

Alternative Medicine Attitudes and Practices of U.S. College Students: An Exploratory Study

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Abstract

This study determined attitudes and practices, including gender differences, of college students regarding advocacy and use of alternative medicine. A convenience sample of students enrolled in undergraduate health classes from universities in five separate regions of the United States was surveyed using a written questionnaire. A total of 561 undergraduate and graduate students volunteered for this study. Results of this survey indicated that the majority of college students favor the use of alternative medicine and the majority of users reported satisfaction with alternative medicine. Significant gender differences were uncovered regarding use of, and advocacy for, alternative medicine.

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Introduction

Interest in and use of alternative medicine has increased significantly in recent years (Eisenberg, 2001; Zolman & Vickers, 1999a). The characteristics of users of alternative medicine include above average education and affluence and below average health status and satisfaction with conventional (allopathic) medicine (Eisenberg, et al., 1998; Zolman & Vickers, 1999b). Users of alternative medicine are more likely than non-users to view conventional medicine as ineffective, expensive, and disease rather than health oriented (Astin, 1998; Ottolini, Hamburger, & Loprieto, 1999).

A number of recent studies have measured attitudes and practices of students related to alternative medicine. A majority of pharmacy students, in one study (Kreitzer, Mitten, Harris, & Shandeling, 2002), stated that the best of complementary and alternative medicine (CAM) practices should be integrated into conventional medical care. Wilkinson and Simpson (2001) found that 78% of nursing, pharmacy, and biomedical science students had used complementary therapies during the preceding year and 56% had visited a complementary

therapy practitioner. The most commonly used therapies included vitamins, minerals, and other supplements. Practitioners who dispensed such therapies were visited the most often, followed by chiropractors. The majority of these students felt that complementary therapies enhanced the quality of life. No significant gender differences were noted.

A recent study of third year medical students revealed that the majority believed that some CAM therapies were useful (Chez, Jonas, & Crawford, 2001). These students did not perceive CAM therapies as threats to public health. Most reported insufficient understanding of the safety of CAM therapies and suggested that they would not refer patients to, nor discourage patients from, these therapies. Significant gender differences were not observed. In another study, Baugneit, Boon, and Ostbye (2000) found that, compared to other students in the health professions, medical students in their final year reported the lowest level of knowledge about CAM therapies, and viewed these therapies as less useful than conventional medicine. Medical and pharmacy students were more likely than students from

other health professions, to support the need for scientific evaluation before acceptance of CAM therapies.

The present study surveyed students enrolled in undergraduate health classes from a national, purposive sample of universities from five separate regions across the United States, to determine student attitudes and practices related to alternative medicine. In addition to attitudes and practices the study examined advocacy for alternative medicine, and gender differences related to alternative and conventional medicine.

Methods

Instrumentation

A short, 16-item written survey developed for use in an earlier study (Lamarine, Fisher, & Sbarbaro, 2003) was adapted for the present study. Alternative medicine was selected as the operational variable, in lieu of CAM, in an attempt to examine therapies that might be selected in place of traditional (allopathic) medicine, rather than as complements to it. For this research a widely cited definition was employed defining alternative medicine as “a heterogeneous set of practices that are offered as an alternative to conventional medicine, for the preservation of health and the diagnosis and treatment of health related problems: its practitioners are often called healers” (Murray & Rubel, 1992, p. 61). The major approaches encompassed by alternative medicine, as described in the literature, were listed. Conventional (allopathic) medicine was defined by the researchers as “medical practices and procedures commonly employed by physicians and other certified health workers.”

The survey comprised a number of items utilizing a Likert scale (1=low; 5=high). These

items examined attitudes and practices related to both alternative and conventional medicine. Other variables examined included the importance of scientifically based evidence, the health of the respondents, whether they had experienced a serious illness within the last five years, and their exercise patterns. In addition to demographic data subjects were asked to list alternative therapies they had used and their frequency of use. Reliability and validity of the instrument were established during the initial pilot study, which preceded the earlier research (Lamarine, Fisher, & Sbarbaro, 2003).

Subjects

A total of 561 usable surveys were submitted by undergraduate (n=495) and graduate (n=64) students enrolled in undergraduate health classes from universities in five separate geographical regions from across the United States.

Results

Of 561 surveys, 58% were completed by females, 89% were undergraduate students, with the majority (79%) comprised of juniors and seniors. Only a small number (6%) reported having taken a course on alternative medicine.

Attitudes and Practices Toward Alternative Medicine

Eighty percent of the students reported that they would *always or sometimes* advocate for the use of alternative medicine, while 44% had used alternative therapies. The most commonly used alternative therapies were herbs (47%), dietary supplements (22%), and chiropractic (16%). Nearly half (49%) of the users of alternative medicine reported that they were *somewhat or very* satisfied with these therapies (see Figure 1).

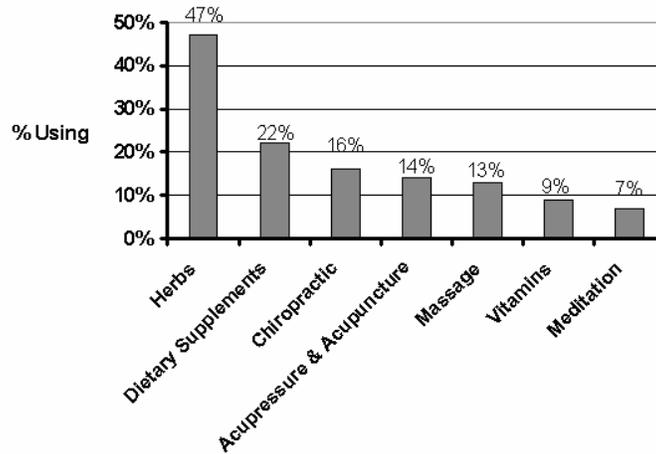


Figure 1
Most Commonly Used Alternative Medical Therapies by US Students (N=215)

Scientific Evidence

A large majority (90%) of the sample reported that scientific evidence was *somewhat or very* important in their decision to support an alternative therapy. Eighty-five percent stated that only *occasionally or never* would it be ethical to advocate for the use of untested or unproven therapies, while 91% noted that it was *usually or absolutely* essential that all new therapies be scientifically tested.

Conventional Medicine

Moderate to high levels of confidence were reported in scientifically tested, conventional medicine by 92% of the sample and 89% were *somewhat or very* satisfied with conventional medicine.

Health and Illness

Moderate to excellent health was reported by 87% of the sample but 26% noted at least one serious illness within the last five years. Of the 26% experiencing serious illness, 39% noted *moderate to high* fear of relapse from their

current state of remission. Respondents reporting serious illness were significantly ($\chi^2=9.35$, $df=2$, $p=.009$) more likely to use alternative medicine (53% vs. 40%) and they were significantly ($\chi^2=24.37$, $df=4$, $p=.000$) more likely to report worse health status.

Gender Differences

Four statistically significant gender differences using Chi Square analyses were noted (see Table 1). Males were more likely to report that they would advocate for alternative medicine (79% versus 67%; $p=.051$) while females were significantly more likely than males to use alternative medicine (50% versus 35%, $p=.000$). However, differences between the sexes disappeared with regard to the need for scientific evidence to support decisions related to using alternative therapies, as both groups supported this issue (mean=89%). Finally, males reported better health status and greater likelihood to participate in aerobic exercise at least twice a week (78% versus 72%, $p=.007$).

Table 1
Gender Differences Between College Students On Issues Relating To Health Status, Alternative Medicine Use, And Exercise (N=561)

	Gender	%	χ^2	df	P
Which describes your current overall health status? (excellent/good)	Female	32	15.99	4	.003
	Male	43			
Would you advocate for the use of alternative medicine? (yes)	Female	67	7.76	3	.051
	Male	79			
Have you personally used alternative medical therapies? (yes)	Female	50	20.04	2	.000
	Male	35			
How important is scientific evidence in your decision to support an alternative therapy? (very/somewhat important)	Female	91	7.57	3	.056
	Male	87			
How many times per week do you participate in at least 20 minutes of aerobic exercise, vigorous enough to significantly raise your heart and breathing rate? (> 2 times /week)	Female	72	19.28	1	.007
	Male	78			

Exercise

Seventy-five percent of the sample reported participating in vigorous aerobic exercise three or more time per week. Users of alternative medicine were significantly ($\chi^2=23.75$, $df=14$, $p = .049$) less likely to exercise than non-users. Females, who as noted earlier were more likely to use alternative medicine, were also less likely to exercise ($\chi^2=19.28$, $df=7$, $p = .007$). Exercise level was significantly correlated ($R = 0.32$, $p = .000$) with better self-reported health status.

Discussion

This study adds to the extant literature aimed at assessing attitudes of students toward the efficacy and use of alternative medicine. Most of this research has focused on students in the health sciences, e.g., pharmacy, medicine, and nursing. This study has attempted to assess responses from a wider student audience. In addition, most previous studies did not explore individual level variation in the use of alternative medicine, particularly with regard to gender, year of study, or geographical variables. This study fills an important gap.

The results show high levels of advocacy for alternative medicine plus a propensity to identify a need for scientific acceptability and proof of effectiveness. This suggests that these students

may be discerning in their use of particular alternative medicines, which have been substantiated by at least some scientific evidence. The relatively minor exposure of students in this sample to any formal courses of alternative medicine (only 6% indicated having taken any courses), lends weight to the call for inclusion of such courses on college campuses (Patterson & Graf, 2000). Compared to previous studies of advocacy and use of alternative medicine by university health faculty (Lamarine, Fisher & Sbarbaro, 2003), support for scientific evidence was similar (93% of faculty vs. 90% students) and use was considerably lower by students (44% of students vs. 66% of faculty) in this sample. In the qualitative analysis, the most frequently utilized alternative medicine practices used by students were similar to those of faculty with herbs ranked first for both groups (21% of faculty vs. 47% of students), dietary supplements were second for students (fifth for faculty), and chiropractic third for students (fourth for faculty), followed by acupuncture/acupressure (see Figure 1).

The relatively high use of alternative medicine combined with conventional medicine may indicate a determination to ameliorate the discomfort and threat of serious illness, as much as a concern for personal health. With more than

a quarter of the sample indicating at least one serious illness in the last five years, combined with moderate to high fear of relapse, public health concerns are raised for these young adults, most of whom are only in their third or fourth year of college.

The inverse relationship observed between alternative medicine use and levels of exercise is worthy of note. Does this suggest a high reliance on substances to ameliorate pain and discomfort rather than alternative non-pharmacological related strategies to improve health? Unfortunately, this survey did not include a measure of other substance use, as it would be interesting to determine the association between alternative medicine use and the use of psychotropic or illicit substances. A small proportion of students (4%) indicated that their choice of alternative therapy was marijuana. Consistent with other studies of the use of health services, higher female use of alternative medicines was related to lower levels of exercise compared to male associations. This more likely reflects the trend in our culture for females to attend to health concerns and seek alternative or additional health services more frequently than males (Cherniack, Senzel, & Pan, 2001; Gotay, Hara, Issell, & Maskarinec, 1999; Ni, Simile, & Hardy, 2002).

This study has several limitations. This was a purposive sample and the colleges within which student populations were sampled represented

five geographical regions within the United States, but the sample may not be representative of all U.S. college students. Students completed the survey voluntarily and were not given extra credit for completing the questionnaire. The questionnaire was administered in various health classes to students from a wide variety of undergraduate and some graduate majors. No sampling strata were applied. The only eligibility criteria were that students be enrolled in a formal college health course.

In conclusion, this paper has explored alternative medicine use among a convenience sample of college students. As a result, the survey uncovered more questions perhaps than answers. Among those questions that could be explored further would be what types and frequency of use for particular remedies were most popular; what is the correlation of alternative medicine use with use of other substances, e.g., tobacco, alcohol, illicit substances; what are the parameters of the alternative medicine use/exercise relationship? Is it merely a reflection of a secular trend of age group physical activity or gender differences in physical activity, or is the relatively high use of alternative medicine masking a reliance on an easily administered therapeutic substance? As the continued growth in the use of alternative medicine climbs in the U.S., it will be important for future studies to identify when this trend begins, e.g., at high school, college, or early adulthood and when it is likely to end.

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