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Community Pharmacists' Knowledge, Attitudes and Practices towards the Use of Herbal Remedies

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Authors' contributions

This work was carried out in collaboration between both authors. Author NJA designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author MFK managed the analyses of the study. Author NJA managed the literature searches. Both authors read and approved the final manuscript.

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ABSTRACT

Background: The use of herbal medicines and natural health products by the public is continuously being increased by the day. Community pharmacists are the most accessible healthcare providers, this necessitates that pharmacists should be aware of the appropriate use of herbal medicines.
Objective: The objective of the present study was to assess the knowledge, attitude and practice of community pharmacists in the Al-Kharj region.
Methodology: A cross-sectional study was carried out amongst pharmacists who work in different community pharmacies in Al-Kharj, Saudi Arabia. The questionnaire was prepared using surveys of previous studies and was hand-delivered to the pharmacists concerning the use of herbal medicines.
Results: All of the respondents were male and more than 50% of them were in the age range between 30-39. Most of the pharmacists reported that they have sufficient information about dietary supplements and that they are interested in updating their knowledge about herbal drugs. Furthermore, more than 70% of the participants said that they take

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both medical and medication history from the buyers before supplying herbal medicines.
Conclusion: The study shows that pharmacists have good knowledge and a positive attitude toward using herbal medicines by the public in Al-Kharj city.

Keywords: Pharmacists; knowledge; attitudes; practices; herbal remedies.

1. INTRODUCTION

The use of herbal medicines and natural health products by the public is increasingly drawing the attention of regulators, researchers, and health professionals due to high levels of consumption in the last decade [1]. However, there is also a growing concern on the safety of these preparations [2] due to lack of suitable quality controls, inadequate labelling, and the absence of appropriate patient information among others [3].

The belief that herbal medicines promote healthier living is cited as a prime reason for its popularity in developed countries. In developing countries, 80% of the population relies on traditional herbal medicines for their primary healthcare needs [4].

Herbal remedies are available to residents in Saudi Arabia from herbal remedy shops or retail outlets. Traditional herbal remedies are usually sold in their crude forms through folk medicine shops. The availability of the new herbal remedies in pharmaceutical dosage forms has made them amenable to being dispensed through community pharmacies. Since community pharmacies come under the regulation of the Ministry of Health, these herbal medicines are registered. However, a large proportion of unregistered herbal medicines continue to be dispensed through outlets other than pharmacies [5,6].

Community pharmacists are receiving more queries from patients about herbal products than ever before [7], this necessitates that pharmacists should be aware of their possible uses, dosing, adverse effects, drug interactions and contraindications [8].

The American College of Clinical Pharmacy stated that the pharmacists' involvement in herbal products is an extension of their roles in pharmaceutical care, clinical pharmacy practices and collaborative healthcare teams [9].

The objective of the present study was to assess the knowledge, attitude, and practice of community pharmacists towards herbal remedies and the availability of herbal medicinal information resources in the Al-Kharj region.

2. METHODOLOGY

A cross-sectional study was carried out amongst 50 randomly selected pharmacists who work in different community pharmacies in Al-Kharj, Saudi Arabia. The questionnaire was prepared using surveys of previous studies [8,10,11]. The questionnaire was hand-delivered to the pharmacists to explore the knowledge, attitude, and practice of community pharmacists. We included the pharmacists in community pharmacies and excluded the pharmacists working in other places.

The questionnaire was divided into the following sections:

1. Participants city
2. Demographic Data
3. Questions regarding community pharmacists' knowledge, attitudes and practices towards herbal remedies and the Availability of herbal medicinal information resources
4. Questions regarding Information sought by the community pharmacists before supplying herbal medicines

Participants were informed that all the information provided was completely confidential and the results would be accessed anonymously. The collected data is presented in 4 tables, each table covers one part of the questionnaire. Some questions could be answered by more than one choice, so for some question, the total was more than 100%.

3. RESULTS

The majority of the respondents were from Alseih city (68%). The different cities and the number of respondents from these cities are shown in Table 1.

All of the respondents were male, 54% of the respondents were in the age range between 30-39. The demographic data are shown in Table 2.

Most of the pharmacists reported that they have sufficient information toward dietary supplement (76%), Additionally, most of them (70%) said that they are interested in updating their knowledge about herbal drugs. Community pharmacists' knowledge and practices towards herbal remedies are shown in Table 3 and their attitudes toward herbal remedies are shown in Table 4.

Most of the participants said that they frequently counsel buyers about the potential adverse effects of herbal medicines (72%) and most of them reported that they counsel buyers about the administration of the herbal medicine supplied (82%). Information sought by the community pharmacists before supplying herbal medicines is shown in Table 5.

Table 1. Participants city

City	Number of participants	Per cent of participants
Alseih	34	68
Hutat-bani-Tamim	8	16
aldelm	8	16

Table 2. Demographic data

Variables	N (%)
Gender	
Male	50 (100%)
Female	0 (0 %)
Age	
20-29	18 (36%)
30 – 39	27 (54%)
40 – 49	4 (8%)
than 50	1 (2%)
Number of years practicing as pharmacist	
< 5	9 (18%)
5 – 10	20 (40%)
11 – 20	18 (36%)
> 20	3 (6%)
Highest qualification related to pharmacy	
College or below	0 (0%)
Bachelor	50 (100%)
Master	0 (0%)

Table 3. Community pharmacists' knowledge and practices towards herbal remedies

Variables	N (%)
Pharmacist Has sufficient information toward dietary supplement	
Yes	38(76%)
No	12(24%)
Have you ever received any previous continuing education on herbal medications?	
Yes	11(22%)
No	39(78%)
Are you interested in updating your knowledge about herbal drugs؟	
Yes	35(70%)
No	15(30%)
How often do you record herbal medicine use in the pharmacy?	
Very often	3(6%)
Often	9(18%)
Sometimes	27(54%)
Rarely	7(14%)
Never	4(8%)

Variables	N (%)
Categories of drugs that are most commonly dispensed	
Cough preparations	36(72%)
General health tonic	4(8%)
Slimming agents	10(20%)
Others	3 (6%)
Who usually asks for herbal drug counselling?	
Children	4(8%)
Adults	11(22%)
Elderly	38(76%)
How often do you discuss herbal medicine use with your patients?	
Very often	7(14%)
Often	15(30%)
Sometimes	20(40%)
Rarely	5(10%)
Never	3(6%)
What are the barriers that limit discussing herbal medicines with your patients?	
Lack of time	31(62%)
Lack of reliable sources	6 (12%)
Not interest in subject	2(4%)
Lack of herbal knowledge	5(10%)
Lack of scientific evidence to support the use of herbal medicine	9(18%)
Others	1(2%)
Which herbal medicinal resources are readily available in your pharmacy?	
Books	8(16%)
Package inserts/Brochures	8(16%)
Internet web sites	34(68%)
Computer databases	3(6%)
Others	0(0%)
None	7(14%)
Pharmacist always checks whether a particular supplement is taken by consumer interact with her/his prescription medicines	
Yes	30(60%)
No	20(40%)
Do you think that Herbal products as alternative therapeutic options are?	
Not effective	1(2%)
Somewhat effective	21(42%)
Effective	22(44%)
Very effective	2(4%)
Uncertain	4(8%)
Did you ever receive complaints of adverse reaction to herbal medicines from the users?	
Very often	1(2%)
Often	1(2%)
Sometimes	11(22%)
Rarely	23(46%)
Never	13(26%)
Have you ever recommended herbal medicines to buyers?	
Very often	10(20%)
Often	14(28%)
Sometimes	15(30%)
Rarely	4(8%)
Never	7(14%)

Table 4. Community pharmacists' attitudes towards herbal remedies

Variables	N (%)
Pharmacists' opinion regarding the reasons for the trend of increasing usage of herbs	
Herbs are safe	30(60%)
Herbs are natural	12(24%)
Not trusting conventional medicine	10(20%)
Other reasons	2(4%)
Pharmacists' attitude regarding stopping conventional medicine while using herbal therapy	
Stop conventional medicine	4(8%)
Don't stop conventional medicine	37(74%)
Don't know	9(18%)
Price is an important factor for recommending supplements to customers	
Yes	29(58%)
No	21 (42%)
Customers usually are influenced by Pharmacist's comments about supplements	
Yes	46(92%)
No	4(8%)

Table 5. Information sought by the community pharmacists before supplying herbal medicines

Did you enquire about herbal medicine prescriber?									
Always	14(28%)	Regularly	9(18%)	Occasionally	9 (18%)	Rarely	7(14%)	Never	10(20%)
Did you take Medical history from the buyers?									
Always	12(42%)	Regularly	15(30%)	Occasionally	9 (18%)	Rarely	6(12%)	Never	8(16%)
Did you take Medication history from the buyers?									
Always	19(38%)	Regularly	19(38%)	Occasionally	9 (18%)	Rarely	1(2%)	Never	2(4%)
Did you Consult referenced materials before supplying herbal medicines?									
Always	17(34%)	Regularly	14(28%)	Occasionally	13(26%)	Rarely	1(2%)	Never	5(10%)
Did you Counsel buyers about the administration of the herbal medicine supplied?									
Always	29(58%)	Regularly	12(24%)	Occasionally	4(8%)	Rarely	3(6%)	Never	2(4%)
Did you Counsel buyers about the potential adverse effects of herbal medicines?									
Always	24(48%)	Regularly	12(24%)	Occasionally	8(16%)	Rarely	4(8%)	Never	2(4%)

4. DISCUSSION

The present study was conducted in Al-Kharj city. All of the respondents were males and 90% of them were from the age range of 20-39. The reason could be that women unemployment rate is over 36%. However, with the new economic vision, women are empowered through different government initiatives to actively participate in the workforce, especially in the pharmacy sector [12,13].

The majority of the respondents said that pharmacist has sufficient information towards dietary supplement, but they are interested in updating their knowledge about herbal drugs. The study also showed that only 24% of the pharmacists record frequent herbal medicine use in pharmacy. In contrast of this, Ziba, et al. found that 50% pharmacist recorded the frequent herbal medicine use in the pharmacy [14].

Herbal medicine for the treatment of cough was the most category of drugs that are most commonly dispensed (72%). This is in contrast with the previous study which reported that the major use of herbal medicines is for health promotion and therapy for chronic conditions [15]. The herbal remedies were dispensed mainly by elderly patient followed by adults and this is rational because the elderly people are using more medications than the adult people and the regimens of their treatment are more complex. Only 44% of the participants frequently discuss herbal medicine use with their patients and this represents one of the negative points that need to be modified because pharmacists are medication experts so they should counsel patients about the treatment that they receive either herbal or not herbal remedies. The respondents reported that main barrier that limits discussing herbal medicines with the patients was lack of time, this problem could be overcome by good time management and also generally

there isn't lack of time during the day, many patients come to the pharmacies at the same time in the night.

Forty-eight per cent of the participants reported that they frequently recommended herbal medicines to buyers. Additionally, the majority of the respondents said that herbal products are alternative therapeutic options and only 1% said that they are ineffective. Similarly, in another survey, 90% of community pharmacists stated that herbal medicines and other alternative medications have several merits [16]. This result is not rational because the herbal products should be tested in different stages for the safety and efficacy status and should be approved by the Saudi food and drug authority before the use of these products.

Only 4 pharmacists said that we should stop conventional medicine while using herbal therapy. Our data also suggest that the main reason for the trend of increasing usage of herbs is that herbs are safe as reported by the pharmacists and that price is important factor for recommending supplements to customers as reported by 58% of the pharmacists, this is not always true because some herbal remedies like the conventional drugs can cause toxicity and many adverse effects . Moreover, there are many drug-drug interactions between drugs and herbal remedies. In support of this statement, other studies reported several potential cases of drug-herb interactions with ginkgo/aspirin, ginseng/warfarin, and ginseng/digoxin are reported in the literature. As a result, healthcare professionals must be aware of these drug-herb interactions to educate their patients [17,18,19]. Furthermore, traditional medicines are widely perceived as safe and non-toxic. It is untrue mainly when herbs are taken with prescription drugs, over-the-counter medications, or other herbs [20,21,22].

Regarding the herbal medicinal resources that are readily available in the pharmacy, the majority said that internet web sites available in their pharmacies and this may create a problem because the internet web sites need assessment to check the accuracy of the information. Furthermore, more than 70% of the participants said that they take a medical history and medication history from the buyers before supplying herbal medicines. Moreover, the majority reported that they counsel buyers about the administration of the herbal medicine supplied and about the potential adverse effects of herbal medicines. In suggestion to this, pharmacies in Saudi Arabia should be equipped with evidence-based references on herb-drug interactions, such as a recent herbal textbook and/or an updated computer database on natural products.

Several limitations to this study exist. First, results of this study may not be generalized to pharmacists nationally or all healthcare professionals since the convenience sample consisted primarily of pharmacists in small city and the survey site distribution of pharmacist did not represent the exact population.

5. CONCLUSION

The study shows that many pharmacists in Al-Kharj believed that herbal remedies were an effective alternative option and a high proportion of pharmacists thought they were safe and derived from natural resources.

The study shows that pharmacists have good knowledge and a positive attitude toward using herbal medicines and that the customers are usually influenced by pharmacist's comments about herbal products. Therefore, the pharmacists should have good knowledge about the uses, side effects, doses and interactions of these herbal drugs with other medications. Additionally, we encourage pharmacist to attend continuing education programs related to herbal remedies.

CONSENT

As per international standard ,pharmacist's written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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