



Complementary and alternative medicine: understanding, attitude and usage among Turkish health sciences and medical students

Tamamlayıcı ve alternatif tıp: Türk sağlık bilimleri ve tıp öğrencileri arasında bilgi, tutum ve kullanma durumları

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Abstract

Introduction: Although many studies conducted have revealed the effectiveness of complementary and alternative medicine (CAM), as much as the modern medicine, CAMs today are generally being used in the light of conventional habits rather than the scientific background. The aim of the present study is to evaluate medical students' attitudes towards, and use of traditional treatment that will be able to recommend or discredit this method of treatment to people in the future.

Methods: This descriptive study has been conducted with 268 male and 369 female students. Questionnaire about students' attitude towards and use of complementary and alternative medicine (CAM) has been completed and analyzed by statistical software.

Results: The frequency of the CAM usage among students who participated in the study was found as 37%. The most well-known methods are religious practices/prayer (16.0%), massage (11.8%), cupping (5.0%) and hydrotherapy/spa practices. The most commonly used CAM methods were found as religious practices/prayer (32.3%), massage (27.5%), use of vitamin (24%) and herbal remedies (21.4%). The most common reason for using these methods was determined as "relaxation" (35%). The acupressure (86.8%), chiropractic (86.5%) and Ayurveda (79.9%) are the CAM methods that students have never had information before.

Discussion and Conclusion: Our results suggested that the students are interested in CAM methods but it has been determined that although they use the method, they don't have knowledge about it. It has been thought that eliminating students' lack of knowledge is an important issue for proper use of the CAM methods and informing the society properly.

Keywords: Complementary and alternative medicine; medicine education; medical students.

Özet

Amaç: Yapılan birçok araştırma, modern tıp kadar tamamlayıcı ve alternatif tıp (TAT) etkinliğini ortaya koymasına rağmen, günümüzde TAT'lar bilimsel geçmişten çok geleneksel alışkanlıklar ışığında kullanılmaktadır. Bu araştırmanın amacı, tıp öğrencilerinin gelecekte TAT yöntemlerini önerebilen veya geleneksel tedaviye yönelik tutumlarını ve bu tedaviyi kullanmalarını değerlendirmektir.

Gereç ve Yöntem: Tanımlayıcı tipteki bu çalışma Aralık 2015 tarihinde 637 öğrenci ile yapıldı. Veri toplama aracı olarak bilimsel kaynaklar desteği ile hazırlanan anket formu kullanıldı. Elde edilen veriler SPSS 22.0 bilgisayar paket programında değerlendirildi.

Bulgular: 369 kadın 268 erkekten oluşan katılımcılar arasında tamamlayıcı ve alternatif tıp konusunda en iyi bilinen yöntemler olarak dini yöntemler/dua (%16.0), 'masaj' (%11.8), 'hacamat' (%5.0) ve hidroterapi/kaplica" öne çıkmaktadır. Öğrencilerin hiç bilgilerinin olmadığı TAT yöntemleri ise 'akupressur' (%86.8), 'chiropraktik' (%86.5) ve 'ayurveda' (%79.9) olduğu belirlendi. Çalışmada katılımcıların TAT kullanma oranı %37 olarak belirlendi. Öğrencilerin kendilerinde denediği TAT yöntemleri; dini yöntemler/dua (%32.3), masaj (%27.5), vitamin kullanımı (%24) ve bitkisel tedavi (%21.4) olduğu görüldü. TAT yöntemlerini kullanma sebeplerinin ise daha çok "rahatlama amaçlı" (%35) olduğu tespit edildi. TAT kullananların çoğunun (%59.5) kullanım sonrasında herhangi bir komplikasyon ile karşılaşmadıkları belirlendi.

Sonuç: Çalışmamızda öğrencilerin tamamlayıcı ve alternatif tıp yöntemlerine karşı ilgili oldukları, önemli bir kısmının alternatif tedavi yöntemlerini kullanmasına rağmen bilgi düzeylerinin yetersiz olduğu belirlenmiştir. Öğrencilerin bilgi eksikliğinin giderilmesinin TAT'ın doğru kullanımı ve toplumun doğru bilgilendirilmesi bakımından önemli olduğu düşünülmektedir.

Anahtar Sözcükler: Tamamlayıcı ve alternatif tıp, tıp eğitimi; tıp öğrencileri.



Complementary and alternative medicine (CAM) practices point out many methods which are used in addition to conventional treatments or instead of these treatments by patients.^[1-3] CAM practices are mostly used in eastern medical practices. Alternative treatment methods are applied sometimes as a support for medical treatments if usual medication does not work. It is also sometimes applied alone.^[4] Especially, it seems that these practices are used so much more when medical treatments are inadequate or side effects occur.^[5-7]

Despite the limited evidence for the effectiveness of most CAM practices, they have been being used for centuries and their use have been increasing all over the world in recent years.^[1,2,5,8-11] The use of CAM methods have been increasing in our country too in parallel with the world in recent years even though the modern medicine is basic in healthcare. One of the main reasons of this increase is the belief that natural products are safe and harmless.^[12] Nowadays, this belief for the CAM practices can be easily exploited. Exploitation can be prevented if it is applied by educated people who have licenses.^[13]

In some countries, CAM practices are subjected to official health policies and are tried to be brought under scientific control.^[14] In 1998, National Centre for Complementary and Alternative Medicine (NCCAM) is established in the USA under National Institutes of Health (NIH), because of increasingly widespread practices and absence in literature. The aim of this centre is to examine credibility and effectiveness of the CAM practices and to integrate scientifically proven practices into conventional treatments.^[15] NCCAM complementary and alternative treatments are classified into five groups as mental-body practices, alternative medicine practices, treatments based on biology, manipulative and based on body practices and energy therapies (bioelectromagnetic).^[16]

In our country, CAM practices are brought under the control of official health policies when the Regulation on Traditional and Complementary Medicine Practices came into force in Official Gazette with number 29158, in 2014.^[17] In this regulation, certified members of health professionals were authorized under the supervision of a physician for 15 methods/practices, such as Cupping Therapy (with cupping glasses), Acupuncture, Apitherapy, Phytotherapy, Hypnosis, Leech Therapy, Homeopathy, Chiropractic Care, Maggot (larvae) Therapy, Mesotherapy, Ozone Therapy, Prolotherapy, Reflexology, Osteopathy and Music Therapy.^[18] With this regulation, administering these CAM practices under control by authorized people as a result of trainings and prohibiting others to do them have been aimed.^[19] In Austria and Germany, almost all CAM practices are carried out by doctors who have licences. Some countries such as Australia, India, Malesia and the Far Eastern Countries are working on new policies about integration, supporting and regulation.^[13]

There are very less reserachs about physicians' and other health staff's opinion and knowledge for CAM practices in our country. International studies show that physicians' interest

in CAM practices has been increasing in parallel with a large section of the society.^[9] Physicians and other health staff play an important role in helping patients for use of CAM practices safely and accurately. Therefore, as future, physicians, other health staff, medical and other health science students should have sufficient knowledge and education on CAM practices. Therefore, this study has been conducted in order to determine the attitude and usage of students of Health Services Vocational School and Faculty of Medicine of Sakarya and Ataturk Universities about CAM practices, and reveal the reasons for tendency to complementary treatment methods.

Materials and Method

Participants

This study was conducted with 1st and 2nd grade students of Health Services Vocational School and Faculty of Medicine of Sakarya and Ataturk Universities in the 2015-2016 academic year. Students have never been taught about CAM during their curricula. In the study wasn't selected sample. Study protocol was approved by the Local Ethics Committee of the university (Ethics Committee Number; 71522473/050.01.04/126) and each subject was provided written and informed consent.

Questionnaire Forms

The data were collected by using a questionnaire consisting of three parts and twenty-five questions. In the first part of the questionnaire (eleven questions); students were asked about identifying characteristics such as gender, age, grade, social security, employment status of parents, educational background of parents. In the second part (five questions) questions about their knowledge level of CAM methods and in the third part, (nine questions), their opinions about CAM were questioned.

The questionnaire was given to the students, who agreed to participate, and they were asked to fill the forms by themselves. Answering the questionnaire lasts about 15 minutes. Questionnaire forms were collected after filled.

Statistical Analysis

Codification and evaluation of the collected data was made by SPSS-22.00-packet software. Frequency calculations were used in the evaluation. Digital data were detected by using approximation, standard deviation and percent in descriptive statistics.

Results

General Characteristics of Participants

When socio-demographic characteristics distributions of students participated in the study was examined; it has been seen that 369 (57.9%) students were female and 268 (42.1%) were male. 247 (38.8%) of the students were 19-year-old and the av-

average age of the participants was found as 19.49. 403 (63.3%) of the students were studying at first grade and 234 (36.7%) of them were at second grade of the university. Mother of 53.7% of students and fathers of 34.4% of students were primary school graduates, while mothers of 73.3% were housewives and fathers of 37.8% were self-employed (farmers, workers) and 31.9% were officers, respectively (Table 1).

Table 1. Socio-demographic characteristics distributions of students

| Characteristics of the participants | n=637 | % |
|-------------------------------------|-------|------|
| Gender | | |
| Female | 369 | 57.9 |
| Male | 268 | 42.1 |
| Grade | | |
| 1 st Grade | 403 | 63.3 |
| 2 nd Grade | 234 | 36.7 |
| Educational background of mother | | |
| Illiterate | 47 | 7.4 |
| Literate | 40 | 6.3 |
| Elementary school degree | 342 | 53.7 |
| High school degree | 121 | 19 |
| Bachelor degree | 87 | 13.7 |
| Educational background of father | | |
| Illiterate | 29 | 4.6 |
| Literate | 7 | 1.1 |
| Elementary school graduates | 219 | 34.4 |
| High school graduates | 185 | 29 |
| Bachelor graduates | 197 | 30.9 |
| Employment status of mother | | |
| Housewife | 467 | 73.3 |
| Self-employed | 62 | 9.7 |
| Retired | 38 | 6.0 |
| Officer | 70 | 11 |
| Employment status of father | | |
| Unemployed | 41 | 6.4 |
| Self-Employed | 241 | 37.8 |
| Retired | 152 | 23.9 |
| Officer | 203 | 31.9 |
| Longest lived residence | | |
| City center | 415 | 65.1 |
| District | 164 | 25.7 |
| Village | 58 | 9.1 |
| Family type | | |
| Nuclear | 504 | 79.1 |
| Extended | 122 | 19.2 |
| Divorced | 11 | 1.7 |
| Number of brothers and sisters | | |
| 0 | 25 | 3.9 |
| 1 | 185 | 29 |
| 2 | 183 | 28.7 |
| ≥3 | 244 | 38.3 |

Determination of participants' awareness of CAM

Considering the participants' awareness of CAM methods; the best-known CAM methods by students were identified as religious practices/prayer (16.0%), massage (11.8%), cupping (5.0%) and hydrotherapy/spa practices. It has been understood that they don't have information about several CAM methods such as acupressure (86.8%), chiropractic (86.5%) and Ayurveda (79.9%) (Table 2).

The Use of CAM Methods

37% of the students participated in the study stated that they used CAM methods themselves, and the remaining 63% never used these methods. The most commonly used CAM methods were found as religious practices/prayer (32.3%), massage (27.5%), use of vitamin (24%), herbal remedies (21.4%), hydrotherapy/spa (12.7%), painting/music/arts (12.1%), relaxation techniques (11.1%) and cupping (10.7%), respectively. Participants never tried aromatherapy, chiropractic, shark cartilage and ozone therapy methods (Fig. 1).

It has been determined that the majority of participants (52.4%) obtained information about CAM methods from the Internet, 26.1% from television, 23.4% from friends/relatives/neighbours, 20.3% from health staff, 19.6% from scientific books and journals and 10.4% from newspapers, respectively. 48.4% of the participants think that these methods are useful, 36.1% are undecided and the remaining 15.5% think that these methods are not useful. When considering the purpose of using CAM methods, 30.5% use these methods for relaxation, 18.4% for treatment, 17.4% for pain relief, 15.4% for support and 8.9% of the participants think that these methods can be used to be protected from diseases. 35.2% of the participants stated that they felt relaxed while 27.8% said that their pain was reduced and 5.8% stated that complications occurred after using CAM methods (Table 3).

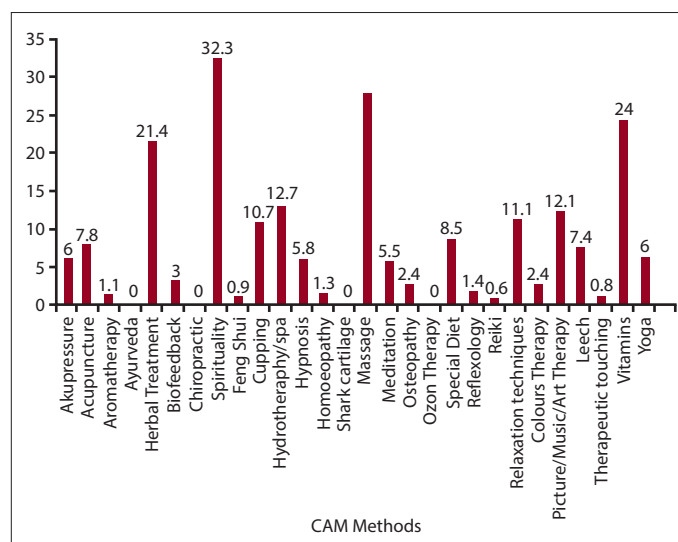


Figure 1. CAM methods used by the participants.

Table 2. Participants awareness status of CAM methods

| CAM methods | I have no idea % (n=637) | I heard its name % (n=637) | I know just a little % (n=637) | I have enough information % (n=637) | I know the method with all aspects % (n=637) |
|----------------------------|-------------------------------------|---|---|--|---|
| Acupressure | 86.8 | 10.0 | 2.4 | 0.8 | 0.0 |
| Acupuncture | 21.7 | 22.8 | 84.1 | 14.0 | 1.6 |
| Aromatherapy | 60.4 | 26.1 | 11.5 | 1.7 | 0.3 |
| Ayurveda | 79.9 | 12.1 | 6.3 | 1.6 | 0.2 |
| Herbal treatment | 16.0 | 17.1 | 47.1 | 17.6 | 2.2 |
| Bioenergy | 37.4 | 32.2 | 23.1 | 6.1 | 1.1 |
| Chiropractic | 86.5 | 9.4 | 1.9 | 2.0 | 0.2 |
| Religious Methods/Prayer | 16.5 | 9.4 | 27.3 | 30.8 | 16.0 |
| Feng Shui | 56.4 | 22.9 | 13.7 | 6.3 | 0.8 |
| Cupping | 27.6 | 16.5 | 31.4 | 19.5 | 5.0 |
| Hydrotherapy/Spa | 17.3 | 14.6 | 37.2 | 25.9 | 5.0 |
| Hypnosis | 15.7 | 18.8 | 43.0 | 18.7 | 3.8 |
| Homeopathy | 64.8 | 23.9 | 8.6 | 2.2 | 0.5 |
| Shark cartilage | 70.6 | 15.4 | 9.3 | 3.8 | 0.9 |
| Massage | 12.9 | 6.8 | 41.3 | 27.3 | 11.8 |
| Meditation | 21.0 | 23.7 | 36.6 | 15.1 | 3.6 |
| Osteopathy | 65.0 | 22.9 | 8.0 | 3.0 | 1.1 |
| Ozone Therapy | 41.1 | 33.0 | 18.8 | 5.3 | 1.7 |
| Special diets | 30.5 | 24.3 | 25.9 | 15.5 | 3.8 |
| Reflexology | 72.8 | 19.9 | 4.9 | 2.0 | 0.3 |
| Reiki | 82.1 | 12.4 | 3.0 | 1.9 | 0.6 |
| Relaxation techniques | 79.0 | 12.1 | 6.0 | 2.4 | 0.6 |
| Treatment with Colors | 51.3 | 30.8 | 14.1 | 2.0 | 1.7 |
| Painting/Music/Art Therapy | 18.4 | 26.1 | 36.4 | 14.4 | 4.7 |
| Leech | 20.9 | 20.4 | 37.7 | 15.9 | 5.2 |
| Therapeutic Touch | 63.4 | 22.3 | 8.9 | 3.6 | 1.7 |
| Vitamins | 17.9 | 17.0 | 34.5 | 25.0 | 5.7 |
| Yoga | 15.4 | 24.5 | 38.8 | 16.6 | 4.7 |

Opinions of the Participants about the Use of CAM Methods

When the opinions of students about complementary and alternative treatment methods were examined; 40.3% of the students stated that it is necessary to obtain more scientific evidence before using these methods therapeutically, 28.6% said that these methods are as effective as medical treatment methods, 24% stated that these methods can be used for treatment of simple diseases and they are not appropriate for the use of non-curable diseases, 23.9% said that these methods prepare the body to fight against diseases and better results can be obtained from medical treatments, 19.9% stated that these methods can be used without consulting a doctor and 17.6% of the participants stated that complementary and alternative treatment methods make people delay to get the right medical treatment and these methods can be used as the last option if medical treatment methods don't work (Table 4).

Discussion

In our study, the best-known CAM methods by students were identified as religious practices/prayer, massage, cupping and hydrotherapy/spa practices, whereas they don't have information about several CAM methods such as acupressure, chiropractic and ayurveda. According to a study conducted in this field, the best known CAM methods are "prayer" and "massage", whereas the least known methods are "Ayurveda" and "chiropractic" among students.^[9] In another study conducted to investigate the medical school students' knowledge of CAM methods, the best-known CAM methods were reported as "diet", "massage" and "vitamins", while the least known method was reported as "acupressure".^[20] Similarly, it has been reported that hydrotherapy/spa and massage are the most well-known CAM methods.^[21] In a study conducted with nurses, it was determined that CAM methods such as aromatherapy, acupuncture, herbal treatment, yoga, bioenergy, vitamins, relaxation techniques, hydrotherapy/spa, hypnosis,

Table 3. Distribution of the students according to use of CAM methods

| | n | % |
|--|-----|------|
| The use of complementary alternative treatment methods (n=637) | | |
| I used | 236 | 37.0 |
| Never used | 401 | 63.0 |
| The reason why CAM methods are used* | | |
| Treatment | 117 | 18.4 |
| Support | 98 | 15.4 |
| Protection | 57 | 8.9 |
| Relaxation | 194 | 30.5 |
| Pain relief | 111 | 17.4 |
| Channels used to learn CAM methods* | | |
| Internet | 334 | 52.4 |
| Television | 166 | 26.1 |
| Newspapers | 66 | 10.4 |
| Scientific Books and Journals | 125 | 19.6 |
| Health Personnel | 129 | 20.3 |
| Friends/Relatives/Neighbors | 149 | 23.4 |
| Finding CAM methods useful or not (n=637) | | |
| Useful | 308 | 48.4 |
| Not useful | 99 | 15.5 |
| Not decided/I have no idea | 230 | 36.1 |
| Benefits of the methods used (n=637) | | |
| Relaxation | 224 | 35.2 |
| Pain relief | 177 | 27.8 |
| Not decided/I have no idea | 236 | 37.0 |
| Complications occurred due to the methods used (n=637) | | |
| Yes, some complication occurred | 37 | 5.8 |
| No complication was occurred | 379 | 59.5 |
| Not decided/I have no idea | 221 | 34.7 |

*Students gave multiple answers in response to the questions why they used CAM methods and how they learnt these methods.

massage and painting/music/art/dancing are well known among them, while nurses don't know some CAM methods such as acupressure, Ayurveda, chiropractic, homeopathy, osteopathy, reflexology, reiki, therapeutic touch and Tai Chi. [22] These results shows similarity with our results. According to the results of our study and earlier studies in the litera-

ture, some methods are not very well known in our country. This can be explained by that some of these methods are not known in our country and educational system doesn't offer sufficient information about these methods. In various countries, there are studies conducted to determine medical school students' knowledge of CAM methods in the literature. Ac-

Table 4. Distribution of opinions of students about complementary and alternative treatment methods

| Assessment of usage status | Yes % (n=637) | No % (n=637) | I have no idea % (n=637) |
|---|------------------|-----------------|-----------------------------|
| CAM methods can be used without consulting a doctor. | 19.0 | 47.1 | 33.9 |
| CAM methods are as effective as medical treatment methods. | 28.6 | 37.4 | 34.1 |
| CAM methods prepare body to fight against diseases. | 23.9 | 41.6 | 34.5 |
| CAM methods can be used for simple diseases but they cannot be used for non-curable diseases. | 24.0 | 41.3 | 34.7 |
| CAM methods can be used as the last option if medical treatment doesn't work | 17.6 | 47.9 | 34.5 |
| It is necessary to obtain scientific evidence before using CAM methods. | 40.3 | 25.3 | 34.4 |
| CAM methods make people delay to get the right medical treatment. | 17.6 | 47.6 | 34.9 |

cording to a study conducted in Iran, unlike our results, 93.5% of the students use alternative treatments and the best known (90%) method was reported to be acupuncture while the least known (12%) method was reported as homeopathy.^[23] This is because CAM methods have been used for many years in this country and people have knowledge about it.

In our study, the frequency of the use of CAM among students participated in the study was found as 37%. In our country, it was determined that 70% of adults over 18 years used at least one of the alternative treatment methods.^[24] According to another study conducted with students of faculty of health sciences, 40.6% of the students used at least one of the CAM methods, while 20.6% used multiple CAM methods.^[17] In Malaysia, more than half of the students of faculty of pharmacy reported that they used CAM methods at least one time.^[25] The reason why the results differ among studies might be traditional differences or not considering the method used as a CAM method.

The most common used CAM methods were found as religious practices/prayer, massage, use of vitamin, herbal remedies, hydrotherapy/spa, painting/music/arts, relaxation techniques and cupping, respectively. Participants never tried aromatherapy, chiropractic and shark cartilage methods. According to a study conducted to investigate whether doctors and nurses know and use CAM methods, 50% of nurses and 27% of doctors use CAM methods for themselves.^[26] There are some other studies in the literature supporting the results of our studies. In a study conducted with nurses, it was reported that 37% of the nurses use CAM methods for themselves, whereas in another study, it was reported that 42.6% of the nurses personally use CAM methods.^[27,28]

In our study, 35.2% of the participants stated that they felt relaxed while 27.8% stated that their pain was reduced and 5.8% said that complications occurred after using CAM methods. When the purpose of using CAM methods are examined, 30.5% of the respondents think that the methods can be used for relaxation and 18.4% think that these methods can be used to be protect from diseases. The earlier studies support that patients using CAM methods use these methods for similar purposes. In a study conducted to investigate why patients use CAM practices; it was determined that they use these methods to defeat the disease, relax physically and feel better psychologically.^[29] In a study conducted in the field of CAM methods, it was reported that nurses often use CAM methods in case of infection, mental distress, pain and fatigue conditions, while doctors personally use CAM methods under the conditions of pain, mental distress and infection.^[26]

Conclusion

According to the results of the study, the rate of students who know the CAM methods in medicine faculties is so low, and over the half of students of medical schools and other health sciences never used any CAM methods. These methods are

mostly used for relaxation purposes and the most widely used CAM methods are religious practices/prayer. They don't have sufficient information about CAM methods. In line with the results of the study, scientific data sources about CAM methods should be created to be used in medical education and CAM methods should be added to the curriculum of medical education and health staff training faculties. Having well-equipped people, who will administrate CAM methods, is considered very important for effectiveness and control of these practices and prevention of complications that may occur.

Conflict of interest: There are no relevant conflicts of interest to disclose.

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