Middle-East Journal of Scientific Research 21 (5): 818-823, 2014 ISSN 1990-9233 © IDOSI Publications, 2014 DOI: 10.5829/idosi.mejsr.2014.21.05.8455

Knowledge, Belief and Performance of Staff in Food and Drug Deputy of Urmia University of Medical Sciences than the Use of Herbal Medicines

¹Kourosh Saki, ²Mahmoud Bahmani, ³Hassan Hassanzadazar, ⁴Mahmoud Rafieian-Kopaei, ³Kamran Dehghan, ⁵Vahid Bahmani, ⁶Ehsan Bahmani, ³Ghader Hajigholizadeh, ³Farzaneh Rahmanpour and ³Jafar Asadzadeh

¹Shahid Beheshti University of Medical Sciences, Tehran, Iran
²Razi Herbal Medicines Research Center, Lorestan University of Medical Sciences, Khorramabad, Iran
³Deputy for Food and Drug, Urmia University of Medical Sciences, Urmia, Iran
⁴Medical Plants Research Center, Shahrekord University of Medical Sciences, Shahrekord, Iran
⁵Arak Branch, Islamic Azad University, Arak, Iran
⁶Agri-Bank of Dehloran City, Ilam Province, Iran

Abstract: Need to plants and herbal medicine has been effective procedure for diseases treatment in human history. The aim of this study was to assess the knowledge, belief and performance of staff in food and drug deputy for Urmia University of Medical Sciences about the use of herbal medicines, because of the high production and consumption of herbal medicines in recent decades. This descriptive study was performed from January to March in 2013. 35 employee of the Food and Drug deputy for Urmia University of Medical Sciences were asked using questionnaires which was prepared and distributed among the employees to fill out all the questions and the demographic data, carefully. The obtained results showed 86 % of participants stated that they knew useful information about medicinal plants and believe more than 100 % in the positive effects of them. 97 % of participants knew use of herbal medicines is popular all over the world. 51 % of themannounced herbal medicines are safe. 60 % stated that they use herbal medicines according to physician order. 83 % of participants prefer herbal remedies to chemical drugs. 31% believed that they should be prepared herbal medicine from a pharmacy. Their highest usage were: peppermint (83 %), thyme (73 %), Ziziphoratenuior (73 %), ginger (73 %), chamomile (60 %) and Pennyroyal (60 %). Their common reason for use were cold (41%), stomach discomfort (37 %), relaxation (34 %) and constipation by 31%. 86percent of participants stated that they have information about herbal medicines and 100 % of them believed to beneficial effects of herbal medicines.51% of the participants announced that herbal medicines are safe. Due to easy access to herbal medicines versus chemical drugs and increased use of herbal medicines, providing comprehensive and useful information on herbal drugs to prevent side effects or drug interactions and promote attitudes and awareness of the population are necessary.

Key words: Urmia • Awareness • Belief • Herbal medicine • Iran • Food and drug deputy

INTRODUCTION

Medicinal plants are closely linked with the history of human life. In all periods of human history, plants especially medicinal plants need to overcome numerous diseases and disorders and use of medicinal plants has always been an effective procedure to treatment [1-8]. Obtained documents from Egyptian and Sumerian civilization of 2500 years BC show that these civilizations were familiar with the therapeutic properties of herbs. The oldest prescriptions belong to Sumerians in 3000 BC. This collection includes over fifteen copies which are the world oldest version in pharmacology and drugs combination have been described in it [9].

Corresponding Author: Mahmoud Bahmani, Razi Herbal Medicines Research Center, Lorestan University of Medical Sciences, Khorramabad, Iran. Tel: +989186157084. Traditional medicine especially herb therapy is one the precious investment in Iran medicine with worthy consideration between three countries [10]. Due to side effects of certain chemical drugs, many patients are tending to herbal therapy. Despite the abilities and values of modern medicine, is faced with problems in the treatment of some diseases particularly in chronic diseases [11]. People have used plants in order to improve their health as food, medicine to treat or prevent diseases, for centuries [12]. By choosing proper plants, best treatment taken with minimal risks and side effects than chemical drugs. Serious adverse effects can also happen in plants low quality or wrong prescription [13].

New scientific scholars have proven safety and efficacy of alternative medicine including using herbal medicine in the treatment of some diseases without any side effects. But nowadays, modern man with promoting greater consumption of synthetic drugs has faced with harmful side effects of these drugs [14-17].

The global published statistics indicated that despite of new developments in chemistry, pharmacy and supplying active ingredients, cultivation and consumption of medicinal plants not only not diminished, but also has increased.80% of marketed medicines in some countries have plant origin. Use of medicinal plants in

Table 1. Plants and information

developed countries increased, so that currently 90 percent of people in these countries use of herbal medicine [18-20].

Published statistics show 42 percent of people in America used various forms of alternative medicine and 12 percent of them used of herbal medicines to treat their disease and disorders [21].

The aim of this study was to assess the knowledge, belief and performance of staff in food and drug deputy of Urmia University of Medical Sciences about the use of herbal medicines, because of the high production and consumption of herbal medicines in recent decades.

MATERIALS AND METHODS

This descriptive study was performed from January to March in 2013. 35 employee of the Food and Drug deputy of Urmia University of Medical Sciences were asked using questionnaires which was prepared and distributed among the employees to fill out all the questions and the demographic data, carefully.

The first part of questionnaire was to gather demographic information of partners including: age, sex, educational level, marital status, living with spouse and family (parents) or the single life in Table 1.

Number	Plant	Scientific name	Number	Percent
1	Thyme	Thymus kotschyanus	24	73%
2	Ziziphora	Ziziphora tenuior L.	24	73%
3	Borage	Echium italicum L.	22	63%
4	Mint	Mentha spp.	29	83%
5	Chicory	Cichorium intybus L.	14	40%
6	Chamomile	Anthemis tinctoria L.	21	60%
7	Four Seeds	-	18	51%
8	Ramping	Fumari aasepala Boiss.	11	44%
9	Camel,s thorn	Alhagi camelorum Fisch	8	23%
10	Green tea	Camellia sinensis	21	60%
11	Hedge mustard	Sisymbrium officinale L.	17	49%
12	Common Lavenders	Nepeta menthoids	6	17%
13	ginger	Zingiber officinale	24	73%
14	Carumcopticum	Trachyspermum spp.	4	11%
15	Egg syrup	-	4	11%
16	Dill seed	Grammosciadium daucoide DC.	9	26%
17	Marsh - Mallow	Althea hirsutaL.	12	34%
18	Yellow flower heads	-	1	3%
19	Achillea	Achillea millefolium L.	4	11%
20	Mugwort Holly wormwood	Artemisia sieberi Besser	0	0%
21	Licorice	Glycyrrhiza glabra L.	14	40%
22	Penny royal	Mentha longifolia L.	21	60%
23	Musk root - Valerian	Valeriana officinalis L	5	14%
24	Cumin	Cuminum cyminum L.	16	46%



Graph 1: Percent of educational degree of the participants

The second part of the questionnaire consisted of 10 questions including: having knowledge about herbal medicines, safety of them, familiarity to herbal medicines, belief and how to preparing of herbal medicines, preferring than chemical drugs, notify doctor to taking herbal medicine, medicinal plants unique to Iran or other parts of the world and etc.

Finally, all the information on the questionnaires was analyzed using Excel 2010 software.

RESULTS

57 percent of participants were male and 43% female. Women in this study aged 53-27 and men aged 26-60. 86% of the participants were married and 14% were single. 11% of cases were diploma, 6% associate degree, 34% were bachelor, 20% were master science and 29 percent had a doctoral degree. Graph (1) shows the education degree of the participants.

86 percent of participants stated that they are aware of helpful and positive effects of herbal medicines and more than 100% believed to use of them.

97 percent of participants knew that use of medicinal plants and herbal remedies are popular all over the world. 51% believed herbal medicines are safe. 60% of them stated that they notified their doctor to use herbal medicine. 83% of the participants prefer herbal remedies to chemical drugs. 31% believed that they should be prepared herbal medicine from a pharmacy.

Most use of herbal drugs wasrespectively for colds 41%, stomach disorders 37%, relaxation 34%, constipation 31%. Other causes of the use of herbal

medicines include body sweatingand warmth 20%, kidney stones 22%, diarrhea30%, hyperlipidemia 20%, diabetes 17%, menstrual disorders 19%, intestinalinfection 17%, hypertension 17%, bladder infection 17%, antiparasitic 10%, gastric acid hyper secretion 19%, tonic 8%, sinusitis 22%, hypersensitivity 12%, sedatives 30% and musculoskeletalproblems 8 percent

DISCUSSION

As the results showed the most widely used herb was mint (83%) and the most common cause of using was common cold.

In a study that was done in Isfahan (one of the central province of Iran) in the field of people's attitudes and beliefs to herbal medicine, it was found 59 % of women had a good awareness and 63 percent of men had low to moderate awareness to herbal medicines.Both men and women had a good belief in the use of herbal medicines but applying of them were performed poorly [22].

The results of a study conducted in shahrekurd (one of the South-West province of Iran) showed that the most common use of herbal medicine was *Achillea* for treatment of colds [23]. It Seems belief, knowledge and use of herbal medicine depends on the region's culture, rich or poor plant flora, history and so on.

In a study that was done on adults in America, it was found most used herbs wereechinacea, Ginkgo, ginseng and garlic and most use of themwere for headache, muscle disorders, colds and gastrointestinal disorders [24]. While in our study, most use of herbal medicines were for treatment of colds, stomach disorders,, constipation, hypersensitivity, diarrhea, relaxation or as sedative.

In another study on the elderly in shahrekurd, 74.4 % of old individuals used medicinal plants. The most common cause of using were stomach aches, headaches, foot pain and blood pressure and the most common herbs were thyme, borage, Daphnia, licorice and sagebrush flowers. 91% believed that herbal medicine is effective to diseases treatment and 76.8% of them recommended medicinal plants using to others [25].

The results showed that 65.8% of people in Isfahan used herbal medicines [26]. In this study, 83% of participants prefer herbal medicines.

Khounsari in his study referred to this fact that the most reason to use of medicinal plants is to treatment neurologic and mental diseases, immunoinflammatory disorders, digestive and cardiovascular diseases and cancer [27]. In a study in Isfahan, 37% of patients stated that effects of herbal medicines are better than chemical drugs, 21 percent of patients preferred chemical drugs and 42% of them had no opinion. Patients living in cities, villages and 33% of residents of Esfahan believed to herbal medicine. The ratio of the men to women was 69% to 31%. Most of the men stated that they rarely go to the doctor and do self-treatment. Due to low literacy of the patient, there is no significant difference was found [28].

60 % of participants in this study stated that they notified their doctor of using herbal medicine, which is inconsistent with previous study. Perhaps one reason is lack of access to medical and other reasons are kind of culture and tradition. Regulatory authority in relation to the effectiveness, quality and safety of medicinal plants is important and a necessary [29]. Being of regulations in relation to the effectiveness, quality and safety of medicinal plants is important and necessary [29-39].

Increasing awareness, Medical Education, insurance supporting and easy availability in compare with chemical drugs cause increase in using of herbal medicine. The obtained results of this study showed insufficient knowledge of staffs in the Food and drug deputy to medicinal plants.

Enhancing staff's awareness and consumer groups through educational interventions and monitoring their application by health organizations is recommended and due to high use of herbal medicines, correct informing to the community about the possible interactions and side effects of this type of drugs is necessary. Further studies are need the effectiveness and possible side effects of herbal medicines.

ACKNOWLEDGMENTS

This study was conducted with the collaboration of Deputy for Food and Drug, Urmia University of Medical Sciences, Urmia, Iran. Grant number of this work research was 01/01/94/777.

REFERENCES

 Bahmani, M. and Z. Eftekhari, 2012. An ethnoveterinary study of medicinal plants in treatment of diseases and syndromes of herd dog in southern regions of Ilam province, Iran. Comp Clin Path., 22: 403-407.

- Bahmani, M., K. Saki, M. Gholami-Ahangaran, P. Parsaei, A. Mohsenzadegan and N. Zia- Jahromi, 2012. Evaluating the Anti-Leech Activity of Methanolic Extract of *Matricaria chamomilla* L. Comparing with Ivermectin, Mebendasole, Praziquantel, Rafoxanide, Febantel and Albendasole Middle-East J. Sci Res., 12(2): 260-263.
- Gholami-Ahangaran, M., M. Bahmani and N. Zia-Jahromi, 2012. Comparative and evaluation of anti-leech (*Limnatis Nilotica*) effect of Olive (*OleaEuropaea* L.) with levamisol and tiabendazole. Asian Pac J. Trop Dis., 2(Suppl 1): 101-103.
- Bahmani, M., H. Golshahi, A. Mohsenzadegan, M. Ghollami-Ahangarani and E. Ghasemi, 2013. Comparative assessment of the anti-*Limnatis nilotica* activities of *Zingiber officinale* methanolic extract with levamisole. Comp Clin Pathol., 22(4): 667-670.
- Eftekhari, Z., M. Bahmani, A. Mohsenzadegan, M. Gholami-Ahangaran, J. Abbasi and N. Alighazi, 2012. Evaluating the anti-leech (*Limnatis nilotica*) activity of methanolic extract of *Allium sativum* L. compared with levamisole and metronidazole. Comp Clin Path., 21: 1219-1222.
- Bahmani, M., S.A. Karamati, E.K.h. Banihabib and K. Saki, 2014. Comparison of effect of nicotine and levamisole and ivermectin on mortality of leech. Asian Pac J. Trop Dis., 4(Suppl 1): 477-480.
- Forouzan, S.H., M. Bahmani, P. Parsaei, A. Mohsenzadegan, M. Gholami-Ahangaran, *et al.*, 2012. Anti-parasitic activites of *Zingiber officinale* methanolic extract on *Limnatis nilotica*. Glob Vet., 9(2): 144-148.
- Gholami-Ahangaran, M., M. Bahmani and N. Zia-Jahrom, 2012. *In vitro* antileech effects of *Vitis vinifera* L., niclosamide and ivermectin on mature and immature forms of leech *Limnatis nilotica*. Glob Vet., 8: 229-232.
- 9. Kramer, S., 2004. Sumerian plates. Translated by David Rsaa. Scientific and cultural.
- Edzard, E., 2005. The efficacy of herbal medicine an overview. Fundamental and Clinical Pharmacology, 19: 405-409.
- Feng, C.G., L.X. Zhang and X. Liu, 2005. Progress in research of aldose reductase inhibitors in traditional medicinal herbs. *Zhongguo Zhong Yao ZaZhi*, 30: 1496-1500.

- Sadeghi, J., F. Maftoon and S.A. Ziaei, 2005. [Herbal medicine: knowledge, attitude and practice in Tehran. J. Med Plants. 2005 winter; 4(13): 11-18.
- Wang, J., Y.G. Wan, W. Sun, H.L. Zhang, P. Chen and J. Yao, 2008. Progress in Japanese herbal medicine in treatment of chronic kidney disease. *ZhongguoZhong Yao ZaZhi*, 11: 1348-1352.
- 14. Hatami Varzaneh, M., 2002. Secret health with herbs. FahmidehShahid Publishing, pp: 254.
- Hashemian Dabbagh, F., A. Goshehgir and M. Siyadati, 2007. Prevalence and characteristics of individual's bloodletting centers referred to these centers in Tehran. Sciences Journal Medical Iran, 58: 199-206.
- Sadighi, J., F. Mafton and A. Ziaee, 2004. Herbal medicine: knowledge and performance insights in the population of Tehran. Journal of Medical Sciences Iran, 13: 60-67.
- Bagheri, A., H. Naghdibadi, F. Movahedian, M. Makizadehtafti and A. HemmatiMoghadam, 2005. Review approach women in Isfahan in the use of herbal medicine. Herb Quarterly, 15: 81-93.
- Baghalyan, K. and H. Naghdibadi, 2000. Oil plants significantly. Printing, publishing Andarz, pp: 9.
- Bernath, J., 1990. Ecophysiological approach in the optimalization of medicinal plant agro systems. Herba. Hungarica, 29: 7-15.
- Omid Beigi, R., 1995. Approach of manufacturing and processing plants, First Edition, publishing Idea Day, the first volume, pp: 34.
- Gardiner, P., R. Graham, A.T.R. Legedza, A.C. Ahn, D.M. Eisenberg and R.S. Phillips, 2007. Factors associated with herbal therapy use by adults in the United States. Alternative Therapies in Health and Medicine, 13(2): 22-29.
- Golshadi, A., R. Ansari, S. Asgari, N.V. Sarafzadegan and M. Boshtam Knowledge, 2002. beliefs and practices regarding herbal medicines in the Isfahan city. J. Med Plants, 2: 21-28.
- Sardashti, M. and P. Azari, 2007. Evaluation of utilization degree of herbal medicine in women's health center-University Hospital Shahrekord. J. Knowledge Health, 2(4): 21-28.
- Gardiner, P., R. Graham, A.T.R. Legedza, A.C. Ahn, D.M. Eisenberg and R.S. Phillips, 2007. Factors associated with herbal therapy use by adults in the United States. Alternative Therapies in Health and Medicine, 13(2): 22-29.

- Akbari, N., N. Parvin, M. Sereshti and F. Safdar, 2010. Survey medicinal plants used in elderly Shahrekord. J. Shahrekord Uni Med Sci., 12(4): 27-32.
- Bagheri, A., B. Naghdi, M. Maki zadeh, A.R. Hemati and F. Movahedian, 2005. [Evaluation of using herbal medicine in Isfahan women population. J. Med Plants. Summer, 4(15): 10-20.
- Khounsari, A., K. Gorgi, F. Abdolahpour, S. Dehestani, A. Mousavi and B. Delfan, 2009. [Study of international approachs on treatment of common diseases using different methods of complementary medicine. J. Ilam Univ Med Sci., 16(4): 37-45.
- 28. Bakhtiyari, Z., 2010. Assess the attitudes patients about herbal therapy in Isfahan. J. Herbal Drugs, 1: 47-50.
- 29. Rafieian-Kopaei, M., 2012. Medicinal plants and the human needs. J. HerbMedPharmacol., 1(1): 1-2.
- Bahmani, M., T. Farkhondeh and P. Sadighara, 2012. The anti-parasitic effects of Nicotinatabacum on leeches. Comp Clin Pathol., 21(3): 357-359.
- Bahmani, M., J. Abbasi, A. Mohsenzadegan, S. Sadeghian and M. Gholami-Ahangaran, 2011. *Allium sativum* L.: the anti-ammature leech (*Limnatis nilotica*) activity compared to Niclosomide. Comp Clin Pathol., doi: 10.1007/s00580-011-1380-7.
- Bahmani, M. and E.Kh., Banihabib, 2013. Comparative Assessment of the Anti-Annelida (*Limnatis nilotica*) Activity of Nicotine with Niclosamide. Global Veterinaria, 10(2): 153-157.
- 33. Amirmohammadi, M., S.H. Khajoenia, M. Bahmani, M. Rafieian-Kopaei, Z. Eftekhari and M. Qorbani, 2014. *In vivo* evaluation of antiparasitic effects of *Artemisia abrotanum* and *Salvia officinalis* extracts on *Syphaci aobvelata*, *Aspiculoris tetrapetra* and *Hymenolepis nana* parasites. Asian Pac J. Trop Dis., 4(1): 250-254.
- Bahmani, M., M. Rafieian-Kopaei, M. Avijgan, Hosseini, H. Golshahi and Z. Eftekhari, 2012. Ethnobotanical studies of medicinal plants used by Kurdish owner's in south range of Ilam province, west of Iran. Am-Euras J. Agric Environ Sci., 12(9): 1128-1133.
- Bahmani, M., M. Rafieian, A. Baradaran, S. Rafieian and M. Rafieian-kopaei, 2014. Nephrotoxicity and hepatotoxicity evaluation of *Crocus sativus* stigmas in neonates of nursing mice. J. Nephropathol., 3(2): 81-85.

- Bahmani, M. and M. Rafieian-Kopaei, 2014. Medicinal plants and secondary metabolites for leech control. Asian Pac J. Trop Dis., 4(4): 315-316.
- Ghasemi Pirbalouti, A., M. Momeni and M. Bahmani, 2013. Ethnobotanical Study of Medicinal Plants Used by Kurd Tribe in Dehloran and Abdanan Districts, Ilam Province, Iran. Afr J Tradit Complement Altern Med., 10(2): 368-000.
- Bahmani, M., M. Avijgan, S.R. Hosseini, H. Najafzadeh-Varzi and S. Mehrzadi, 2011. Traditional application of medicinal plants in southern area of Ilam province for treatment diseases and clinical syndromes in small ruminants. J. Herb Drugs, 2: 51-60.
- Bahmani, M., N. Vakili-Saatloo, R. Maghsoudi, H. Momtaz, K. Saki and B. Kazemi-Ghoshchi, 2013. A comparative study on the effect of ethanol extract of wild *Scrophularia deserti* and streptomycin on *Brucella melitensis*. J. Herb Med Pharmacol., 2(1): 17-20.