Journal of Taibah University Medical Sciences (2015) 10(1), 74–78

Taibah University

Journal of Taibah University Medical Sciences

www.sciencedirect.com

Educational Article

Satisfaction, self-use and perception of medical students in Majmaah University, Kingdom of Saudi Arabia, towards Complementary and Alternative Medicine

Mohammed A. Al Mansour, MD [a,*], Elsadig Y. Mohamed, MD [b], Sawsan M. Abdalla, MD [b], Khalid A. Medani, MD [b], Waqas S. Mahmoud, BSc [c] and Syed A. Meraj, MD [b]

[a] *Department of Family Medicine, College of Medicine, Majmaah University, Majmaah, Kingdom of Saudi Arabia*
[b] *Department of Public Health & Community Medicine, College of Medicine, Majmaah University, Kingdom of Saudi Arabia*
[c] *Biostatistics, Department of Public Health & Community Medicine, College of Medicine, Majmaah University, Kingdom of Saudi Arabia*

Received 24 December 2014; revised 26 January 2015; accepted 26 January 2015; Available online 23 February 2015

الملخص

أهداف البحث: يتنامى الطب التكميلي والبديل في نظام الرعاية الصحية بصورة مضطردة. هنالك القليل من الأبحاث في المملكة العربية السعودية التي تناولت رضا، واستخدام وإدراك طلاب الطب لتخصص الطب التكميلي والبديل. تهدف هذه الدراسة إلى تقييم مستوى رضا طلاب كلية الطب وإدراكهم لدراسة الطب التكميلي والبديل وتحديد مدى استخدامهم الذاتي له.

طرق البحث: أجريت هذه الدراسة الوصفية على الدفعتين الأولى والثانية من دفعات طلاب كلية الطب، جامعة المجمعة، في المملكة العربية السعودية. شمل حجم العينة التعداد الكلي للدفعتين الذين درسوا منهج الطب التكميلي والبديل. وقد جمعت البيانات عن طريق الاستبانة وحللت بواسطة الحزمة الإحصائية للدراسات الاجتماعية.

النتائج: كان٣٠ طالبا (٤٣٪) راضين عن دراسة الطب التكميلي والبديل كجزء من المنهج الطبي. بينما كان بقية الطلاب غير راضين (٣٢٪) أو محايدين (٢٥٪). كما بلغ الاستخدام الذاتي للطب التكميلي بالنسبة للطلاب كما يلي: الصلاة ٤٦ (٦٦.٧٪)، ومنتجات الأعشاب ٤٢ (٦٠.٩ ٪)، والتدليك ٣٢ (٤٦.٤٪). وأظهرت الدراسة أن ٤٣ طالبا (٦٢٪) لديهم تصور إيجابي نحو ممارسة الطب التكميلي والبديل في المستقبل.

الاستنتاجات: أظهرت هذه الدراسة أن الرضا العام منخفض بين طلاب الطب لدراسة الطب التكميلي والبديل كجزء من المنهج الطبي، وكان الاستخدام الذاتي الأكثر شيوعا لممارسات الطب التكميلي والبديل من قبل طلاب الطب هو الصلاة، ومنتجات الأعشاب، والتدليك، والمكملات الغذائية، والوخز بالإبر.

الكلمات المفتاحية: رضا; الاستخدام الذاتي; إدراك؛ الطب التكميلي; الطب البديل

Abstract

Objectives: Complementary and Alternative Medicine (CAM) is a growing industry in the health care system, and the use of CAM is rapidly evolving. In the Kingdom of Saudi Arabia (KSA), little research has addressed the satisfaction, use and perception of medical students towards CAM. The objectives of the current study were to assess the level of medical students' satisfaction and perception towards studying CAM and to determine their self-use of different modalities of CAM.

Methods: This descriptive study was conducted by administering a questionnaire to the first and second batches of the medical students studying the CAM module at the College of Medicine, Majmaah University KSA. The instrument used in this study was a validated self-administered questionnaire, and the retrieved data were analysed using SPSS.

Results: Thirty students (43%) were satisfied with studying CAM as a part of the medical curriculum. The

* Corresponding address: Assistant Professor of Family Medicine, Department of Family Medicine, Majmaah University, Majmaah, Kingdom of Saudi Arabia.
E-mail: abu.amerah@hotmail.com (M.A. Al Mansour)
Peer review under responsibility of Taibah University.

ELSEVIER Production and hosting by Elsevier

 http://dx.doi.org/10.1016/j.jtumed.2015.01.009

rest of the students were either dissatisfied (32%) or neutral (25%). The most important CAM modalities self-used by the medical students were prayers (46 students or 66.7%), herbal products (42 students or 60.9%) and massage (32 students or 46.4%). Forty-three students (62%) showed a positive perception towards practicing CAM in the future.

Conclusion: This study has shown that there is an overall low satisfaction among the medical students regarding CAM as a part of the medical curriculum. The most common self-use CAM modalities by the medical students were prayers, herbal products, massage, nutritional supplements and acupuncture.

Keywords: Complementary and Alternative Medicine; Perception; Satisfaction; Self-use

Introduction

Complementary and alternative medicine (CAM) is a group of diverse medical and health care interventions, practices, products or disciplines that are not generally considered part of conventional medicine.[1] Scientific literature indicates an increased interest in complementary and alternative medicine (CAM) among the general public and a tendency towards increased use, especially in patients with chronic diseases.[2] Complementary and alternative medicine (CAM) is a growing industry in the health care system, and the use of CAM in health care is rapidly evolving. The National Center for Complementary and Alternative Medicine in the USA (NCCAM) defines CAM as a group of diverse medical and health care systems, practices and products that are not generally considered part of conventional medicine.[3] A national survey in the United States in 1993 stated that one in three adults use some sort of CAM.[4] More recently, the Centers for Disease Control and Prevention's National Center for Health Statistics reported that 62% of 31,044 adults surveyed used some form of CAM in the previous 12 months.[2]

A study conducted in Malaysia showed that there was a high prevalence of CAM use by the population, particularly the use of herb-based therapies for health issues.[5]

A study conducted in Ajman, United Arab Emirates, showed that approximately one-third of the seekers of modern medicine care also use CAM, mostly without physician advice.[6] CAM is used widely for treatment of chronic diseases in many parts of the world. In a study conducted in the Muscat region of Oman, almost half of the patients used CAM therapies for diabetes mellitus, and they had a strong faith in its effectiveness in treating patients.[7]

Attitudes and perceptions of medical students towards CAM in many countries were generally positive, and many stated that CAM includes ideas and methods from which Western medicine could benefit. The lack of evidence supporting CAM practices was considered to be the major barrier toward more students using CAM and advising their patients to use CAM in the future.[8–10] Involving CAM in the medical student curricula is a growing concern worldwide; in a study conducted in Washington, more than 75% of medical students stated that CAM should be included in the medical curricula, and 79% agreed that clinical care should integrate conventional medicine and CAM practices. With gradual scientific development and increased popularity, there appears to be a need for coordinated policy in integrating CAM into all medical curricula by taking the expectations and feedback of medical students into consideration in setting educational standards. In the United States of America, many CAM-based therapies, such as dietary supplements, massage, herbs and homoeopathic medicines, were used by medical students. Significant gender differences in attitude were observed, with male students having more conservative attitudes toward CAM use; however, a high percentage of students desired more training in CAM.[10]

In the Kingdom of Saudi Arabia, little research has addressed the satisfaction, use and perceptions of medical students towards complementary and alternative medicine. In the kingdom, there is no CAM-specialized track or post-graduate education in any health college. Eleven (12.2%) colleges offer CAM courses in their curricula. Fifteen (16.7%) colleges teach topics related to CAM in different study subjects. Five (5.6%) colleges conducted continuous medical education (CME) activities related to CAM. Among faculty members, there were only 16 CAM specialists working in seven colleges and 84 interested staff members working in 20 colleges.[11]

In a study conducted in KSA among pharmacists, 72.6% were satisfied with CAM and 79.4% indicated that they would recommend CAM to family and friends. Eighty-one per cent of pharmacists felt that they had inadequate skills and knowledge to counsel patients and 90.5% felt the professional curricula should have more components on CAM.[12] Introduction of CAM in the curricula of medical colleges is new in the Kingdom of Saudi Arabia, so knowledge about students' perception and satisfaction regarding CAM is important for planning and setting priorities and strategies.

The objectives of the study were to determine the level of medical students' satisfaction with studying CAM, to assess their perceptions towards studying CAM and to determine their self-use of different CAM modalities.

Materials and Methods

The study used a descriptive institutional-based design. The population was the first and the second batches of medical students in the College of Medicine, Majmaah University, in the Kingdom of Saudi Arabia. Majmaah, which is located in the centre of the kingdom, is one of Riyadh region's provinces and lies 180 km from the capital Riyadh.[13] The college of Medicine was established in 2010 and adopted an innovative outcome-based curriculum in medical education.[14] The college introduced CAM as a core module in the curriculum for semester six students. The course is introductory and in intended to provide an

overview of CAM practices that have been conducted with the cooperation of the National Center for Complementary and Alternative Medicine (NCCAM).

The sample size included total enumeration (69) of the first and second batches of medical students who studded the module on CAM. The data were collected using a pre-tested questionnaire after obtaining written informed consents. The questionnaire was composed of questions regarding perceptions, use and satisfaction of the students with studying CAM; it also included their suggestions to improve the module. The SPSS for Windows software, version 20 (SPSS, Chicago, Illinois, USA) was employed to analyse the data. Frequencies and percentages were used for qualitative variables.

Results

Figure 1 shows the satisfaction of the students about studying CAM. Thirty (43%) students were satisfied with studying CAM. Seventeen (25%) and 22 (32%) were neutral and dissatisfied, respectively. Regarding use of CAM modalities by medical students, results showed that the most important modalities used were prayers (46 students or 66.7%), herbal products (42 students or 60.9%), massage (32 students or 46.4%), nutritional supplements (29 students or 42.0%), acupuncture (24 students or 34.8%) and aromatherapy (17 students or 24.6%), as shown in Table 1.

In response to the perceptions of the medical students about studying CAM, 43 (62%) will utilize CAM knowledge in the future, 29 (42%) stated that knowledge gained improved their ability of thinking and problem solving, 35 (51%) improved their skills in team working and 35 (51%) improved their effective communication. The mean of the perceptions was 52%, as shown in Table 2.

Discussion

The level of satisfaction of the medical students in studying CAM was 43%. This seems to be low and may be due to the new experience because this was the first time that CAM was studied by medical students within the curriculum in the kingdom of Saudi Arabia. Students are familiar with Western medicine; therefore, they may not accept studying CAM, which they think is related to traditional medical practices. Lack of evidence supporting CAM practices was considered to be the major barrier towards studying and using CAM.[15] These findings are in line with Yildirim Y et al., who found that the satisfaction of medical students regarding CAM is low among medical students and lower compared with nursing students.[16] This level of satisfaction is also lower than the finding among pharmacists in the KSA, of whom 72.6% were satisfied with CAM.[12] Regarding the staff members, they were more satisfied with the CAM training offered at their schools.[17] Comparing medical students' satisfaction with patients' satisfaction regarding CAM, although the patients' perceptions of its overall effectiveness is low, those who do use CAM still have high levels of satisfaction.[18–20]

The results showed that the most common CAM modalities used by the medical students were prayers, herbal products, massage nutritional supplements and acupuncture. These findings are in line with the findings of a survey conducted to explore the use, knowledge and attitudes toward complementary and alternative medicine (CAM) among pharmacy students at the college of pharmacy, King Saud University, where herbal medicine, nutrition, massage, relaxation exercises, yoga and mega-dose vitamin were the most CAM used by the students.[21] This may be explained by the fact that all students are Muslims and prayers are justified as the first modality used by the students. The students

Table 1: Use of different modalities of Complementary and Alternative Medicine by medical students (n = 69).

CAM modality	Use	Per cent
Prayer/spiritual healing	46	66.7
Herbal medicine	42	60.9
Massage	32	46.4
Nutritional supplements	29	42.0
Acupuncture	24	34.8
Aromatherapy	17	24.6
Cauterization	16	23.2
Naturopathy	16	23.2
Music	14	20.3
Chiropractic	13	18.8
Meditation	12	17.4
Bio-electromagnetic therapies, e.g., magnets	11	15.9
Hypnosis/guided imagery	11	15.9
Cupping (Hijama)	11	15.9
Osteopathy	10	14.5
Homoeopathy	10	14.5
Rolfing (structural reintegration)	7	10.1

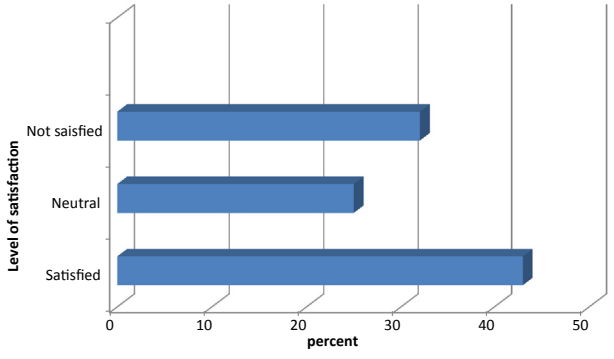

Figure 1: Level of medical students' satisfaction regarding CAM (n = 69).

Table 2: Perception of medical students about studying Complementary and Alternative Medicine (CAM), n = 69.

Perception	Agree	Neutral
Utilization of CAM knowledge in the future	43	62%
Improvement of ability to think and solve problems	29	42%
Improvement of skills in working with teams	35	51%
Improvement of effective communication	35	51%
	Mean = 52%	

suggested their needs for more lectures in prophylactic and herbal medicine to improve the benefits. These findings contradict the results of a study conducted in University of Texas, where the most common therapies used were massage, deep breathing exercises, yoga, chiropractic care and meditation.[22]

The results showed that 43 (62%) of the students will utilize the CAM knowledge that they learned in the future. This finding is less than the findings of a study conducted in Ireland, the United States, Turkey and Saudi Arabia, where most medical students had positive attitudes towards studying CAM and are willing to utilize CAM in the future.[8–10] In studies conducted in Canada and Malaysia, medical students showed lower propensities for future utilization of CAM compared with students from other disciplines.[23,24]

The results showed that 29 (42%) of the medical students stated that the CAM module helped them improve their ability to think and solve problems. The present study showed that the CAM module improved the skills of half of the students in team-work. Thirty-five (51%) of the students stated that the CAM module helped them to improve effective communication and team-work. This may be explained by the challenges facing CAM education: the difficulty in specifying measurable objectives, identifying valid indicators and evaluating the attainment of desired outcomes.[25]

Conclusion

This study has shown that there is an overall low satisfaction among the medical students regarding CAM as a part of the medical curriculum. The most commonly self-used CAM modalities by the medical students were prayers, herbal products, massage, nutritional supplements and acupuncture. The perception of the medical students towards studying CAM is average because more students still need to accept CAM for CAM to be considered as an important part of the healthcare system.

Financial disclosure

There are no financial support in this work.

Authors' contribution

All of the authors contributed equally in this work.

Conflicts of interest

The authors have no conflict of interest to declare.

Acknowledgements

The authors would like to acknowledge the Saudi National Center for Complementary and Alternative Medicine. We would also like to extend our thanks to the medical students of the College of Medicine, Majmaah University Kingdom of Saudi Arabia who participated in this work.

References

1. Wardwell WI. Alternative medicine in the United States. **Soc Sci Med 1994**; 38(8): 1061–1068.
2. Eisenberg DM, Davis RB, Ettner SL, et al. Trends in alternative medicine use in the United States, 1990–1997: results of a follow-up national survey. **J Am Med Assoc 1998**; 280(18): 1569–1575. http://dx.doi.org/10.1001/jama.280.18.1569.
3. National Center for Complementary and Alternative Medicine, Ireland. *What is complementary and alternative medicine (CAM)?*; 2008 [updated July 2011; cited September 18, 2011]. Online document at: http://www.nccam.nih.gov/health/whatiscam/ Accessed September 18, 2011.
4. Eisenberg DM, Kessler RC, Foster C, Norlock FE, Calkins DR, Delbanco TL. Unconventional medicine in the United States: prevalence, costs, and patterns of use. **N Engl J Med 1993**; 328(4): 246–252.
5. Siti ZM, Tahir A, Farah AI, Fazlin SM, Sondi S, Azman AH, Maimunah AH, Haniza MA, Siti Haslinda MD, Zulkarnain AK, Zakiah I, Zaleha WC. Use of traditional and complementary medicine in Malaysia: a baseline study. **Complement Ther Med 2009**; 17(5–6): 292–299. http://dx.doi.org/10.1016/j.ctim.2009.04.002 [Epub 2009 Nov 6].
6. Mathew E, Muttappallymyalil J, Sreedharan J, John LJ, John J, Mehboob M, Mathew A. Self-reported use of complementary and alternative medicine among the health care consumers at a Tertiary Care Center in Ajman, United Arab Emirates. **Ann Med Health Sci Res 2013 Apr-Jun**; 3(2): 215–219. http://dx.doi.org/10.4103/2141-9248.113665.
7. Al-Kindi RM, Al-Mushrafi M, Al-Rabaani M, Al-Zakwani I. complementary and alternative medicine use among adults with Diabetes in Muscat Region, Oman. **Sultan Qaboos Univ Med J Feb 2011**; 11(1): 62–68.
8. Loh KP, Ghorab H, Clarke E, Conroy R, Barlow J. Medical students' knowledge, perceptions, and interest in complementary and alternative medicine. **J Altern Complement Med 2012**; 18: 1–7.
9. Akan H, Izbirak G, Kaspar EC, Kaya CA, Aydin S, Demircan N, Bucaktepe PG, Özer C, Sahin HA, Hayran O. Knowledge and attitudes towards complementary and alternative medicine among medical students in Turkey. **BMC Complement Altern Med 2012**; 12: 115. From: http://www.biomedcentral.com/1472-6882/12/115.
10. Chaterji PR, Rochelle E, Amri TH, Lumpkin M, morosi SBW, Haramati A. A large-sample survey of first and second year medical student attitudes toward complementary and alternative medicine in the curriculum and in practice. **Altern Ther 2007**; 13(1): 30–35.
11. Al-Rukban MO, AlBedah AMN, Khalil MKM, El-Olemy A, Tawfik K, Hussein AA. Status of complementary and alternative medicine in the curricula of health colleges in Saudi Arabia **2012**; 20(5): 334–339.
12. Ling Koh H, Teo HH, Hui-Ling Ng. **J Altern Complement Med 2003**; 9(1): 51–63. http://dx.doi.org/10.1089/107555303321222946.
13. Http://www.En.wikipedia.org. Al-Majma'h. Kingdom of Saudi Arabia (accessed 13.12.14).
14. Http://www.Mu.edu.sa. Majmaah University. Kingdom of Saudi Arabia (accessed 13.12.14).
15. Hussain S, Malik F, Hameed A, Ahmed S, Riaz H, Abbasi N, Malik M. Pakistani pharmacy students' perception about complementary and alternative medicine. **Am J Pharm Educ 2012**; 76(2): 1–7.
16. Yildirim Y, Parlar S, Eyigor S, Sertoz OO, Eyigor C, Fadiloglu C, Uyar M. An analysis of nursing and medical students' attitudes towards and knowledge of complementary and alternative medicine (CAM). **J Clin Nurs 2010 Apr**; 19(7–8): 1157–1166. http://dx.doi.org/10.1111/j.1365-2702.2009.03188.

17. April KT, Gaboury I. A survey of Canadian regulated complementary and alternative medicine schools about research, evidence-based health care and interprofessional training, as well as continuing education. **BMC Complement Altern Med 2013**; 13(374): 2–7. http://www.biomedcentral.com/1472-6882/13/374.
18. Tovey P, Broom A, Chatwin J, Hafeez M, Ahmad S. Patient assessment of effectiveness and satisfaction with traditional medicine, globalized complementary and alternative medicines, and allopathic medicines for cancer in Pakistan. **Integr Cancer Ther 2005 Sep**; 4(3): 242–248.
19. Avci A, Koç Z, Sağlam Z. Use of complementary and alternative medicine by patients with cancer in northern Turkey: analysis of cost and satisfaction. **J Clin Nurs 2012 Mar**; 21(5–6): 677–688. http://dx.doi.org/10.1111/j.1365-2702.2011.03732.x. Epub 2011 Jun 30.
20. Marian F, Joost K, Saini KD, Ammonn Kv, Thurneysen A, Busato MA. Patient satisfaction and side effects in primary care: an observational study comparing homeopathy and conventional medicine. **BMC Complement Altern Med 2008**; 8: 52. http://dx.doi.org/10.1186/1472-6882-8-52.
21. Al-Omar HA, Al-Arifi MN. Pharmacy students' use, knowledge and attitudes toward complementary and alternative medicine at Riyadh region, Saudi Arabia. **Int J Green Pharm 2011**; 5(1): 16–23.
22. Amy L, Nowak V, Dorman SM. Social-cognitive predictors of college student use of complementary and alternative medicine. **Am J Health Educ 2008**; 39(2): 80–90.
23. Baugniet J, Boon H, Ostbye T. Complementary/alternative medicine: comparing the views of medical students with students in other health care professions. **Fam Med 2000**; 32(3): 178–184.
24. Hassan I, Abd Hadi NH, Keng SL. Complementary and alternative medicine (CAM): a comparative study between nursing and medical students. **Educ Med J 2012**; 4(2): 94–98. http://dx.doi.org/10.5959/eimj.v4i2.24.
25. Stratton TD, Benn RK, Lie DA, Zeller JM, Anne AR. Evaluating CAM education in health professions programs. **Acad Med 2007**; 82(10): 956–961.