

Nursing, Midwifery, and Dietetics Students' Attitudes to Complementary and Integrative Medicine and their Applications

Mehtap Kavurmaci¹, Mehtap Tan¹, Zuhâl Kavurmaci²

¹Ataturk University, Faculty of Nursing, Department of Internal Medicine Nursing, Erzurum, Turkey

²Ataturk University, Department of Medicinal Plants, Erzurum, Turkey

ABSTRACT

Objectives: This study aimed to determine the attitudes and practices of students in the nursing, midwifery, and dietetics departments of the Faculty of Health Sciences concerning complementary and integrative medicine (CIM).

Method: A descriptive cross-sectional survey was performed among students of the Faculty of Health Sciences in the academic year 2013-2014. The study used a questionnaire prepared by the researchers as a data collection form.

Results: A statistically significant difference was found in the use of CIM practices between the students according to their gender, class, and department. The most commonly known type of CIM among the students was herbal medicine. The participants stated that their main sources of information were their mothers or relatives.

Conclusion: The study indicated that students have positive opinions and attitudes about CIM. A great majority of the students agreed that CIM should be included in their school's curriculum.

Keywords: Complementary and Integrative Medicine, midwifery, nursing, dietetics

ÖZ

Hemşirelik, ebelik ve diyetetik öğrencilerinin tamamlayıcı ve entegre tıp hakkındaki düşünce ve uygulamaları

Amaç: Bu araştırma, sağlık bilimleri fakültesi hemşirelik, ebelik ve diyetetik bölümü öğrencilerinin tamamlayıcı ve entegre tıp (TET) hakkındaki düşünce ve uygulamalarını belirlemek amacıyla yapılmıştır.

Yöntem: Tanımlayıcı türdeki araştırma 2013-2014 akademik yılında Sağlık Bilimleri Fakültesi öğrencileri ile yapılmıştır. Verilerin toplanmasında araştırmacılar tarafından hazırlanan soru formu kullanılmıştır.

Bulgular: Öğrencilerin cinsiyet, sınıf ve bölümleri ile TET uygulamaları arasında istatistiksel olarak önemli fark bulunmuştur. Öğrenciler arasında en yaygın olarak bilinen TET yöntemi bitkisel tedavidir. Öğrenciler ilk bilgi kaynaklarının anne/akrabaları olduğunu belirtmişlerdir.

Sonuç: Araştırma sonucunda öğrencilerin TET uygulamalarına karşı pozitif düşünce ve tutumları olduğu saptanmıştır. Öğrencilerin büyük bir çoğunluğu TET uygulamalarının onların okul eğitiminde yer alması gerektiği konusunda hemfikir idi.

Anahtar kelimeler: Tamamlayıcı ve entegre tıp, ebe, hemşire, diyetisyen

Received/Geliş tarihi: 06.06.2017 Accepted/Kabul tarihi: 18.07.2017



Address for Correspondence/Yazışma Adresi: Mehtap Kavurmaci, Ataturk University, Faculty of Nursing, Department of Internal Medicine Nursing, Erzurum, Turkey **Phone/Telefon:** +90-442-231-5768 **E-mail/E-posta:** m.curcani@hotmail.com

Citation/Atıf: Kavurmaci M, Tan M, Kavurmaci Z. Nursing, midwifery, and dietetics students' attitudes to complementary and integrative medicine and their applications. Bakırköy Tıp Dergisi 2018;14:300-306. <https://doi.org/10.5350/BTDMJB.20170606124143>

INTRODUCTION

Recently, the utilization of complementary and integrative medicine (CIM) has increased among both the general public and health care professionals (1-4). CIM can be defined as "diagnosis, cure, and/or prevention that complements mainstream medicine by contributing to a common whole, by satisfying a demand not met by orthodoxy or by diversifying the conceptual frameworks of medicine". CIM includes approaches such as herbal therapy, aromatherapy, massage, acupuncture, acupressure, reflexology, therapeutic touch, prayer, meditation, guided imagery, relaxation, exercise, biofeedback, nutrition biotherapy, megavitamin usage, and therapeutic diets (4).

A review by Harris et al. (2) established that CIM was commonly used; the prevalence of all types of CIM use ranged from 9% to 76%. Similarly, the use of CIM practices has increased in popularity in Turkey. Studies with different patient groups have demonstrated that most patients with chronic illnesses have used at least one type of CIM practices (1,5-9).

CIM use is extensive also among health professionals (3,10,11). A study by Koksoy carried out in Turkey found that 35.1% of health professionals used one or more CIM therapies (12). The Taiwanese study evaluated nurses' attitudes toward CAM and was significant owing to Taiwan's high rate of CAM usage, which is reported to be 51%-82% (13). The study by Koc et al. determined that 58.9% of midwives had suggested CIM to their patients (11). As a result, nurses, midwives, and other healthcare professionals have increasingly integrated these CIM approaches into everyday practice. Healthcare professionals' information and attitudes can affect patients' health beliefs and encourage the use of CIM (3,14). Nurses, midwives, and dietitians play a major role in selecting a therapeutic approach (10,12,15). Training can impact the use of nursing, midwifery, and dietetics interventions by providing theoretic information and opportunities for the acquisition of practical abilities. Nursing, midwifery, and dietetics students' views suggest that there is a realization that the role of CIM in healthcare is becoming more widespread, and for this reason, CIM is seen as a field of which future healthcare workers need to be aware (16-19).

Research about medical students' attitudes and information regarding CIM in several countries have generally shown that there are positive attitudes towards CIM and a high level of desire to learn about CIM in their education programs (16,18,20-24). Currently in Turkey, only few studies are available that investigate nursing students' attitudes towards and knowledge of CIM (22-24). One study found that the students had positive attitudes towards CIM therapies, yet their individual knowledge of the subject was limited (23). Moreover, no studies in Turkey have evaluated the knowledge, attitudes, opinions, and practices of nurses, midwives, and dietetics students' and compared these three groups.

This research aimed to determine the knowledge, attitudes, opinions and application among students from the departments of nursing, midwifery, and dietetics of the Faculty of Health Sciences towards complementary and integrative medicine in Turkey.

MATERIAL AND METHOD

A descriptive cross-sectional survey was conducted among students of the Faculty of Health Sciences, Ataturk University, in the academic year 2013-2014. The school has three departments, nursing (n=655), midwifery (n=195), and dietetics (n=169). The total number of students enrolled in the Faculty of Health Sciences is 1019. First, second, third, and fourth year students comprised the study group. The research was conducted with 671 students (66%) who volunteered to participate.

A question form containing 29 items was developed by the researchers after a review of the related literature (6,16,22,24). The question form was divided into three parts; the first part contained questions to determine the students' demographic features (age, gender, year of school, department). The second part included questions investigating the students' knowledge about CIM (yes / no / don't know), from which source they obtained attitudes and opinions, and if they used CIM practices. In part three, two questions inquired whether CIM should be integrated into the education programs. The question forms were distributed before lectures, explaining the aim of the research. Students completed the question form during class hours after obtaining the required permission from the faculty managers

and ethics boards. Time taken to complete the question form was around 15 min. Students handed in the completed question form on the same day.

Ethical Considerations

The study was approved by the Ethics Committee of the Health Science Institute of Ataturk University. Written permission was obtained from the institutions to execute the research. The students were provided with information about the aim and content of the research and gave their oral consent to participate in the research. Students were reassured that their participation was voluntary and that the questionnaire was anonymous.

Data Collection and Analysis

Statistical analyses for data evaluation were carried out in the Statistical Program for Social Sciences (SPSS) version 16.0 for Windows (SPSS, Inc., Chicago, IL, USA). In the statistical analyses of the data, percentages and chi-square test were used. The level of significance was set at $p < 0.05$.

RESULTS

Data were collected from a total of 671 students from the Faculty of Health Sciences. The overall response rate for the survey was 66%, namely 35.5% for the first-year, 27% for the second-year, 18.5% for the third-year, and 19.0% for the fourth-year students. Of these students, 81.5% were female,

and 18.5% were male. The mean age was 21.15 ± 1.68 years. Of the students, 55.3% were in the nursing, 25.3% in the midwifery, and 21.2% in the dietetics department (Table 1).

The findings indicated that 46.9% of the students reported the use of 1 or more CIM therapies. Nursing students' (60%) overall use of CIM was higher than that of midwifery (31.8%) and dietetics (32.4%) students. A statistically significant difference was found for the use of CIM practices between the students according to gender, year of course, and department (Table 1, $p < 0.05$).

Evaluation of students' knowledge, attitudes, and opinions about CIM were: "CIM practices are as efficient as medical treatment" (48.4%), "CIM practices prepare the body for defense and thus provide better response to the medical treatment" (75.1%), "It is required to obtain more scientific evidence before using CIM practices as a treatment method" (76.2%), "CIM practices that are not scientifically proven should be forbidden" (49.9%). Very few of the students (15.8%) stated that "CIM practices are threat to public health." About 42.5% of the students agreed that "CIM delays people seeking the right medical treatment." A large majority of the students (80.3%) agreed that CIM should be included in their education programs and they considered that information about CIM is significant for a nurse/midwife/dietitian (82.1%) (Table 2).

The most commonly known types of CIM among the students were herbal medicine (30%) and acupuncture (15.8%). However, the most commonly used CIM practices

Table 1: Comparison of descriptor features of the use of CIM status of the students

Descriptor Features	n	%	Status of CIM use		t/p
			Use	Not Use	
Gender					
Female	547	81.5	267 (48.8%)	280 (51.2%)	χ^2 :
Male	124	18.5	48 (38.7%)	76 (61.3%)	4.142
P:0.042					
Class					
First year	238	35.5	130 (54.6%)	108 (45.4%)	χ^2 :
Second year	181	27.0	97 (53.6%)	84 (46.4%)	26.331
Third year	124	18.5	50 (40.3%)	74 (59.7%)	P:0.000
Fourth year	128	19.1	38 (29.7%)	90 (70.3%)	
Department					
Nursing	359	53.5	215 (59.9%)	144 (40.1%)	χ^2 :
Midwifery	170	25.3	54 (31.8%)	116 (68.2%)	51.948
Dietetic	142	21.2	46 (32.4%)	96 (67.6%)	P:0.000
Total	671	100.0	315 (46.9%)	356 (53.1%)	

Table 2: Students' general opinion towards CIM

Survey Statement	Yes (%)	No (%)	Don't know (%)
CIM practices could be used without consulting the physician	39.8	60.2	0.0
CIM is as efficient as the medical treatment	48.4	48.0	3.6
CIM practices prepare the body for defense and thus provide better response to the medical treatment	75.1	20.3	4.6
CIM could only be used for curable diseases rather than incurable diseases	51.1	44.0	4.8
CIM practices should only be used as a last choice in occasions where the medical treatment is insufficient	29.8	68.6	1.6
It is required to obtain more scientific evidences before using CIM practices as a treatment method	76.2	20.6	3.3
CIM delays people to receive right medical treatment	42.5	52.8	4.8
CIM practices are threat to public health	15.8	77.8	6.4
CIM practices that are not scientifically proved should be forbidden	49.9	47.7	2.4
CIM practices should be contained in my education programs	80.3	16.7	3.0
Information about CIM is significant to me as a Nursing/Midwifery/Dietetic student	82.1	14.3	3.6

Table 3: Students' Know and Use of CIM Practices

Students' know CIM (n=373)	n	%
Herbal medicine	201	30.0
Acupuncture	106	15.8
Aromatherapy	41	6.1
Massage	25	3.7
Students' use CIM (n=315)		
Herbal medicine	244	36.4
Acupuncture	12	1.8
Aromatherapy	39	5.8
Massage	20	3.0

among students were: herbal medicines (36.4%), aromatherapy (5.8%), acupuncture (1.8%), and massage therapy (3%) (Table 3).

The majority of students were using CIM for health problems (28.2%) and hair-face care (28.0%). Students stated that their first sources of information were their mothers or relatives (30.4%) (Table 3).

DISCUSSION

The primary focus of the present study was to assess knowledge, attitudes, opinions, and application of nursing/midwifery/dietetics students regarding CIM. As a result of the study, it was determined that among the CIM types used, significant differences were observed between male and female students (Table 1, $p < 0.05$). Like all over the world, increasingly more female than male students are choosing to study nursing/midwifery/dietetics in Turkey. Former research in different countries has also determined that females have more favorable attitudes towards CIM and are

Table 4: Students' reasons use of CIM and sources of informatin about CIM

Reason for using*	n	%
For health problems	189	28.2
For hair-face care	188	28.0
For density	138	20.6
Reduce stres	109	16.2
Comfortable to sleeping	79	11.8
For losing weight	62	9.2
Sources of information*		
Mother/Relatives	204	30.4
Friends	191	28.5
TV/Internet	179	26.7
Newspaper/Magazine	116	17.3
Healthcare Professionals	57	8.5

*Multiple options are marked

more likely to use it (25-27). Gender-specific preferences regarding CIM need to be explored further.

The differences between the years of course in relation to the use of CIM were found significant (Table 1, $p < 0.05$). Akan et al. found that first-year students usually had more favorable attitudes towards CIM (17). Multiple factors can affect the use of CIM by the students, including environmental and personal factors such as having a family member or friends/relatives who use CIM practices, having a personal interest in CIM, believing that moral phenomena. In studies in the international literature, it is reported that in general favorable attitudes towards and willingness to receive education in CIM practices declined as the number of years spent in the faculty increased (19,28). This variation of attitude probably results from increased exposure to evidence-based medicine, educators, and individual

experiences with the patients.

The results of this study show that the differences between the departments of the school in relation to the use of CIM were significant (Table 1, $p < 0.05$). Nursing students were usually more favorable towards CIM-use than midwifery and dietetics students. Yildirim et al. reported that nursing students were usually more favorable towards CIM (24). This difference may result from the fact that nursing students spend more time than midwifery and dietetic students with patients providing care and listening to and educating patients during their practice in the internship program.

The research demonstrated that students have positive opinions about CIM (Table 2). However, there was a split among the students regarding the benefits of CIM: 48.4% felt that "CIM is as effective as medical treatment," while 48% considered CIM as being not as effective as medical treatment. Uzun and Tan stated that students perceived positive effects of CIM in the patients' recovery period (23). Only a minority considered CIM to be a threat to public health. Many of the students stated that they would like CIM practices to be included in their education program, and a majority agreed that information on CIM is significant to them as future nurse/midwife/dietitian. Health professionals play an important role in evaluating their patients' existing use of CIM and answering questions about CIM practices (29). Most of the students indicated that CIM should be integrated into the education program. Camurdan and Gul reported that 85.6% of nursing/midwifery students believed that CIM should be integrated into the school curriculum (20). Tougher-Decker and Thompson have suggested that the education of traditionally-trained dietitians has not kept pace with consumers' patterns of complementary and integrative medicine usages and that no guidelines for complementary and integrative medicine education exist for teaching students in dietetics (15). In a 2002 study, more than 90% of the students stated that clinical care should integrate the best of CIM practices and that health professionals should be prepared to advise patients about frequently used CIM practices. In the same study, a total of 88% of faculty and 84% of students stated that CIM should be included in their school's curriculum (30). Various studies have reported similar results (16,23,24,31). Explicitly including information about CIM in the current nursing,

midwifery, and dietetic education programs is significant. In some schools in the world, CIM practices have been integrated into the standard education program (32,33). Nonetheless, such courses generally include a small number of staff, such as nurse trainers with knowledge about CIM. Faculty development programs are needed to ensure that information about CIM is provided via nursing, midwifery, and dietetics curricula across education programs.

In this research, students mostly had knowledge about and used herbal medicine, acupuncture, aromatherapy, and massage therapy. Hussain et al. and James and Bah found that many CIM practices, such as dietary supplements, massage, herbal medicine, and homoeopathic medicines were used by students (34,35). Akan et al. determined that the best known CIM practices among students were herbal medicine, acupuncture, hypnosis, massage, and meditation (17). In their study, Araz et al. state that the most widely-known integrative treatment method was herbal medicine (36). In Turkey, herbals products can be found readily by everyone, at the herbalist, in herbal shops, and on markets. Therefore, the consumption of herbal products is significant. Some plants can probably be dangerous on their own or when combined with medical drugs (37). It is significant for health professionals to have information about CIM practices and to know the potential side effects and drug interactions associated with CIM.

A variety of sources of information about CIM practices were consulted by students (table 3). A majority of students obtained information from mothers or relatives, followed by friends and tv or internet. Only few students (8.5%) had received CIM training from healthcare professionals. Araz et al. found that 33.3% of the students learnt or heard about these methods from their friends, 30.2% from relatives or neighbors and 27.5% from health personnel (36). Yildirim et al. determined that the most common sources of CIM information for nursing students were books (24). Another study reported that nursing students' primary sources of information about CIM were newspapers, magazines, or television programs (23). Camurdan and Gul found that the main sources of information were books or magazines (65.5%) and schools (60.3%) (20). It appears that not enough importance is given to CIM practices in formal nursing education programs in Turkey.

CONCLUSION

Students' attitudes towards CIM can be influenced by learning, lecturers, preceptors, and practical experience. The content and focus of CIM education has to be further investigated and tailored to meet the professional needs of our future healthcare professionals. Thus, wrong and harmful uses of CIM can be prevented, and public health care standards can be improved. Half of the students reported self-use of CIM modalities, and their opinions about CIM were positive. Knowledge of CIM modalities was generally poor. The students acknowledge the need to be well educated about CIM to better advise their patients in the future.

It is known that complementary and integrative medicine have existed for centuries and they have been chosen as a method of treatment by patients worldwide as well as currently in Turkey. Nurses, midwives, and dietitians play important roles in helping patients use CIM safely and adequately. As healthcare professionals, they have to help assessing their patients' existing use of CIM practices,

answering their CIM-related questions and explaining CIM's potential impacts and contraindications. For these reasons, we recommend that students of the Faculty of Health Sciences as future healthcare professionals should be informed about CIM practices commonly used in Turkey as part of their educational programs. In this way, wrong and injurious uses of CIM practices can be avoided and health care standards can be improved.

Ethics Committee Approval: Ethics committee approval was received for this study from the local ethics committee.

Informed Consent: Informed consent was obtained.

Author Contributions: Conception/Design of study - M.K., M.T., Z.K.; Data acquisition - M.K., M.T., Z.K.; Data analysis/Interpretation - M.K., M.T., Z.K.; Drafting manuscript - M.K., M.T., Z.K.; Critical revision of manuscript - M.K., M.T., Z.K.; Final approval and accountability - M.K., M.T., Z.K.; Technical or material support - M.K., M.T.; Supervision - M.K., M.T., Z.K.

Conflict of Interest: Authors declared no conflict of interest.

Financial Disclosure: Authors declared no financial support.

REFERENCES

1. Akinci AC, Zengin N, Yildiz H, Sener E, Gunaydin B. The complementary and alternative medicine use among asthma and chronic obstructive pulmonary disease patients in the southern region of Turkey. *Int J Nurs Pract* 2011;17:571-82. [\[CrossRef\]](#)
2. Harris PE, Cooper KL, Relton C, Thomas KJ. Prevalence of complementary and alternative medicine (CAM) use by the general population: a systematic review and update. *Int J Clin Pract* 2012;66:924-39. [\[CrossRef\]](#)
3. Junaid R, Abaas M, Fatima B, Anis I, Hussain M. Attitude and practice of patients and doctors towards complementary and alternative medicine. *J Pak Med Assoc* 2012;62:865-8.
4. O'Regan P, Wills T, O'Leary A. Complementary therapies: a challenge for nursing practice. *Nurs Stand* 2010;24:35-9. [\[CrossRef\]](#)
5. Akyol AD, Oz B. The use of complementary and alternative medicine by patients with cancer: in Turkey. *Complement Ther Clin Pract* 2011;17:230-4. [\[CrossRef\]](#)
6. Araz N, Bulbul S. Use of complementary and alternative medicine in a pediatric population in southern Turkey. *Clin Invest Med* 2011;34:E21-29. [\[CrossRef\]](#)
7. Haliloglu B, Isguven P, Yildiz M, Arslanoglu I, Erguven M. Complementary and alternative medicine in children with type 1 diabetes mellitus. *J Clin Res Pediatr Endocrinol* 2011;3:139-43. [\[CrossRef\]](#)
8. Karali Y, Saglam H, Karali Z, Kilic SS. The use of complementary and alternative medicine in patients with common variable immunodeficiency. *J Investig Allergol Clin Immunol* 2011;21:480-3.
9. Tokem Y, Parlar Kilic S, Ozer S, Nakas D, Argon G. Multicenter analysis of the use of complementary and alternative medicine in Turkish patients with rheumatoid arthritis: holistic nursing practice review copy. *Holist Nurs Pract* 2014;28:98-105. [\[CrossRef\]](#)
10. Kalder M, Knoblauch K, Hrgovic I, Munstedt K. Use of complementary and alternative medicine during pregnancy and delivery. *Arch Gynecol Obstet* 2011;283:475-82. [\[CrossRef\]](#)
11. Koc Z, Topatan S, Saglam Z. Use of and attitudes toward complementary and alternative medicine among midwives in Turkey. *Eur J Obstet Gynecol Reprod Biol* 2012;160:131-6. [\[CrossRef\]](#)
12. Koksoy S. The Knowledge level and using of complementary and alternative therapies of the doctors, nurses and midwife who working at hospitals [Yataklı Sağlık Kuruluşlarında Çalışan Doktor, Hemşire ve Ebelerin Tamamlayıcı ve Alternatif Tedavi Yöntemlerini Bilme ve Kullanma Durumları]. PhD thesis. Mersin University, 2008.
13. Chang, L, Li I. Patterns of complementary therapy use by homebound cancer patients in Taiwan. *Applied Nursing Research*, 2004;17:41-7.
14. Ernst E. & Watson L.K. Midwives' use of complementary/alternative treatments. *Midwifery* 2012;28:772-7. [\[CrossRef\]](#)
15. Tougher-Decker R, Thomson CA. Complementary and alternative medicine: Competencies for dietetics professionals. *J Am Diet Assoc* 2003;103:1465-9. [\[CrossRef\]](#)
16. Avino K. Knowledge, attitudes, and practices of nursing faculty and students related to complementary and alternative medicine: a statewide look. *Holist Nurs Pract* 2011;25:280-8. [\[CrossRef\]](#)

17. Akan H, Izbirak G, Kaspar EC, Kaya CA, Aydin S, Demircan N, et al. Knowledge and attitudes towards complementary and alternative medicine among medical students in Turkey. *BMC Complement Altern Med* 2012;3:115-8. [\[CrossRef\]](#)
18. Kim SS, Erlen JA, Kim KB, Sok SR. Nursing students' and faculty members' knowledge of, experience with, and attitudes toward complementary and alternative therapies. *J Nurs Educ* 2006;45:375-8.
19. Munstedt K, Harren H, von Georgi R, Hackethal A. Complementary and Alternative Medicine: Comparison of current knowledge, attitudes and interest among German medical students and doctors. *Evid Based Complement Alternat Med* 2011;2011:1-7. [\[CrossRef\]](#)
20. Camurdan C, Gul A. Complementary and alternative medicine use among undergraduate nursing & midwifery students in Turkey. *Nurse Educ Pract* 2013;13:350-4. [\[CrossRef\]](#)
21. Laurenson M, MacDonald J, McCready T, Stimpson A. Student nurses' knowledge and attitudes toward CAM therapies. *Br J Nurs* 2006;15:612-5. [\[CrossRef\]](#)
22. Turker T, Kilic S, Kocak N, Acikel C, Turk YZ, Kir T. Knowledge and attitudes toward complementary and alternative medicine amongst Turkish nursing students. *Pakistan J Med Sci* 2011;27:379-83.
23. Uzun O, Tan M. Nursing students' opinions and knowledge about complementary and alternative medicine therapies. *Complement Ther Nurs Midwifery* 2004;10:239-44. [\[CrossRef\]](#)
24. Yildirim Y, Parlar S, Eyigor S, Sertoz OO, Eyigor C, Fadiloglu C, et al. An analysis of nursing and medical students' attitudes towards and knowledge of complementary and alternative medicine (CAM). *J Clin Nurs* 2010;19:1157-66. [\[CrossRef\]](#)
25. Greenfield SM, Brown R, Dawlatly SL, Reynolds JA, Roberts S, Dawlatly RJ. Gender differences among medical students in attitudes to learning about complementary and alternative medicine. *Complement Ther Med* 2006;14:207-12. [\[CrossRef\]](#)
26. Oberbaum M, Notzer N, Abramowitz R, Branski D. Medical students attitude to the introduction of complementary medicine into the medical curriculum in Israel. *Isr Med Assoc J* 2003;5:139-42.
27. Awad AI, Al-Ajmi S, Waheedi MA. Knowledge, perceptions and attitudes toward complementary and alternative therapies among Kuwaiti medical and pharmacy students. *Med Princ Pract* 2012;21:350-4. [\[CrossRef\]](#)
28. Furnham A, McGill C. Medical students' attitudes about complementary and alternative medicine. *J Altern Complement Med* 2003;9:275-84. [\[CrossRef\]](#)
29. Smith GD. Editorial: the need for complementary and alternative medicine familiarization in undergraduate nurse education. *J Clin Nurs* 2009;18:2113-5. [\[CrossRef\]](#)
30. Kreitzer MJ, Mitten D, Harris I, Shandeling J. Attitudes toward CAM among medical, nursing, and pharmacy faculty and students: A comparative analysis. *Altern Ther Health Med* 2002;8:44-7, 50-3.
31. Oztekin DS, Ucuzaal M, Oztekin I, Issever H. Nursing students' willingness to use complementary and alternative therapies for cancer patients: Istanbul survey. *Tohoku J Exp Med* 2007;211:49-61. [\[CrossRef\]](#)
32. Xu Y. Complementary and alternative therapies as philosophy and modalities: Implications for nursing practice, education, and research. *Home Health Care Management & Practice* 2004;16:534-7. [\[CrossRef\]](#)
33. Fenton MV, Morris DL. The integration of holistic nursing practices and complementary and alternative modalities into curricula of schools of nursing. *Altern Ther Health and Med* 2003;9:62-7.
34. Hussain S, Malik F, Hameed A, Ahmed S, Riaz H, Abbasi N, et al. Pakistani pharmacy students' perception about complementary and alternative medicine. *Am J Pharm Educ* 2012;76:art.21(7pp.).
35. James PB, Bah AJ. Awareness, use, attitude and perceived need for Complementary and Alternative Medicine (CAM) education among undergraduate pharmacy students in Sierra Leone: a descriptive cross-sectional survey. *BMC Complement Altern Med* 2014;14:438(9pp.).
36. Araz Col N, Tasdemir HS, Kilic Parlar S. Evaluation of opinions of the faculty of health sciences students about non medical alternative and traditional therapies. *Gumushane University J Health Sci* 2012;1:239-51.
37. Tan M, Uzun O, Akcay F. Trend in complementary and alternative medicine in Eastern Turkey. *J Altern Complement Med* 2004;10:861-5. [\[CrossRef\]](#)