Abahussain NA, Abahussain EA, Al-Oumi FM. Pharmacists' attitudes and awareness towards the use and safety of herbs in Kuwait. Pharmacy Practice 2007;5(3):125-129.

Original Research

Pharmacists' attitudes and awareness towards the use and safety of herbs in Kuwait

Nada A. ABAHUSSAIN, Eman A. ABAHUSSAIN, Fawaz M. AL-OUMI.

ABSTRACT[*]

Objectives: The purpose of this study was to investigate the knowledge and attitudes among pharmacists in Kuwait towards the use of herbs.
Methods: Self-administered questionnaire was designed as the study instrument and distributed among 100 qualified pharmacists working in government and private pharmacies in Kuwait.
Results: The mean age was 34.2 (SD=7.5) years. About 51% of pharmacists reported they had used herbal therapy in their lifetime. The majority were interested in herbal information, and their herbal information came mainly from their previous classes during college. Although the pharmacists' knowledge about uses of selected herbs was good, their awareness about side effects of those herbs was modest. About 31% of the pharmacists did not have enough information about potential interactions between herbs and conventional medicines.
Conclusion: Herbal information is needed for pharmacy students as part of the Pharmacy College curriculum. Continuing education programs for practising pharmacists about the safety of different herbal products should be established in Kuwait.

Keywords: Herbal Medicine. Pharmacy Continuing Education. Pharmacy Graduate Education. Attitude of Health Personnel. Kuwait.

RESUMEN

Objetivos: El propósito de este estudio fue investigar el conocimiento y actitudes entre los farmacéuticos en Kuwait hacia el uso de plantas medicinales.
Métodos: Se diseñó un cuestionario auto-administrado como instrumento para el estudio y se distribuyó entre 100 farmacéuticos cualificados que trabajan en farmacias privadas y gubernamentales de Kuwait.
Resultados: La edad media fue de 34,2 (DE=7,5) años. Alrededor del 51% de los farmacéuticos comunicaron que habían usado plantas medicinale sen su vida. La mayoría estaban interesados en la información sobre plantas medicinales, y su información sobre ellas venía principalmente de la enseñanza en la Universidad. Aunque el conocimiento de los farmacéuticos sobre los usos de las plantas seleccionadas era bueno, su conciencia sobre los efectos adversos era modesta. Alrededor del 31% de los farmacéuticos no tenía suficiente información sobre las posibles interacciones entre las plantas medicinales y los medicamentos convencionales.
Conclusión: Se necesita información de plantas medicinales para los estudiantes de farmacia como parte del currículo de la facultad de Farmacia. Deberían establecerse en Kuwait programas de formación continuada para farmacéuticos en ejercicio sobre la seguridad de las diferentes plantas medicinales.

Palabras clave: Plantas Medicinales. Formación continuada en farmacia. Formación de grado en farmacia. Actitud del personal sanitario. Kuwait.

(English)

INTRODUCTION

Traditional medicine is an accessible and affordable health care resource for many countries including countries of the Eastern Mediterranean region.[1] Among the World Health Organization (WHO) efforts and priorities for promoting the use of traditional medicines is the creation of awareness about safe and effective traditional medicine/ complementary and alternative medicine (TM/CAM) therapies among the public and consumers.[2] The use of TM/CAM in the management of chronic diseases is well known in developing countries; people commonly use herbal medicines in self-care.

[*]**Nada A. ABAHUSSAIN**. PhD, School Health Services, Ministry of Education, Saudi Arabia (Saudi Arabia).
Eman A. ABAHUSSAIN, PhD. Pharmacy Practice Department, Faculty of Pharmacy, Kuwait University, (Kuwait).
Fawaz M. AL-OUMI. BSc. Pharmaceutical Department, Ali Abdul Wahab & Sons Co. (Kuwait).

It is also practiced to varying degrees and is increasing in industrialized countries.[3-6] The increase in the use of TM/CAM by the general public has led to increasing interest in how health professionals view these therapies.[7] A high level of interest and acceptance of alternative medicine among general practitioners (GPs) has been reported in recent years. The reasons for this may be due to its wide usage, low cost, and many physicians believe in the usefulness of alternative medicine.[8]

Studies have reported that pharmacists across all practice settings are reciving more questions from patients about natural products than ever before.[9] This necessitates that pharmacists should be aware of their possible uses, dosing, adverse effects, drug interactions and contraindications.

Although many studies are available that indicate a high degree of interest in alternative medicine among the public worldwide, the attitudes of pharmacists have not been adequately explored. This is in spite of the fact that pharmacists are well placed to provide TM/CAM. To date nobody has determined the current level of herbal knowledge and skills that the community pharmacist in Kuwait possesses.

The objectives of this study were to determine the knowledge and attitudes of pharmacists working in Kuwait toward herbs (herbal medicines).

METHODS

A convenience sample[10] of 100 pharmacies in Kuwait (31% of the total 322 pharmacies) were included in the study (50 pharmacists from the private sector and 50 pharmacists from the government sector). This representative of all pharmacies in Kuwait. Data collection was carried out using a structured self-administered questionnaire. It was especially created for this study. A pilot study was conducted with 10 pharmacists to check for readability, comprehension, question design and length of the questionnaires.

The questions were mainly closed questions while open questions were only used to find out the use and the side-effects for the five main herbs dispensed in Kuwait. The questionnaire consisted of four sections. The demographic section which included age, nationality, gender, current work, years of experience as a qualified pharmacist in practice, latest qualification and place of graduation. The second section was about the sources of herbal information . The third section elicited pharmacists' attitudes and personal use of herbs, while the fourth section investigated pharmacists' knowledge about herbs.

Five Selected herbs (garlic, Ginkgo biloba, ginseng, St. John's wort and Echinacea) were used to investigate the pharmacists' knowledge regarding their uses and side-effects. They were selected as they are the most commonly known and sold in Kuwait. They are also among the 12 most popular herbs used in the USA.[11]

The data were analysed using Statistical Package for Social Sciences (SPSS, version 13). The frequency distributions were obtained and the chi-squared test was used for finding the association between qualitative variables. A significance level of $p \leq 0.05$ was used for significant differences.

RESULTS

A total of 65 pharmacists participated in the study (65% response rate). The mean age of the pharmacists was 34.2 (SD=7.5) years. Fifty (77%) were men and 39 (60%) were practicing in the private sector. Most pharmacists were from Arab nationalities, mainly Egypt 29 (44.6%) as is common in the Kuwait, while Kuwaiti pharmacists constituted 16 (24.6%) of the sample. Their experience in practice ranged from 1 to 26 years. The median years of experience were 7 years. Table 1 illustrates demographic characteristics of the participants.

Table 1. Demographic characteristics of the pharmacists (N=65)

Characteristic	N (%)
Age	
Mean age 34.2 (SD=7.5)	
< 30	20 (30.8)
30-40	32 (49.2)
>40	13 (20.0)
Gender	
Male	50 (77)
Female	15 (23)
Nationality	
Egyptian	29 (44.6)
Kuwaiti	16 (24.6)
Other Arab nationalities	20 (30.8)
Years of experience	
Median = 7 years	
≤ 7 years	34 (52.3)
> 7 years	31 (47.7)
Latest qualification	
BSc	63 (96.9)
MSc	2 (3.1)
Place of work	
Government	26 (40.0)
Private pharmacy	39 (60.0)

The majority (96%) of the pharmacists were interested in herbal information; their herbal information came mainly from their previous classes during college, followed by books/magazines then from the media. It was interesting to find that sales representatives were among the pharmacist's sources for herbal information as illustrated in Table 2. With regard to the pharmacists' views on the reasons behind the recent trend of increased herbal usage, 23 (35.4%) of the pharmacists reported that it was because the herbs are safer, of natural origin and peopled do not trust conventional medicine. This is shown in Table 3.

Table 2. Source of herbal information

Source of information	Frequency (%)
Studying in college	51 (78.5)
Books / Magazines	35 (53.8)
Media	31 (47.7)
Other sources (Sales representative)	20 (30.8)
Not interested in herbal information	4 (6.2)

The results of this study showed that about half of the sample (51%) had used herbal therapy in their lifetime for treatment of their own aliments. The remedies most frequently used by pharmacists as folk medicine were: mint, thyme, garlic, camomile, fenugreek, anise, and senna. It was also indicated that (49%) of the participants give advice (counselling) to patients about the use of herbs. There was a statistically significant difference in this aspect based on the pharmacist place of work: more pharmacists who work in private pharmacies reported advising patients regarding herbs than those working in government pharmacies. Also, more non-Kuwaiti pharmacists reported counselling patients about the herbal issues than Kuwaiti pharmacists ($p<0.05$) as is shown in Table 4.

Table 3. Pharmacists' opinion regarding the reasons for the trend of increase usage of herbs.

The reason	Frequency (%)
Herbs are safe	33 (50.8)
Herbs are natural	30 (46.2)
Not trusting conventional medicine	7 (10.8)
All the above reasons	23 (35.4)
Other reasons	3 (4.6)

Table 4. The attitudes of pharmacists towards advising patients about the use of the herbs.

Characteristics	Counselling on herbs	p-value
Gender		
Male	48.0	0.717
Female	53.3	
Age		
< 30	40.0	0.506
30-40	56.3	
>40	46.2	
Work experience		
≤ 7 years	38.2	0.063
> 7 years	61.3	
Place of work*		
Government	23.1	0.001
Private	66.7	
Nationality*		
Egyptian	51.7	
Kuwaiti	18.8	0.009
Other Arab	70.0	

* Cross tabulation revealed that there was a statistically significant difference between the place of work, nationality and counselling on herbs ($p \leq 0.05$).

Although the pharmacist's knowledge about uses of selected herbs (Garlic, Ginkgo biloba, Ginseng, St.Jones and Echenicea) was good but their awareness about the side effects of those herbs was modest as it is illustrated in Table 5. Pharmacists' attitude regarding stopping conventional medicine while using herbal therapy was unsatisfactory. Table 6 shows that 47 (72.3%) of the pharmacists thought that the conventional medicine should not stop during usage of herbs.

This study also showed that about 31% of the pharmacists did not have enough information about potential interactions between herbs and conventional medicines. The government pharmacists were more aware 22 (84.6%) that there are drug-herb interactions than those working in the private sector 23 (59.0%) ($p=0.028$) as it is shown in Table 7.

Table 5. Pharmacists knowledge of use and side-effects of selected herbs

Herb selected	Correct answer	
	use of herb (%)	side-effect of herb (%)
Garlic	47 (72)	12 (19)
Ginsing	55 (85)	9 (14)
Ginko biloba	37 (57)	0 (0)
Echinaceae	34 (52)	0 (0)
St. Jones	16 (25)	3 (5)

Table 6. Pharmacists' attitude regarding stopping conventional medicine while using herbal therapy.

The attitude during herbal usage	Frequency (%)
Stop conventional medicine	6 (9.2)
Don't stop conventional medicine	47 (72.3)
Don't know	12 (18.5)

Table 7. Awareness of pharmacists towards drug-herb interactions.

Characteristic	%	p-value
Gender		0.806
Male	70.0	
Female	66.7	
Age		0.995
< 30	70.0	
30-40	68.8	
>40	69.2	
Work experience		0.408
=< 7 years	64.7	
> 7 years	74.2	
Place of work*		0.028
Government	84.6	
Private	59.0	
Nationality		0.552
Egyptian	72.4	
Kuwaiti	75.0	
Other Arab	60.0	

* Cross tabulation revealed that there was a statistically significant difference between the place of work and pharmacists' awarness regarding drug-herb interactions ($p \leq 0.05$).

DISCUSSION

This study revealed that pharmacists` personal use of herbs in Kuwait is high. This finding is similar to other studies where the use of herbal therapy among pharmacists is reported as prevalent and widespread.[7,12,13]

A possible reason for the shift from conventional to unconventional medicine is the perspective that Western medicine lacks "caring for the whole patient".[6] In general people believe that herbal therapy is more natural than modern pharmaceuticals. This is not always true as it is documented in a WHO report that some herbal medicines are potent and their safety is not as evident as people think. Also they can be dangerous when taken in combination with modern pharmaceuticals.[14] Half of the pharmacists participating in this study believed that herbal therapy is safe; this finding is similar to a comparable study carried by Welna et al.[13]

Use of herbal therapy together with conventional medicines is reported in some studies as usual practice by patients with chronic conditions.[15,16] This practice has effects on compliance with the

prescribed medication regimen. The pharmacist's involvement in TM/CAM use by consumers becomes even more critical if we recognise that most patients are using herbal products without the knowledge of their physician or pharmacist; it is reported in some studies that many patients do not routinely tell their physicians about alternative medicines use nor do physicians ask about it.[17,6] In a recent United States survey, one in six adults taking prescription drugs reported concomitant use of at least one herbal product (not including vitamin or mineral supplements) during the preceding week.[11] This was also found in the Gulf region where it reported that 24% of patients attending a health centre in northern province of Saudi Arabia had used an alternative medicine during the last 6 months.[18] This may be of some importance especially for those patients with chronic diseases.[3,19] In the Mediterranean area, there are thousands of plants which have been used extensively as "traditional prescription" with little or no information regarding their toxicity. In the absence of health education programs designed to warn the community, especially high risk populations, of the hazards involved the use of the traditional preparations the role of the pharmacist is crucial in this area.[20]

The issue of using certain kinds of herbs together with conventional medication is critical in some cases, as in warfarin therapy. Safe level of anticoagulation may be exceeded if, for example, it is used together with herbs such as garlic, ginkgo, and ginseng.[21-24] It is important that the pharmacist should know and ask his/her patients if they are using such herbs in order to avoid potential drug-herb interactions. Pharmacists must be aware of these drug-herb interactions to educate their patients.

The findings of this study demonstrate that pharmacists were more likely to answer correctly about the uses of selected herbs than about drug interactions, or side effects of the herbs. The same has been found in other studies.[9,21] As more and more people try herbal medicines, the pressure increases on pharmacists to be well informed about the subject. Pharmacists must be better informed and it was documented in this study that the vast majority of the participants were interested in getting more herbal information. It is reported that all pharmacists must have a basic knowledge of herbal products in order to provide pharmaceutical care.[25,26]

Most respondents gathered their information on herbal remedies during their previous studying in pharmacy schools. It can be assumed that these were the older pharmacists as many pharmacy schools no longer include pharmacognosy as part of their curriculum. However there is an increasing call to add or integrate a course of natural products into pharmacy school curricula.[9,21,25,27] This call has received a positive response with many pharmacy colleges in USA offering coursework in some area of CAM[6] but there is still a need to improve the breadth and scope of this education.[26]

The other important finding was that almost half of the surveyed pharmacists chose the media and nearly about one third considered sales representatives as a source of herbal information. These sources are often not under the oversight of any agency to ensure quality or accuracy of information. This was also reported by Clauson et al where the natural product reference of choice of Missouri pharmacists was determined more by the pharmacists' familiarity with and the accessibility of the resource more than by the quality of the resource itself. While pharmacists are aware of their role as educators about both TM/CAM and conventional medicines, there is a need for greater access to reliable resources and education on these therapies.[7,12]

The results of our study suggest that information about herbal medicine should be provided to the pharmacists in Pharmacy College as part of the curriculum not only as an elective course for the future pharmacists and that Continuing Education programs should be organised for practicing pharmacists. It is reported that pharmacists with previous continuing herbal education are more knowledgeable than those without.[21]

CONCLUSIONS

The use of herbs among pharmacists is widespread and prevalent in Kuwait. Pharmacists were more educated about the uses of herbal products and less informed about their side-effects and interactions. The increased use of herbal medicines necessitates the need for more education. There is also a need for reliable sources of information on herbs. This can be achieved by providing herbal information through Pharmacy Colleges as part of the curriculum for pharmacy students. The pharmaceutical association may play a role in organizing continuing education programs focused on rational use of herbs for practising pharmacists. When pharmacists have a basic knowledge of herbal products, they can educate the public and offer them the optimal pharmaceutical care.

CONFLICT OF INTEREST

None declared.

References

1. Annual report of the Eastern Mediterranean Region 2005. WHO.

2. Traditional medicine. Fact sheet No 134. WHO, Geneva. 2003.

3. Al-Saeedi M, Elzubier AG, Bahnassi AA, Al-Dawood KM. Patterns of belief and use of traditional remedies by diabetic patients in Mecca. Saudi Arabia East Mediterr Health J 2003;9:99-107.

4. Barnes J. An introduction to herbal medicinal products . Pharm J 2002;268:804-6.

5. Vickers A, Zollman C. ABC of complementary medicine, herbal medicine. BMJ 1999;319:1050-3.
6. Dutta AP, Miederhoff PA, Pyles MA. Complementray and alternative medicine education: Students' perspectives. Am J Pharm Educ 2003;67:345-9.
7. Naidu S, Wilkinson JM, Attitudes of Australian pharmacists toward complementary and alternative medicines. Ann Pharmacother 2005; 39:1456-61.
8. Hasan MY, Das M, Behjat S. Alternative medicine and the medical profession: views of medical students and general practioners. East Mediterr Health J 2000; 6: 25-33.
9. Clauson KA, Mc-Queen CE, Sheild KM, Bryant PJ. Knowledge and attitudes of pharmacists in Missouri regarding natural products. Am J Pharm Educ.2003;67:301-9.
10. Churchill GA. "Marketing Research : Methodological Foundations". The Dryden Press (Seventh Edition, 1999). p. 501-507.
11. De-Smet PA. Herbal remedies. N Engl J Med 2002;347:2046-55.
12. Koh HL, Teo HH, Ng HL Pharmacists' patterns of use, knowledge, and attitudes toward complementary and alternative medicine. J Altern Complement Med 2003;9:51-63.
13. Welna EM, Hadsall RS, Schommer JC. Pharmacists' personal use, professional practice behaviors, and perceptions regarding herbal and other natural products. J Am Pharm Assoc 2003;43:602-11.
14. Guidelines to promote proper use of alternative medicines. WHO Geneva 2004. Available at: http://www.who.int/mediacentre (accessed Sep 28,2006).
15. Brown CM.Use of alternative therapies and their impact on compliance: perceptions of community pharmacists in Texas. J Am Pharm Assoc 1998; 38: 603-8.
16. Brown CM, Barner JC, Shah SJ. Community pharmacists' actions when use complementry and alternative therapies with medications. J Am Pharm Assoc 2005; 45:41-7.
17. Bennett J, Brown CM. Use of herbal remedies by patients in a health maintenance organization. J Am Pharm Assoc 2000;40:353-8.
18. Ajaji N, Taha AZ, Al-Subaie AG. Prevalence of utilization of native medicine among primary care consumers. Saudi Med J 1998; 19: 551-4.
19. Al-Rowis NA. Herbal medicine in the treatement of diabetes mellitus. Saudi Med J 2002:23:1327-31.
20. Al-Awamy BH. Evaluation of commonly used tribal and traditional remedies in Saudi Arabia. Saudi Med J 2001;22(12):1065-8
21. Chang ZG, Kennedy D, Holdford D, Small R. Pharmacists' knowledge and attitudes toward herbal medicine. Ann Pharmacother 2000;34(6):710-5.
22. Wong SM, Cheng G, Chan TY. Use of herbal medicines by patients receiving warfarin. Drug safety.2003;26:585-88.
23. Williamson EM. Drug interactions between herbal and prescription medicines. Drug Safety. 2003; 26:1075-92.
24. Ramsay NA, Kenny MW, Davies G, Patel JP. Complimentary and alternative medcine use among patients starting warfarin. Br J Haematol. 2005;130(5),770-80.
25. Mackowiak ED, Parikh , Freely J. Herbal product education in united Statespharmacy schools: core or elective program?. Am J Pharm Educ 2001;65:1-6.
26. Shields KM. Natural products education in schools of pharmacy in the United States. Am J Pharm Educ 2003; 67:43-7.
27. Kouzi SA. Herbal remedies: the design of a new course in pharmacy. Am J Pharm Educ 1996;60:358-64.