

A Survey of Medical Students' Opinions about Complementary and Alternative Medicine

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I. Introduction

If conventional medicine is called medicine as practiced by holders of medical doctor (M.D.) or doctor of osteopathy (D.O.) degrees and by their allied health professionals, such as physical therapists, psychologists, and registered nurses, complementary and alternative medicine may be called non-conventional, unproven, and irregular medicine or health care. Complementary and alternative medicine, as defined by National

Center for Complementary and Alternative Medicine under National Institute of Health, is a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine.

While some scientific evidence exists regarding some CAM therapies, for most there are key questions that are yet to be answered through well-designed scientific studies--questions such as whether they are safe and whether they work for the diseases or medical conditions for which they are used.

* This study was conducted by researching fund of Kosin medical college in 2001

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The Federal Government of the United State of America lead scientific research on complementary and alternative medicine, explore complementary and alternative healing practices in the context of rigorous science, train CAM researchers, and inform the public and health professionals about the results of CAM research studies from 1992. But in Korea, Neither of the government nor medical researchers are interested in CAM even though many patients are using them. The studies for CAM has been primarily conducted by the researchers of the North America and Europe since 1980s latter(Yoo, et al. 1999) In America, complementary and alternative medicine (CAM) is becoming more popular, and CAM remedies are used instead of, or integrated with, orthodox allopathic therapies by many patients. The use of complementary and alternative medicine (CAM) by Americans increased from 34% to 42% during the 7 years between 1990 and 1997 (Eisenberg et al. 1998). We believe this percentage has continued to grow during the last 3 years because of increasing attention by the public media and increasing advertising dollars being spent by CAM manufacturers and providers.

The recent peer-reviewed medical literature contains data on the use and efficacy of various CAM practices in both obstetric and gynecologic patients (Astin, 1998). One of the larger subgroups of users is reproductive age,

educated, employed women(Eisenberg et al. 1998). In 1999, The American College of Obstetricians and Gynecologists published a Committee Opinion on the role of CAM in clinical practice(ACOG Committee Opinion, 1999). Its membership was encouraged to inquire about the patient' s motivation for and use of CAM and to provide the patient information on safety and effectiveness of any particular CAM modality or intervention she was using or considering using.

The spreading popularity of herbal and other forms of complementary and alternative medicine (CAM) is a phenomenon that progresses on the wings of faith that soar beyond the conventional bounds of science and logic. Surveys consistently show that close to 40% of US citizens are now using alternative medicine of one sort or another. Most of them are not telling their conventional physicians that they are doing so(Eisenberg et al. 1998). Visits to alternative providers now exceed visits to primary care physicians, and money spent on those visits exceeds money spent for primary care(Eisenberg et al. 1993, Eisenberg et al. 1998). Clearly, this is a market force to be reckoned with. The main advance in recent times has been the escalation in the output of health materials with the increase in resources for those who wish to avail themselves of CAM therapies.

A recent study in Boston, America, of randomly selected households showed that in

1997 at least one of 16 alternative therapies was used by 42.1% of individuals, this was an increase from 33.8% in 1990 (Eisenberg et al. 1998). The investigators suggested that more than 600 million visits occurred to alternative medicine practitioners in the United States in 1997, this figure exceeded the total number of visits to primary care physicians. A study of family practice patients in Oregon revealed that 50% were using some form of alternative medicine, although only about half had told their physician about this use (Elder et al. 1997). The National Institutes of Health suggest that 1 in 3 Americans uses some form of alternative or complementary medicine (National Institutes of Health Office of Alternative Medicine, 1997). The same phenomenon is apparent in other countries where orthodox medical care is generally available. In Israel, it is likely that the U.S. experience will be duplicated, however, in a 1998 report, only 18.7% of patients in two primary care practices had consulted alternative medicine therapies (Kitai et al. 1998). However, where fewer visits to alternative consultants occur, it is possible that orthodox physicians in those communities are already incorporating CAM into their practices (Druss and Rosenheck 1999). In England, a survey of patients with asthma revealed that 59% of patients had tried complementary therapies, and two thirds of the remaining 41% were considering them (Ernst 1998). In Australia,

a survey of children with asthma revealed that 55% used alternative therapies (Andrews et al. 1998), however, this included vitamins, which are no longer alternatives because their general use is so prevalent.

In Korea, the percentage of those who have experience to use CAM among cancer patients is 53.0% (Lee 1998). By the study of the author, A Survey on Complementary/Alternative Medicine Use of the Admitted Patients to A General Hospital, 37.6% of the admitted patients to the Gospel Hospital, Kosin University were using CAM with orthodox medicine. Especially among patients with chronic conditions, the use of CAM is common (Kim et al. 2002). Even though the percentage of the patients in our country who are using CAM is not high compared to American and European countries, it will grow up higher as much as that of America in near future. Therefore, we have to prepare for future.

The American Medical Association, the Federation of State Medical Boards, and other national groups or panels also have recommended that physicians learn about CAM practices and inquire about their patients' use of these practices (ACOG Committee Opinion 1999; Federation of State Medical Boards 1997; Panel of Medical and Nursing Education in Complementary Medicine 1996). More than 50% of practicing physicians are willing to refer for CAM practices

such as biofeedback, hypnosis, acupuncture, diet, and lifestyle therapies. However, few are willing to refer for homeopathy or spiritual healing or for herbal treatments or mega-vitamins, two modalities readily available over-the-counter and frequently used by patients(Astin et al. 1998).

According to recent surveys, two thirds of the medical schools in the United States and Canada now include either electives or required instruction on CAM in their curriculum (Wetzel et al. 1998; Moore 1998; Barzansky et al. 1999). Most surveys show that between 60% and 80% of medical students would like more instruction about CAM in their medical training. Between 30% and 50% of medical students indicate they would like to learn how to incorporate selected CAM practices into their repertoire of clinical skills because they believe that some CAM practices can benefit patients, while recognizing others may produce adverse effects (Furnham et al. 1995).

In our country, there hardly is an professional endeavor to establish the concept or clarification of CAM. Only news papers or magazines deal with it. When the patients with incorrect information and knowledge about CAM visit hospital, physicians can not help them except offer a therapy direction to them according to their own individual knowledge of CAM. And when the influence on a public health is considered, it is necessary

to find out medical students', who are going to become medical doctors, understanding and reality of CAM.

Like almost all medical schools in Korea that do not include CAM in the curriculum, the medical student curriculum of the Medical College, Kosin University does not contain either a formal or informal course on CAM. In this study, the author report the responses of second, third and fourth-year Kosin medical college students to a questionnaire that asked about their personal knowledge and opinions related to CAM in general and to 10 CAM interventions specifically. By this, the author make known the medical students' understanding of CAM and intend to offer basic material for understanding the reality of CAM.

II. Subjects and methods

1. Subjects and period

During 7th, August to 30th, August 2003, the questionnaire was offered to each group of second, third and fourth-year medical students at Medical College, Kosin University. The 163 students, who were 29 second year students, 78 third year students and 56 fourth year students, were invited to complete the questionnaire at each end of a 2-hour official class sessions lectured by professors of Kosin medical college. The 120 students,

who were 21 second year students, 56 third year students and 43 fourth year students, completed the questionnaire. Nothing related to CAM was discussed with the students before or after they completed the survey.

2. Methods

The questionnaire was provided by referring to the study on medical students' opinions about complementary and alternative medicine, which Chez, Jonas, and Crawford(2001) published. It contains demographic questions(grade, age, sex, and religion) without name identification, a question asking students' self-perceived knowledge of individual CAM therapies, and 6 multiple-choice questions related to 10 frequently used CAM therapies. Three of the 6 questions have 5 category Likert scale answers.

The data were collated and analyzed by using SPSS (Hangul version 10.0 for windows). Descriptive statistics were done on all variables and were the primary method of data evaluation.

The questionnaire assessed Kosin medical college students' attitude on CAM in general, opinions of clinical usefulness of 10 CAM therapies, perceived knowledge about 10 CAM therapies, opinion of license for CAM practitioner, opinion of insurance for CAM and any use of these CAM therapies after their graduate from medical college. After a pilot test with nine students from

second year students to assess the clarity of the instructions and questions, two items on the questionnaire were reworded.

The students were asked about 10 frequently used CAM therapies (Acupuncture, Chiropractic, Herbal medicine, Hypnosis, Meditation, Naturopathy, Massage, Prayer, and Diet)

III. Results

Of the 120 students who answered the questionnaire, 65.0% were men and 34.2% women(one did not answer which sex he is). The mean age was 25.7 years (SD, 2.7). 26.4% refused to complete the survey.

Seventy eight percent of the group believed that many Korean patients were currently using CAM. Only two students strongly disagreed or disagreed that many Korean patients were using CAM.

Most of the students (85%) indicated they had been exposed to acupuncture, 81.6% to chiropractic, 84.1% to herbal medicine, 88.3% to massage, and 84.2 to diet(Table 2).

The students' opinions about CAM in general are listed in Table 1. Most of the group(79.2%) neither disagreed nor agreed that CAM therapies were a threat to public health. Above half of the group neither agree nor disagree as to whether the effects of CAM are usually the result of a placebo effect and

Table 1. Medical students' opinions about complementary therapies (N=120)

| opinion | Strongly agree and agree n(%) | Neutral n(%) | Strongly disagree and disagree n(%) |
|--|-------------------------------|--------------|-------------------------------------|
| Complementary therapies a threat to public health | 14 (11.7) | 95(79.2) | 11(9.2) |
| Treatments not tested in a scientifically manner should be discouraged | 77(64.2) | 41(34.2) | 2(1.6) |
| Effects of complementary therapies are usually the result of a placebo effect. | 39(32.5) | 65(54.2) | 16(13.3) |
| Complementary therapies include ideas and methods from which conventional medicine could benefit | 40(33.3) | 67(55.8) | 13(10.8) |
| Most complementary therapies stimulate the body's natural therapeutic powers | 56(46.7) | 54(45.0) | 10(8.3) |
| Complementary therapies have either a optional or compulsory unit in the curriculum | 63(52.5) | 30(25.0) | 27(22.5) |
| Many patients is using complementary therapies | 94(78.3) | 24(20.0) | 2(1.6) |

also to CAM therapies include ideas and methods from which conventional medicine could benefit. One-third of the students agreed that the effects of CAM are usually the result of a placebo effect and that CAM therapies include ideas and methods from which conventional medicine could benefit. Only 8.3% of respondents disagreed that most CAM interventions stimulate the body's natural therapeutic powers. But almost half agreed that most CAM interventions stimulate the body's natural therapeutic powers and also neither agree nor disagree that most CAM interventions stimulate the body's natural therapeutic powers. Above half of the group (52.5%) agreed that complementary therapies have either a optional or compulsory unit in

the curriculum. 22.5% of the students disagreed that complementary therapies have either a optional or compulsory unit in the curriculum. Only two of the all students (1.6%) disagreed that many patients is using complementary therapies. The majority of the students(78.3%) agreed that many patients is using complementary therapies.

The students' perceived knowledge about 10 CAM therapies is shown in Table 2. 10% or less of the respondents said they understood the basic principles underlying 8 of the 10 items. The majority of the students(81.6%-86.6%) were exposed to 5 CAM therapies of the 10 items.

Another question addressed the clinical usefulness of these same 10 modalities. The

Table 2. Students' self-perceived knowledge of individual complementary therapies (N=120)

| Therapy | Understand basic principles n(%) | have pursued education n(%) | heard what it is n(%) | do not know what it is n(%) | never heard what it is n(%) |
|-----------------|----------------------------------|-----------------------------|-----------------------|-----------------------------|-----------------------------|
| Acupuncture | 10(8.3) | 14(11.7) | 78(65.0) | 14(11.7) | 4(3.3) |
| Chiropractic | 13(10.8) | 24(20.0) | 61(50.8) | 17(14.2) | 5(4.2) |
| Herbal medicine | 7 (5.8) | 16(13.3) | 78(65.0) | 15(12.5) | 4(3.3) |
| Qi calisthenics | 4 (3.3) | 10(8.3) | 59(49.2) | 38(31.7) | 9(7.5) |
| Hypnosis | 3 (2.5) | 14(11.7) | 61(50.8) | 32(26.7) | 10(8.3) |
| Meditation | 6 (5.0) | 17(14.2) | 68(56.7) | 26(21.7) | 3(2.5) |
| Naturopathy | 3 (2.5) | 7 (5.8) | 59(49.2) | 41(34.2) | 10(8.3) |
| Massage | 10 (8.3) | 16(13.3) | 80(66.7) | 11 (9.2) | 3(2.5) |
| Prayer | 38(31.7) | 16(13.3) | 41(34.2) | 15(12.5) | 9(7.5) |
| Diet raw | 12(10.0) | 12(10.0) | 77(64.2) | 15(12.5) | 4(3.3) |

Table 3. Students' opinions of clinical usefulness of therapy (N=120)

| Therapy | Hamful or not useful n(%) | Useful or very useful n(%) | No opinion n(%) |
|-----------------|---------------------------|----------------------------|-----------------|
| Acupuncture | 6 (5.0) | 87(72.5) | 27(22.5) |
| Chiropractic | 3 (2.5) | 89(74.2) | 28(23.3) |
| Herbal medicine | 26(21.7) | 38(31.7) | 56(46.7) |
| Qi calisthenics | 21(17.5) | 39(32.5) | 60(50.0) |
| Hypnosis | 28(23.3) | 22(18.3) | 70(58.3) |
| Meditation | 11 (9.2) | 51(42.5) | 58(48.3) |
| Naturopathy | 11 (9.1) | 37(30.8) | 72(60.0) |
| Massage | 2 (1.7) | 89(74.2) | 29(24.2) |
| Prayer | 20(16.7) | 64(53.3) | 36(30.0) |
| Diet raw | 9 (7.5) | 59(49.2) | 52(43.3) |

responses are depicted in Table 3. More than one half of the students(53.3%-74.2%) said 4 of these interventions were useful or very useful therapies. Fewer students (19.1%-21.6%) stated they understood the basic principles of herbal medicine, acupuncture, and massage (Table 2) but more students (72.5%-74.2%) believed these 3 methods were useful in the care of patients.

Many students did not know their basic principles of massage, chiropractic, and acupuncture but they believed they were useful in the care of patients. Only 20% of the respondents said that they knew its basic principles but 74.2% believed it was useful in the care of patients. Most students (84.7%) heard about herbal medicine and knew it even though they did not know its basic principles

Table 4. Students' opinion in practice after graduation from medical school (N=120)

| Therapy | Yes n(%) | No n(%) | No opinion n(%) |
|-----------------|----------|----------|-----------------|
| Acupuncture | 61(50.8) | 57(47.5) | 2(1.7) |
| Chiropractic | 70(58.3) | 46(38.3) | 4(3.3) |
| Herbal medicine | 26(21.7) | 91(75.8) | 3(2.5) |
| Qi calisthenics | 20(16.7) | 95(79.2) | 5(4.2) |
| Hypnosis | 22(18.3) | 93(77.5) | 5(4.2) |
| Meditation | 40(33.3) | 75(62.5) | 5(4.2) |
| Naturopathy | 25(20.8) | 91(75.8) | 4(3.3) |
| Massage | 50(41.7) | 65(54.2) | 5(4.2) |
| Prayer | 44(36.7) | 70(58.3) | 6(5.0) |
| Diet raw | 38(31.7) | 77(64.2) | 5(4.2) |

Table 5. Students' opinion in that practitioners should be formally licensed by government. (N=120)

| Therapy | Yes n(%) | No n(%) |
|-----------------|-----------|----------|
| Acupuncture | 109(90.8) | 11(9.2) |
| Chiropractic | 108(90.0) | 12(10.0) |
| Herbal medicine | 107(89.2) | 13(10.8) |
| Qi calisthenics | 51(42.5) | 69(57.5) |
| Hypnosis | 82(68.3) | 38(31.7) |
| Meditation | 38(31.7) | 82(68.3) |
| Naturopathy | 57(47.5) | 63(52.5) |
| Massage | 83(69.2) | 37(30.8) |
| Prayer | 39(32.5) | 81(67.5) |
| Diet raw | 71(59.2) | 49(40.8) |

but one third of students(31.7%) believed it was useful therapy and one fifth (21.7%) believed it was harmful or useless therapy (Table 3).

Only chiropractic and acupuncture scored in one half when the students were asked if they would use any of these 10 interventions in practice after graduation from medical school (Table 4). Fewer than 1 in 5 students would use Qi calisthenics and hypnosis in

practice after graduation medical school. More than three quarter(75.8%-79.2%) students said that they would not use Qi calisthenics, herbal medicine, hypnosis, and naturopathy in practice after graduation from medical school.

At least 90% of students believed a nonphysician acupuncturist or a chiropractor should be formally licensed by the government (Table 5). 89% said this also applied

Table 6. Students' opinion in eligibility for medical insurance. (N=120)

| Therapy | Yes(%) | No(%) |
|-----------------|----------|-----------|
| Acupuncture | 94(78.3) | 26(21.7) |
| Chiropractic | 84(70.0) | 36(30.0) |
| Herbal medicine | 79(65.8) | 41(34.2) |
| Qi calisthenics | 26(21.7) | 94(78.3) |
| Hypnosis | 52(26.7) | 88(73.3) |
| Meditation | 24(20.0) | 96(80.0) |
| Naturopathy | 24(20.0) | 96(80.0) |
| Massage | 44(36.7) | 76(73.3) |
| Prayer | 20(16.6) | 100(83.4) |
| Diet raw | 31(25.8) | 89(74.2) |

to herbal medicine practitioners and more than two thirds (69.2% and 68.3%) said same thing to massage therapists and hypnotists. This same response ranged from 31.7% to 59.2% for practitioners of meditation, naturopathy, hypnosis, Qi calisthenics, and prayer.

Between 78.3% and 65.8% of respondents stated that acupuncture, chiropractic, and Herbal medicine treatment should be eligible for medical insurance (Table 6).

Only 16.6% to 36.7% of the group found it acceptable for the other 7 modalities (Table 6).

IV. Discussion

These data come from second, third, and fourth-year medical college students in a school that does not have a required or an

elective course on CAM.

On the basis of the apportionment of responses in Tables 3 and 4, it is the author's opinion that most of these students had insufficient knowledge or understanding of the safety or lack of it for the 10 CAM modalities listed in the survey. Most of the students did not disagree usefulness of the 10 CAM modalities listed in the survey but they had not confidence in their usefulness. However, the students were aware that the interest about and the use of CAM by the Korean public were increasing. Many also had been exposed to some CAM interventions used either by themselves, friends, or patients.

One of the physician's most important roles is as patient advocate. The medical doctor who is inadequately informed about various aspects of CAM will be at a disadvantage in fulfilling this role. Including topics

on CAM in the medical school curriculum would better prepare the practicing physician for soliciting information from the patient about the current use of CAM, for more effectively responding to the patient's inquiries about CAM, and for assessing the merit of introducing or removing a CAM modality in the patient's plan of care. Thus, it is concurred with others that allopathically trained medical doctors should have a purposeful, formal education about CAM (Hufford 1997).

This course should be constructed with the same requirements that are applied to other clinical courses in medical school, namely, with content that includes the historical background of a particular intervention or modality, its mechanisms of action, the scientific basis for efficacy, clinical applicability, indications and contraindications, and an approach to calculating the benefit and risk ratio for its use in an individual patient. Recent integration of topics in spirituality into the curriculum of several medical schools affirms the feasibility and merit of this pedagogic approach (Ellis, 1998).

CAM has pertinence to obstetrics and to gynecology. For instance, a number of CAM interventions have been and are being applied to pregnant patients (Chez and Jonas, 1997; Allaire et al. 2000). The role of phytoestrogens, adjuncts to cancer therapy regimens, quality-of-life considerations, and

the relief of adverse symptoms associated with menstruation are examples of CAM in gynecology (Chez and Jonas, 1997; Taylor, 1997; Cassileth 1999).

The author cautions that formal education on this subject is not equivalent to approval or acceptance of a CAM procedure or practice nor should it be interpreted that way. Rather, it is an appropriate effort to provide valid medical information to the learner that will facilitate making clinical decisions with confidence and competence (Jonas, 1999).

The absence of purposeful learning about CAM is unwise (ACOG Committee Opinion, 1999; Federation of State Medical Boards, 1997; Panel of Medical and Nursing Education in Complementary Medicine, 1996). The public's use of CAM is not a passing fad. The health care needs of the chronically ill and disabled, a major stimulus for patients to use CAM, will continue to increase (Eisenberg et al. 1993; Eisenberg et al. 1998). The debates on eligibility of CAM providers for reimbursement and on how to divide the health care dollar between conventional and complementary medicine will continue to increase (Weeks and Layton, 1998). Third-party payer expectations of integrating CAM and allopathic medicine in the overall plan of care for a patient also will continue to increase (Weeks and Layton, 1998).

Therefore, the author strongly supports others who have encouraged our medical

trainees and colleagues to pursue learning about this increasingly sought after aspect of patient care(ACOG Committee Opinion, 1999; Federation of State Medical Boards, 1997; Panel of Medical and Nursing Education in Complementary Medicine, 1996).

V. Conclusion

This study is to determine second, third and fourth-year medical college students' opinions and knowledge related to complementary and alternative medicine (CAM) in a school with no formal or elective course on the subject.

A questionnaire was offered to second, third and fourth-year medical students of Medical College, Kosin University from 7th, August to 30th, August 2003.

Most students had been exposed to CAM therapies, knew that the majority of the Korean public was using CAM, believed that some CAM interventions were useful, and did not believe CAM therapies were a threat to public health. One fifth student(22.5%) disagreed that CAM therapies have either a optional or compulsory unit in the curriculum. Most students had insufficient knowledge or understanding of the safety or lack of it for 10 of the more common CAM modalities. Most respondents thought these interventions

were useful, but would not refer the patient nor dissuade her from using them.

Medical students in this school identified an interest about the clinical usefulness of 10 CAM modalities, but did not have sufficient knowledge about the safety for 10 of the more common CAM modalities. Including CAM topics in the medical school curriculum would better prepare physicians to respond to patient inquiries about CAM and thereby to fulfill their role as patient advocates.

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References

- ACOG Committee Opinion. 1999(11). *Complementary and alternative medicine. No. 227*, American College of Obstetricians and Gynecologists, Washington, DC.
- Allaire, A.D., Moos, M.K, and Wells, S.R. 2000. Complementary and alternative medicine in pregnancy: a survey of North Carolina certified nurse-midwives. *Obstet Gynecol* 95:19-23.
- Andrews, L., Lokuge, S., Sawyer, M., Lillywhite, L., Kennedy, D., and Martin J. 1998. The use of alternative therapies by children with asthma: a brief report. *J Pediatr Child Health*. 34:131-134.
- Astin, J.A. 1998. Why patients use alternative

- medicine: results of a national study. *JAMA*. 279:1548-1553.
- Astin, J.A., Marie, A.M., Pelletier, K.R., Hansen, E., and Haskell, W.L. 1998. A review of the incorporation of complementary and alternative medicine by mainstream physicians. *Arch Int Med* 158:2303-10.
- Barzansky, B., Jonas, H.S., and Etzel, S.I. 1999-2000. Educational programs in US medical schools, *JAMA* 2000;284:1114-1120.
- Cassileth, B.R. 1999. Complementary and alternative cancer medicine. *J Clin Oncol* 17(11Suppl):44-52.
- Chez, R.A., and Jonas, W.B. 1997. Complementary and alternative medicine. Part 1: Clinical studies in obstetrics. *Obstet Gynecol Survey* 52:704-708.
- Chez, R.A., and Jonas, W.B. 1997. Complementary and alternative medicine. Part 2: Clinical studies in gynecology. *Obstet Gynecol Survey* 52:709-715.
- Chez, R.A., Jonas, W.B., and Crawford, C. 2001. A survey of medical students' opinions about complementary and alternative medicine. *American Journal of Obstetrics and Gynecology*. 185(3): 754-757
- Druss, B.G., and Rosenheck, R.A. 1999. Association between use of unconventional therapies and conventional medical services. *JAMA* 282:651-656.
- Eisenberg, D.M., Kessler, R.C., Foster, C., Norlock, F.E., Calkins, D.R, and Delbanco, T.L. 1993. Unconventional medicine in the United States: prevalence, costs, and patterns of use. *N Engl J Med* 328:246-252.
- Eisenberg, D.M., Davis, R.B., Ettner, S.L., Appel, S., Wilkey, S., and Van Rompey, M., et al. 1998. Trends in alternative medicine use in the United States, 1990-1997. *JAMA* 280:1569-1575.
- Elder, N.C., Gillcrist, A., and Minz, R. 1997. Use of alternative health care by family practice patients. *Arch Fam Med* 6:181-184.
- Ellis, FJ. 1998. Academics explore spirituality and medicine. *Acad Phy Scient* 1998 March/April
- Ernst, E. 1998. Complementary therapies for asthma: what patients use. *J Asthma* 35:667-671.
- Federation of State Medical Boards. Report on health care fraud from the Special Committee on Health Care Fraud. 1997. Federation of State Medical Boards of the United States, Inc. Austin, Texas.
- Furnham, A.D., Hanna, D., and Vincent, C.A. 1995. Medical students' attitudes to complementary medical therapies. *Complement Ther Med* 3:212-219.
- Hufford, D.J. 1997. Integrating complementary and alternative medicine into conventional medical practice. *Altern Ther Health Med* 3:81-3.

- Jonas, W.B., Linde, K., and Walach, H. 1999. How to practice evidence-based complementary and alternative medicine. In Jonas, W.B., Levin, J.S. editors. Essentials of complementary and alternative medicine. Philadelphia: Lippincott Williams & Wilkins 72-86.
- Kim, Y.R., Yoo, T.S., Park, H.K., Kim, T.H., Jun, J.B., Jung, S.S., Yoo, D.H., and Bae, S.C. 2002. Complementary and Alternative Medicine Use and Its Usefulness in Patients with RA, *J Korean Rheum Assoc.* 9(3):173-183.
- Kitai, E., Vinker, S., Sandink, A., Hornik, O., Zeltcer, C., and Gaver, A. 1998. Use of complementary and alternative medicine among primary care patients. *Fam Pract* 15:411-414.
- Lee, Gun-Sei. 1998. Present Condition of Use of Alternative Medicine among Korean Patients. *Journal of Korean Medical Doctors Association.* 41(12):1233-1238.
- Moore, N.G. 1998. A review of alternative medicine courses taught at US medical schools. *Alter Therap* 4:90-101.
- National Center for Complementary and Alternative Medicine: What is CAM? <http://www.altmed.od.nih.gov/health/whaticam/#4>
- National Institutes of Health Office of Alternative Medicine. 1997. Practice and Policy Guidelines Panel : Clinical practice guidelines in complementary and alternative medicine. An analysis of opportunities and obstacles. *Arch Fam Med* 6:149-154.
- Panel of Medical and Nursing Education in Complementary Medicine. 1996. Panel issues recommendations for incorporating complementary practices into medical/nursing education [news item]. *Alt Therap Health Med* 2:25.
- Taylor, M. 1997. Alternatives to conventional hormone replacement therapy. *Compr Ther* 23:514-532.
- Weeks, J., and Layton, R. 1998. Integration as community organizing: toward a model for optimizing relationships between networks of conventional and alternative providers. *Integrative Med* 1:15-25.
- Wetzel, M.S., Eisenberg, D.M., and Katchuk, T.J. 1998. Courses involving complementary and alternative medicine at US medical schools. *JAMA* 280: 784-787.
- Yoo, Hee-Jung., Ro, Eun-Yoe., Lee, Chul., and Han, Oh-Su. 1999. The Psychosocial Characteristics Influencing the Selection of Complementary Medecine. *J Korean Neuropsychiatry Assoc.* 38(4):738-746.

ABSTRACT

Objective: To determine second, third and fourth-year medical students' opinions and knowledge related to complementary and alternative medicine (CAM) in a school with no requirement or elective course on the subject.

Study Design: A questionnaire was offered to second, third and fourth-year medical students of the Medical College of Kosin University from August 7th, through August 30th, 2003.

Results: Most students had been exposed to CAM therapies, knew that the majority of the South Korean public was using CAM, believed that some CAM interventions were useful, and did not believe CAM therapies were a threat to public health. Only one fifth of the students(22.5%) disagreed that they had to have requirement or elective course on CAM in their curriculum. Most students had insufficient knowledge or understanding of the safety or lack of it for ten of the more common CAM modalities. Most respondents thought these interventions were useful, but would not refer a patient nor dissuade a patient from seeking out such interventions.

Conclusion: Medical students in this school self-identified an interest about the clinical usefulness of ten CAM modalities, but did not have sufficient knowledge about the safety for ten of the more common CAM modalities. Including CAM topics in the medical school curriculum would better prepare physicians to respond to patient inquiries about CAM and thereby to fulfill their role as patient advocates.

Key words: Complementary and alternative medicine (CAM), Medical school curriculum, Medical school students