Full Length Research Paper

The knowledge and attitude of medical students of Rafsanjan University of Medical Sciences about complementary and alternative medicine 2010

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This study was conducted to determine the knowledge and attitude of the medical students of Rafsanjan University of Medical Sciences about complementary and alternative medicine. This descriptive study was done on all medical students of Rafsanjan University of Medical Science (n = 295) with a census method; however, 89.8% (n = 265) of the students filled the questionnaires completely. The data used for this study were collected through the questionnaires that comprised demographic questions and knowledge and attitude questions about complementary and alternative medicine. The data were stored in $SPSS_{16}$ software and analyzed by descriptive statistics and Chi^2 and Fisher statistical test. The $P<0.05$ was considered at a statistical significance level. The findings of this study showed that 34.7% (n = 92) of the students have weak knowledge and 13% (n = 4.9) have a positive attitude about complementary and alternative medicine. The relationship between attitude toward complementary and alternative medicine and age was shown in the sample of below 20 years old, with 3.1% (n = 1) having positive attitude and 96.9% (n = 31) having negative attitudes. The samples between 20 to 25 years old showed that 2.9% (n = 6) have positive attitude, and the samples for more than 25 years old showed that 21.4% (n = 6) have positive attitude as well. Cases with good knowledge and positive attitude were 13% (n = 12) and those with good knowledge and negative attitude were 87% (n = 80). For promotion of their knowledge, continuous education is needed in order to develop a proper attitude about this issue.

Key words: Knowledge, attitude, complementary and alternative medicine, medical students, Rafsanjan.

INTRODUCTION

Complementary and alternative medicine (CAM), by the National Center Complementary and Alternative Medicine, is defined as a group of different types of medicine and health care system and practices and technology which have not been presented yet as part of conventional medicines. Alternative medicine includes a variety of methods of treatment or prevention that its efficacy with conventional medicine or biologic is different.

CAM still have many critics; the first group of physicians are those that have ignored and considered it to be worthless and are not even willing to talk about it,

while the second group in a strong position are suspicious to CAM and they said it is non-scientific or even anti-scientific. However, many of the CAM methods are applied as a modern medicine. In alternative medicine, physicians treat patients as a whole, without special emphasis on the disorder or disease. Treatment with alternative medicine will find more recognition day by day and it is estimated that one out of every three persons used this treatment in his lifetime for common diseases such as back problems, headaches, anxiety and depression (Schimpff, 1997). Many physicians do not know much about this medicine or do not believe it. In contrast, many physicians and even ordinary people use this technique for disease treatment (Eisenberg et al., 1998). Thus, regarding using of this method, information and attitude of physicians to this issue are important (John and Joseph, 1999). Considering the increased

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application of this medicine in our country regarding the variety like acupuncture and airoda etc., knowledge and attitude of physicians in this case need to be increased by training like other countries (Wetzel et al., 2003).

In many parts of Africa, Asia and Latin America, this medical care is the only way for treatment. The alternative methods are also growing in Australia, Europe and North America. A recent report from Harvard University has shown that almost half of U.S. populations are improving their health by using complementary and alternative medicine (Mosavizadeh and Ansari, 2008).

In Iran, it is observed that some treat patients after failure of modern medicine with the modern approach, outcome refer to those who have knowledge of traditional medicine it may ties rooted in the nation to long-standing beliefs and traditions and perhaps because of that success is sometimes earned (Mirzai et al., 2011). Always talk about traditional, complementary and alternative medicine having wide range of reactions, however, traditional medicine in developing countries and the same time, the use of complementary and alternative medicine in developed countries are increasingly expanding.

In many parts of the world, policy makers, health authorities and people are faced with various questions about the safety, efficacy, quality, accessibility, how to maintain and preserve and expand the use of such methods to health care (Rezaezadeh, 2005). Nowadays these methods beside conventional medicines are widely used to treat and return health to patients and also prevent disease in healthy persons.

Studies in other countries suggest substantial use of this method that every day more people are interested in alternative and complementary medicine, despite improving and progress made in advertising of the medical classic (Goldbeck et al., 1996; Eisenberg et al., 1998). Analysis of people utilization of alternative and traditional medicine is the first step in planning for expanding the application of useful method of alternative, complementary and traditional medicine methods and limit non effective techniques (Tehrani Banihashemi et al., 2005).

Despite all the progress made on the medical and general advertising of classic treatment still, many patients are interested in complementary medicine in Rafsanjan area and use of this medicine. So the extending of the complementary and alternative therapies with traditional medical practice seems to be necessary. We attempt to study with the aim to determine knowledge and attitudes of Rafsanjan University of Medical Sciences students in complementary and alternative medicine.

MATERIALS AND METHODS

This descriptive study was done on all medical students of Rafsanjan University Medical Science (n = 295) in a census method but only 89.8% (n = 265) samples were filled the questionnaires

completely. At the first step, with the consent of the authorities of the various units of Rafsanjan University of Medical Sciences, then by personal satisfaction of medical students with anonymous code, the knowledge and attitude questionnaires were filled by the samples.

In this study the data collection method was used a questionnaire which consists of two parts; in the first part of demographic data (with three questions) subjects were questioned and in the second part some questions about knowledge (18 questions) and attitude (19 questions) that by using of articles and books were prepared. Reliability and validity in international studies have been approved and the similar research project in Singapore has also been performed (Yeo et al., 2005). For using this questionnaire in Iran, face validity questionnaire has confirmed by experts and the internal reliability was found by repeated questionnaires in a small sample and by calculating Cronbach alpha (R = 0.87). After collecting, the questionnaires, data were collected and entered in $SPSS_{16}$ software and were analyzed statistically by means of descriptive statistics and analytical statistics (Chi^2 and Fisher statistical test). Fisher test was used in 2×2 tables which 25% expected frequency is below 5 and chi-square test is used in tables 2×2 that the expected frequency was not more 5.

The P<0.05 was considered as a statistical significance level. It should be mentioned that in the knowledge questions, those answers are correct; score given 1 and those who have given wrong answer 0 score was awarded. If the total score of sample is below 50% having weak knowledge and between 75 to 50% having medium knowledge and above 75% having good knowledge. Grades were considered as (0 to 9) weak knowledge, (10 to 13) medium knowledge and (14 to m18) good knowledge.

Attitude questions score based on Lecart method and the answer questions of positive attitude were completely disagree, disagree, no idea, agree and completely agree which were scores from 1 to 5, and in the negative attitudes questions the answer were completely agree, agree, no idea, disagree, completely disagree were scores from 1 to 5 respectively. It shows the score toward 5 are more corrected (Abaryazdian, 2002). Using the following formula attitude scores (0 to 57) as a negative attitude (58-95) as positive attitude was considered.

$$X(n) = \frac{(5k+1k)}{2} = \frac{[(5 \times 19)+19]}{2} = 57$$

It should be mentioned in the above formulas K is equal to the number of attitude questions (Ganji, 2001).

RESULTS

This study was performed on medical students of Rafsanjan University of Medical Sciences (295 people) whom the 265 of them fully completed the questionnaires in 2010. Table 1 shows the demographic characteristic of samples, the mean and SD of age were 22.16 ± 2.54 years with maximum 36 years old and minimum 18 years old.

34.7% (n = 92) of samples were with good knowledge, 46.8% (n = 124) had moderate knowledge and 18.5% (n = 49) had poor knowledge about CAM. Regarding the positive or negative attitude about CAM, 4.9% (n = 13) having positive attitude and 95.1% (n = 252) having negative attitudes. As shown in Table 2, there are the significant relationship between CAM and knowledge and

Table 1. Demographic Characteristic of samples.

	Variable	No.	Percentage
Gender	Female	174	65.70
	Male	91	34.30
	Total	265	100
Age (Year)	20<	32	12
	20-25	205	77.40
	25>	28	10.60
	Total	265	100
Mean±SD (age)	22.16±2.54		
Minimum (age)	18		
Maximum (age)	36		

Table 2. Frequency distribution of the samples under studied according to gender and knowledge about complementary and alternative medicine**.**

Gender	Male	Female	Total
Knowledge	Percentage (No.)	Percentage (No.)	Percentage (No.)
Weak	22 (20)	41.4 (72)	41.4 (92)
Medium	67 (61)	36.2 (63)	46.8 (124)
Good	11 (10)	22.4 (39)	18.5 (49)
Total	100 (91)	100 (174)	100 (265)

Chi-square = 22.83 df = 2 P-value <0.001.

gender (P-Value<0.001).

The relationship between CAM and knowledge and age were as in the samples below 20 year old with 25% (n = 8) good knowledge and 53.1% (n = 17) medium knowledge and the samples between 20 to 25 years old with 36.7% (n = 69) good knowledge, 49.7% (n = 102) medium knowledge and 16.6% (n = 34) weak knowledge and also the samples more than 25 years old with 53.5% (n = 15) good knowledge, 17.9% (n = 5) medium knowledge and 28.6% (n = 8) weak knowledge. There were a significant relationship between knowledge and age and CAM (P-Value = 0.02). There is no significant relationship between attitude towards CAM and gender (Table 3).

The relationship between the attitude toward CAM and age were as the sample below 20 years old with 3.1% (n = 1) having positive attitude and 96.9% (n = 31) having negative attitudes. The samples between 20 to 25 years old with 2.9% (n = 6) having positive attitude and the samples more than 25 years old 21.4% (n = 6) having positive attitude. There were no significant relationships between age and attitude toward CAM. Additionally the relationship between knowledge and attitude towards CAM such as cases with having good knowledge and

positive attitude were 13% (n = 12) and with good knowledge and negative attitude were 87% (n = 80). The samples with medium 99.2% (n = 123) and weak 100% (n = 49) knowledge had negative attitude towards CAM.

DISCUSSION

The results showed 34.7% (n = 92) student under studied had good knowledge regarding CAM which this awareness is low so considering the importance, more is needed. Yeo et al. (2005) also find low awareness of CAM in the number of medical students; it may be due to lack of scientific support which is the main obstacle to implementation of CAM. Uzun and Tan (2004) revealed that the nursing student's awareness of CAM was also limited which is confirmed by other researchers (Cutshall et al., 2010; Kemper et al., 2011). Therefore the researches in different part of the world confirmed the result of the present study.

In the present study, 4.9% (n = 13) had positive attitude regarding CAM. According to Yeo et al. (2005) 92% of the samples had positive attitude regarding CAM which these samples believed that CAM includes opinion and methods of traditional medicine that could be more useful. In the study on nursing students showed most of them having positive attitude to the methods of CAM as well as in the study which performed by Koh et al., (2003) revealed that 72.6% of pharmacists were in favor of CAM. 63% of psychiatrists believed that complementary and alternative ideas and methods can be useful to psychiatrists (Ko and Berbrayer, 2000). Chan and Wong (2004) reported that physicians have the appropriate knowledge in the field of acupuncture, massage therapy, treatment based on spirituality, hypnosis and meditation and also in the study of knowledge of pharmacists; Koh et al. (2003) showed that scoring rate was 7.23 from 10. It may be due to continued training and support staff about CAM in the region. Furnham and McGill (2003) showed that training in medical school may improve the attitude toward CAM.

The result of the present study on the negative attitude of the most sample on CAM has not been confirmed by the mentioned researches it causes due to the higher academic support and more utilization of CAM for treatment of diseases.

The relationship between CAM and knowledge and age were as in the samples below 20 year old with 25% (n = 8) good knowledge and 53.1% (n = 17) medium knowledge and the samples between 20 to 25 years old with 36.7% (n = 69) good knowledge, 49.7% (n = 102) medium knowledge and 16.6% (n = 34) weak knowledge and also the samples more than 25 years old with 53.5% (n = 15) good knowledge, 17.9% (n = 5) medium knowledge and 28.6% (n = 8) weak knowledge. There was a significant relationship between knowledge and age and CAM (P-Value = 0.02). It clearly shows that when the age increased level of knowledge has been

Table 3. Frequency distribution of samples under studied by gender and attitudes about Complementary & Alternative Medicine (2010).

Gender	Male	Female	Total
Attitude	Percentage (No.)	Percentage (No.)	Percentage (No.)
Positive	4.4 (4)	5.2 (9)	4.9 (13)
Negative	95.6 (87)	94.8 (165)	95.1 (252)
Total	100 (91)	100 (174)	100 (265)

Fisher'extract test P-value = 1.

increased, it could be because of more training (Adams et al., 2011; Bamidele et al., 2010; Rojas-Cooley and Grant, 2009).

4.4% (n = 4) of males and 5.2% (n = 9) females had positive attitude to CAM. There is no significant relation between gender and attitude however there were higher positive attitude in women than men. This result could be due to more education of women than men so female have more positive attitudes.

The relationship between the attitude toward CAM and age were as the sample below 20 years old with 3.1% (n = 1) having positive attitude and 96.9% (n = 31) having negative attitudes. The samples between 20 to 25 years old with 2.9% (n = 6) having positive attitude and the samples more than 25 years old 21.4% (n = 6) having positive attitude. There were no significant relationships between age and attitude toward CAM. It demonstrated that with increasing the age, the positive attitudes are increased and this can be due to more education and raising awareness at higher ages. Cases with having good knowledge and positive attitude were 13% (n = 12) and with good knowledge and negative attitude were 87% (n = 80). The samples with medium (n = 123, 99.2%) and weak (n = 49, 100%) knowledge had negative attitude towards CAM. Chan and Wong (2004) noted that knowledge may not associate with a positive attitude necessarily. Experiences, initiatives and interest in learning CAM are also important which can change the attitude.

Conclusion

This study showed that the knowledge and positive attitude toward CAM of medical students of Rafsanjan University of Medical Sciences are in low level. Therefore it is necessary to train these students to improve their knowledge and attitude toward CAM, and to enable the physician respond to questions related to patients in correct way.

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