

## ORIGINAL ARTICLE

# Knowledge, Attitude and Practice of General Practitioners toward Complementary and Alternative Medicine: a Cross-Sectional Study

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**Abstract-** Orientation of public and physicians to the complementary and alternative medicine (CAM) is one of the most prominent symbols of structural changes in the health service system. The aim of his study was a determination of knowledge, attitude, and practice of general practitioners in complementary and alternative medicine. This cross-sectional study was conducted in Qazvin, Iran in 2013. A self-administered questionnaire was used for collecting data including four information parts: population information, physicians' attitude and knowledge, methods of getting information and their function. A total of 228 physicians in Qazvin comprised the population of study according to the deputy of treatment's report of Qazvin University of Medical Sciences. A total of 150 physicians were selected randomly, and SPSS Statistical program was used to enter questionnaires' data. Results were analyzed as descriptive statistics and statistical analysis. Sixty percent of all responders were male. About sixty (59.4) percent of participating practitioners had worked less than 10 years. 96.4 percent had a positive attitude towards complementary and alternative medicine. Knowledge of practitioners about traditional medicine in 11 percent was good, 36.3% and 52.7% had average and little information, respectively. 17.9% of practitioners offered their patients complementary and alternative medicine for treatment. Although there was little knowledge among practitioners about traditional medicine and complementary approaches, a significant percentage of them had attitude higher than the lower limit.

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## Introduction

Today, because of the volume of new issues about health, health development, cultural and philosophical changes of modern medicine and deficiency in it; emotional needs of patients with chronic diseases are undergoing fundamental changes. Increasing public and physicians' attention to the complementary and alternative medicine (CAM) is one of the most prominent symbols of structural changes in the health service system. Several factors affect this tendency in different cultures. Focus of these holistic methods to lifestyle, emotional and spiritual aspects of patients is one of the most important supportive factors of these methods (1). Alternative medicine is getting more popular during the time and is estimated that one of

three persons uses these treatments for a common illness such as back problems, headache, anxiety, and depression in his lifetime (2). In many regions of Africa, Asia and South America, this type of medicine is the only way to cure and treat. Using of complementary and alternative medicine is growing in Australia, Europe, and North America. According to data at 2007, 38% of adults (4 persons of 10), as well as 11.8% of children (1 person of 9), used complementary and alternative medicine (3-5).

In Canada, 48% of responders visited doctors at first and then visited a complementary and alternative medicine expert (6). Forty four percent of British people used at least one of complementary and alternative medicine methods in their lifetime (7). Sixty six percent of people in Australia used at least one of

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complementary and alternative medicine methods during the past 12 months (8). 76% of Japanese used at least one of complementary and alternative medicine methods during the past 12 months (9). In this regard, research in Iran shows that 35% of 625 patients suffering cancer used complementary medicine (10). In another research, 83% of persons older than 15 years old in Tehran knew at least one method of complementary medicine. 42% used at least one method of complementary medicine methods (11). Talking about traditional, complementary and alternative medicine always stimulates many reactions (from an attitude of unnecessarily excessive and beyond criticism to an unconscious denial). Nevertheless, traditional medicine in developing countries and at the same time using complementary and alternative medicine in developed countries is expanding increasingly. In many parts of world, politicians, health authorities and public are faced with many questions about safety, efficiency, quality, accessibility, manner of maintain, preserve and expanding these health care methods (12).

Today, these methods are being used besides current medicine widely to treat and return health to patients and disease prevention. Studies in other countries show these methods to be used significantly and despite all progress and advertising on classical medicine, more people are becoming interested in complementary medicine daily (13-15). There are some patients in Iran who finally visit traditional medicine experts after the failure of modern medicine methods. This issue is a due to Iranians dependency to believe and old traditions and maybe it's also because of some achieved successes (16).

Iranian traditional medicine, without considering the east and west world, is really unknown for Iranians and especially Iranian's doctors. Azin *et al.*, showed most of the doctors have little information about common methods of complementary medicine such as acupuncture, homeopathy, yoga and etc. (17). Public utilization analysis of complementary and traditional medicine is the first step towards program using practical methods of complementary and traditional medicine and limit using ineffective and harmful methods (18-22).

It is really important that doctors know complementary medicine. The educational program system of medicine courses in other countries consider helping both doctors and patient to choose the best treatment method with minimum symptoms with the inclusion of CAM education (23,24). Physicians and medical students must have comprehensive information about this regard as be able to help patients well, know

possible symptoms and dangers, be able to provide advice to patients, and answer patient's questions (25-28). There are many physicians that don't have enough information about this kind of medicine or don't believe it, but against that there are many doctors or other than doctors who take advantage of this medicine (15).

So in addition to public reception of these methods, physicians' knowledge, and attitude is a matter of high importance (29). Due to the increasing use of this medicine in our country, especially some types of acupuncture and Ayurveda, evaluation of physicians' knowledge and attitude about this case is necessary to determine the need for training in this area like many other countries (30). Since studies show that short-time courses at students' schedule can make them familiar to the CAM (31), so performing a research about practitioners' knowledge, attitude and practice of CAM is one of the priorities. Thus, decisions can be made about including CAM training courses in an educational system based on the achieved results of these researches.

## Materials and Methods

This cross-sectional study was conducted among general practitioners in Qazvin, Iran in 2013. To collect data, self-administered questionnaires were used and completed by scientific resources. Questionnaires included four parts:

-Demographic characteristics including age, sex, marital status and the number of years of employment

-Questions about practitioners' attitude towards complementary and alternative medicine that were answered as "agreed, do not matter, disagreed."

-Questions about practitioners' knowledge towards complementary and alternative medicine including Iranian traditional medicine, Acupuncture, and Homeopathy.

-Questions about how practitioners get the information and their practice towards "refer patients to CAM experts and discuss usage and possible damages in CAM treatments" which is a complementary and alternative medicine. To determine level of knowledge, after collecting information, practitioners were classified into three groups: with little knowledge (answered correctly by the less than 30% of questions), average (answered correctly by the 30-70% of questions) and good (answered correctly by the more than 70% of questions).

## Data collection

All physicians in Qazvin were considered as a

population of this study including 228 ones according to a report from deputy treatment of Qazvin province. A total of 150 physicians were selected randomly to be enrolled in the study. This study was conducted in 2013. All practitioners had to get score of rated retraining courses to work and licensed, for sampling co-operation with Qazvin medical university, rated retraining courses related to complementary and alternative medicine were used and qualified practitioners in each field were studied. A self-administered questionnaire was used to collect data and information including 36 questions in 4 pages. Questionnaires were filled by practitioners in one day. Questionnaires were designed as multiple-choice questions to be easy and less time consuming.

Non-identifying personal information was requested to respect moral principles. A total of 146 questionnaires were collected in overall. All questionnaires data was entered into a computer using SPSS statistical program. Results were analyzed as descriptive statistics and statistical analysis Chi2 with significant statistical level defined as  $P < 0.05$ .

## Results

Among 146 participants 60.3% were male. Practitioners in this study were between 25-70 years old (Table 1). A number of 135 cases (96.4%) had positive, and 5 cases (3.6) had a negative attitude towards complementary and alternative medicine (Table2).

Between participating, 45.9% didn't know complementary medicine methods (Table 3).

11% of participating had good information about Iranian traditional medicine, and 7.5% of them had good information about Homeopathy (Table 4). In total Knowledge of 75.3% of practitioner about homeopathy was weak (Table 5).

26 participating (17.9%) suggested their patient to use complementary and alternative medicine during their practice (Table 6). 82.1% of practitioners had never suggested their patients CAM. About 76% of practitioners talked to less than ¼ their patients about CAM benefits or dangers. Patients started talking about CAM benefits or dangers in 77% of cases. 63.2% of practitioners said that they don't suggest CAM to their patients with chronic diseases. Media had a major role in obtaining information about complementary medicine techniques (Figure 1).

**Table 1. Distribution of practitioners participating in the study in terms of sex, age, marital status, and years of employment (N=146)**

|                   |           | Percent | Number |
|-------------------|-----------|---------|--------|
| Sex               | Female    | 60.3    | 58     |
|                   | Male      | 39.7    | 88     |
| Age (year)        | <35       | 38.2    | 55     |
|                   | 35-45     | 48.6    | 70     |
|                   | >45       | 13.2    | 19     |
| Marital status    | Unmarried | 82.8    | 25     |
|                   | Married   | 17.2    | 120    |
| Employment (year) | <10       | 59.4    | 85     |
|                   | >10       | 40.6    | 58     |

**Table 2. Practitioners' attitude towards complementary medicine methods (n=146)**

|   | Agree | No Difference | Disagree |
|---|-------|---------------|----------|
| More use of CAM in recent years   | 79.2  | 14.6          | 6.3      |
| Potential of classical medicine in use of CAM approaches  | 83.3  | 6.9           | 9.7      |
| CAM has placebo effect  | 32.9  | 8.2           | 58.9     |
| Education of CAM for medical students and postgraduate is necessary                                       | 80.1  | 9.6           | 10.3     |
| CAM methods stimulate vital capacity  | 75.9  | 10.3          | 13.8     |
| Refer of patients to CAM centers is increased because of inability of classical medicine in many diseases | 63.7  | 13            | 23.3     |
| Combination of classical medicine and CAM increased patients satisfaction                                 | 86.3  | 7.5           | 6.2      |
| Combination of classical medicine and CAM increased patients refer to medical centers                     | 84.2  | 11            | 4.8      |
| Scientific research and evidence base medicine only confirmed the effect of CAM                           | 90.4  | 6.2           | 3.4      |
| the official justification for the use of CAM by practitioners is necessary                               | 81.5  | 11            | 7.5      |
| Use of CAM methods is accepted by people that are not practitioner  | 13.7  | 3.4           | 82.9     |
| Control of Ministry of Health and Treatment and Education is necessary                                    | 89.7  | 9             | 1.4      |
| Insure policy must be considered for CAM approaches   | 65.8  | 24            | 10.3     |

**Table 3. Knowledge and practice of participating about complementary medicine (n=146)**

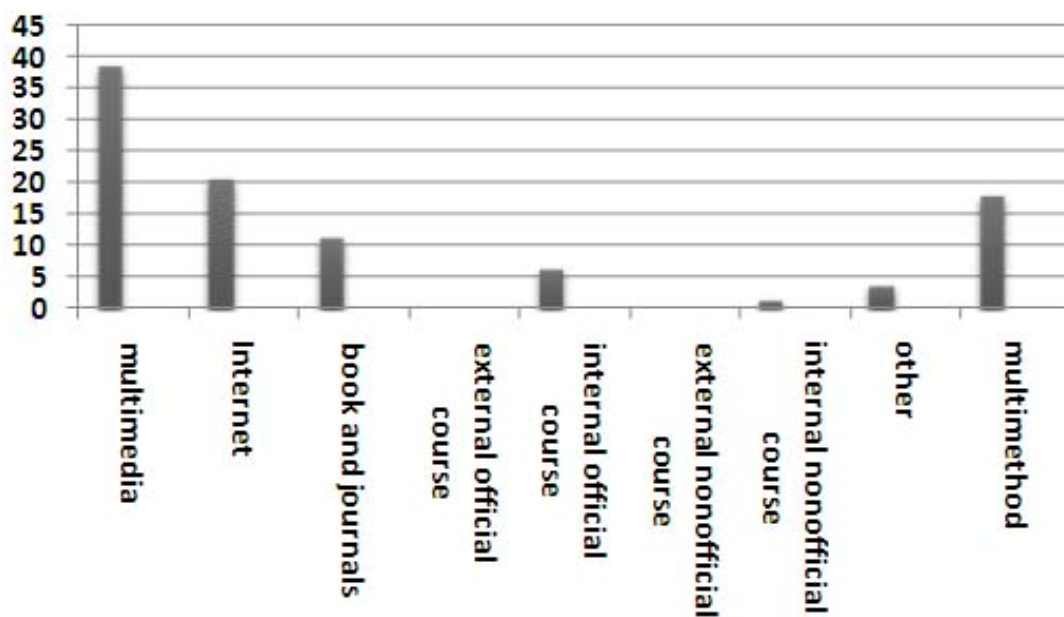
|   | Homeopathy | Acupuncture | Traditional |
|---|------------|-------------|-------------|
| No information and no tend to learn         | 24.7       | 19.9        | 16.4        |
| No information and tend to learn            | 38.4       | 39.7        | 29.5        |
| Generality information and no tend to learn | 13         | 9.6         | 11          |
| Generality information and tend to learn    | 21.9       | 28.8        | 38.4        |
| Complete information with method            | 0.7        | 0.7         | 0.7         |
| Use in practice                             | 1.4        | 0           | 4.1         |

**Table 4. Knowledge of participating about complementary medicine in terms of sex, age and employment years (n=146)**

|                   |        | Homeopathy |              |      | Acupuncture |              |      | Traditional |              |      |
|-------------------|--------|------------|--------------|------|-------------|--------------|------|-------------|--------------|------|
|                   |        | Good       | Intermediate | Weak | Good        | Intermediate | Weak | Good        | Intermediate | Weak |
| Sex               | Male   | 72.7       | 48           | 61.8 | 56.1        | 63.4         | 60   | 68.8        | 50.9         | 64.9 |
|                   | Female | 27.3       | 52           | 38.2 | 43.9        | 36.6         | 40   | 31.3        | 49.1         | 31.5 |
| Total             |        | 7.5        | 17.1         | 75.3 | 39.9        | 28.7         | 31.5 | 11          | 36.3         | 52.7 |
|                   |        |            | 0.30         |      |             | 0.76         |      |             | 0.21         |      |
| Age               | <35    | 72.7       | 29.2         | 36.7 | 37.5        | 42.5         | 37.8 | 20          | 41.5         | 39.5 |
|                   | 35-45  | 27.3       | 54.2         | 49.5 | 53.6        | 50           | 42.2 | 60          | 49.1         | 46.1 |
|                   | >45    | 0          | 16.7         | 13.8 | 8.9         | 7.5          | 20   | 20          | 9.4          | 14.5 |
| Total             |        | 7.6        | 16.7         | 75.7 | 39.7        | 28.4         | 31.9 | 10.4        | 36.8         | 52.8 |
|                   |        |            | 0.14         |      |             | 0.36         |      |             | 0.52         |      |
| Employment (year) | <10    | 72.7       | 40           | 62.6 | 66.1        | 55           | 54.5 | 50          | 56.6         | 63.5 |
|                   | >10    | 27.3       | 60           | 69   | 33.9        | 45           | 45.5 | 50          | 43.4         | 36.5 |
| Total             |        | 7.7        | 17.5         | 74.8 | 40          | 28.6         | 31.4 | 11.2        | 37.1         | 51.7 |
|                   |        |            | 0.75         |      |             | 0.41         |      |             | 0.52         |      |

**Table 5. Distribution of practitioners' knowledge about complementary medicine types (n=146)**

|             | Good | Intermediate | Weak | Total |
|-------------|------|--------------|------|-------|
| Homeopathy  | 7.5  | 17.1         | 75.3 | 146   |
| Acupuncture | 39   | 28.1         | 30.8 | 143   |
| Traditional | 11   | 36.3         | 52.7 | 146   |



**Figure 1. Basic information sources about complementary and alternative medicine**

## Discussion

In current study, 79.2% of practitioners believed that in recent years, notice to complementary medicine methods and applying them are growing and 80.1% had the opinion that is necessary to present courses in complementary medicine principles at educational courses of medicine. 86.3% of practitioners believed that combination of complementary medicine methods with prevalent treatments can result in more patient satisfaction. More than 80% disagreed with applying complementary medicine procedures by unskilled people and were of the opinion that supervision from the ministry of health and medical education is required.

Previous studies reported prominent percent of practitioners believe that these methods are being taken into consideration in recent years and practitioners had a positive opinion about beneficial effects of some of these methods. They emphasized the need for adequate monitoring of the use of this technique but disagreed with applying complementary medicine procedures by unskilled people. This finding is consistent with the results of the other studies (4,6,10,11,17,20,22).

The result of preceding studies showed most of the practitioners participating doesn't have enough information about complementary medicine and do not apply it, but they are interested in learning that, and they believe it. This finding is consistent with the results of the other studies (17,32-34).

In the current study, practitioners had more information about acupuncture, traditional medicine, and homeopathy, respectively. Nevertheless, 39% had enough information about acupuncture, 11% about traditional medicine and just 7.5% had satisfactory knowledge about homeopathy.

Most of the participants were interested in learning acupuncture more than other methods and, in general, 60% of practitioners were known of learning more about CAM.

Results showed there is a significant association between age and knowledge about homeopathy method as practitioners younger than 35-year-old had most information and the minimum information was about ones older than 50. This finding is consistent with the results of the other studies (32-34).

There was no significant association between any kind of complementary methods such as traditional method, acupuncture or homeopathy with age, sex and years of employment.

Based on one of preceding researches, at least 9.9%

of practitioners used one or more of complementary methods and 24% of them suggested their patients to follow complementary medicine in past six months (17).

In this study, 82.1% of practitioners never suggested their patients to use CAM. 76% of them talked less than ¼ of their patients about CAM benefit or dangers

4.1% of study participants used traditional medicine and 1.4% used homeopathy to treat patients and no one used acupuncture.

Due to the need and desire to learn complementary medicine and since one of effective factors to develop complementary medicine methods is awareness of the medical community, it is suggested that Ministry of Health and Medical Education implement a comprehensive program to train graduate physicians and medical students and establish research settings for universities to discover scientific dimensions of these methods.

Complementary medicine regulation by health care system adjusts all medicine methods regulates CAM methods; therefore, it validates all processes in the current health care system.

## References

1. Zollman C, Vickers A. User and practitioners of complementary medicine. *BM J* 1999;319: 836-8.
2. Schimpff SC. Complementary medicine. *Curr Opin Oncol* 1997;9(4):327-31.
3. Sutton AL, editor. *Complementary and alternative medicine source book*. 4th ed. Pennsylvania: Omnigraphics Inc; 2010: p.4-20.
4. Mousavizadeh K, Ansari H. Complementary/Alternative medicine and medical education Persian. *Payesh* 2008;7(4):329-36.
5. Ansari H. Making Transnational Connections: Muslim Networks in Early Twentieth-Century Britain. In: Clayer N, Germain E, editors. *Islam in Inter-war Europe*. 1st ed. London: Hurst; 2008: p. 31-63.
6. Esmail N. Complementary and alternative medicine in Canada: Trends in Use and Public Attitudes, 1997-2006. The Fraser Institute. (Accessed in May 2015, 2, at <http://www.fraserinstitute.org/publicationdisplay.aspx?id=12941>).
7. Hunt KJ, Coelho HF, Wider B, et al. Complementary and alternative medicine use in England: results from a national survey. *Int J Clin Pract* 2010;64(11):1496-502.
8. Xue CC, Zhang AL, Lin V, et al. Complementary and alternative medicine use in Australia: a national population-based survey. *J Altern Complement Med*

- 2007;13(6):643-50.
9. Yamashita H, Tsukayama H, Sugishita C. Popularity of complementary and alternative medicine in Japan: a telephone survey. *Complement Ther Med* 2002;10(2):84-93.
  10. Sajadian AS, Kaviani A, Montazeri A, et al. Complementary medicine use among Iranian cancer patients. *Payesh* 2005;4(3):197-205
  11. Sedighi ZH, Maftoon F, Moshrefi M. Complementary and alternative medicine (CAM): knowledge; attitude and practice in Tehran, Iran. *Payesh* 2004;3(4):279-89.
  12. Rezaezadeh H. Strategy of traditional medicine [Dissertation]. Tehran: Tehran Univ Med Sci., 2004.
  13. Goldbeck-Wood S, Dorozynski A, Lie LG. Complementary medicine is booming worldwide. *BMJ* 1996;313(7050):131-3.
  14. WoodHam APD, editor. *Encyclopedia of Natural Medicine*. 3rd ed. London: Dorling Kindersly; 2012.
  15. 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. *JAMA* 1998;280(18):1569-75.
  16. Mohammadkhani H. *Glossary of traditional medicine*. Tehran: Daroteb Press; 2003.
  17. Azin SA, Nouraei SM, Moshkani ZS. Complementary/alternative medicine: knowledge, attitudes and practice among general practitioner in Tehran. *Payesh* 2002;2(3):165-73.
  18. Yeo AS, Yeo JC, Yeo C, et al. Perceptions of complementary and alternative medicine amongst medical students in Singapore--a survey. *Acupunct Med* 2005;23(1):19-26.
  19. Uzun O, Tan M. Nursing students' opinions and knowledge about complementary and alternative medicine therapies. *Complement Ther Nurs Midwifery* 2004;10(4):239-44.
  20. Chan PS, Wong MM. Physicians and complementary/alternative medicine: Training, attitudes, and practices in Hawaii. *Hawaii Med J* 2004;63(6):176-81.
  21. Koh HL, Teo HH, Ng HL. Pharmacists' patterns of use, knowledge, and attitudes toward complementary and alternative medicine. *J Altern Complement Med* 2003;9(1):51-63.
  22. Tehrani-Banihashemi S, Asghari-fard H, Haghdoost A, et al. Application of complimentary and traditional medicine in Tehran city. *Payesh* 2005;7(4):355-60.
  23. Konefal J. The challenge of educating physicians about complementary and alternative medicine. *Acad Med* 2002;77(9):847-50.
  24. Corbin Winslow L, Shapiro H. Physicians want education about complementary and alternative medicine to enhance communication with their patients. *Arch Intern Med* 2002;162(10):1176-81.
  25. Silverstein DD, Spiegel AD. Are physicians aware of the risks of alternative medicine? *J Community Health* 2001;26(3):159-74.
  26. Chez RA, Jonas WB, Crawford C. A survey of medical students' opinions about complementary and alternative medicine. *Am J Obstet Gynecol* 2001;185(3):754-7.
  27. Marcus DM. How should alternative medicine be taught to medical students and physicians? *Acad Med* 2001;76(3):224-9.
  28. Tasaki K, Maskarinec G, Shumay DM, et al. Communication between physicians and cancer patients about complementary and alternative medicine exploring patients' perspectives. *Psychooncology* 2002;11(3):212-20.
  29. Spencer JW, Jacobs JJ, editors. *Complementary/Alternative medicine: An evidence based approach*. 1st ed. USA: Mosby; 1999.
  30. Wetzel MS, Kaptchuk TJ, Haramati A, et al. Complementary and alternative medicine. Implication for medical education. *Ann Intern Med* 2003;138(3):191-60.
  31. Greenfield SM, Innes MA, Allan TF, et al. First year medical students' perceptions and use of complementary and alternative medicine. *Complement Ther Med* 2002;10(1):27-32.
  32. Mirzaei V, Saiadi AR, Heydarinasab M. Knowledge and attitudes of Rafsanjan GP toward CAM. *ZJMS* 2011;13(6):20-4.
  33. Shafia S, Hemati ZH, Meshkini L, et al. Evaluation of physician's attitude and knowledge. *J Med Univ Mazandaran* 2008;18(66):102-3.
  34. Banaiyan S, Rasti Borujeni M, Shirmardi SA, et al. Knowledge and attitude of physicians about cupping in Chaharmahal va Bakhtiari province, 2007. *J Shahrekord Univ Med Sci* 2009;10(4):19-24.