

# Knowledge, Attitudes and Awareness of Community Pharmacists Towards the Use of Herbal Medicines in Muscat Region

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## Abstract

**Objective:** This study aims to investigate the knowledge and attitudes among pharmacists in Oman towards the specific use and knowledge of herbal drugs.

**Methods:** The study was conducted on 100 pharmacists employed in Oman. The data was collected using two self-administered questionnaire containing 7 and 11 closed ended questions in each, respectively.

**Results:** The mean age of pharmacists was 32.6 (SD=5.6) years. The majority of pharmacists were interested in herbal information and their herbal information mainly comes from their previous classes during college. Most of them have belief on the effectiveness of herbal products. Pharmacists were more knowledgeable on specific therapeutic indications of herbal products rather than on other areas such as drug-herb interaction or side effects.

**Conclusion:** In summary, Pharmacists need to be informed on the therapeutic indications, drug interactions, dose, active constituent and precautions of herbal products. Concerned bodies must also provide them with regular continuing education programs apart from putting their effects to incorporate relevant topics in herbal medicine in pharmacy curriculum.

**Keywords:** Herbal drugs; Herb-drug interaction; Pharmaceutical care.

## Introduction

More than 80% of the population within developing countries rely on the use of herbal and other traditional medicines for their primary healthcare.<sup>1</sup> The use of herbal medicine is very common in the Arab world including Oman,<sup>2</sup> and their consumption is increasing at a rapid pace worldwide due to the wide spread belief that these preparations are natural and therefore, safe, which is not true.<sup>3</sup> This trend is also observed among the general practitioners who are now more interested and inclined towards the use of herbal drugs for the treatment of some common ailments.<sup>4</sup>

In Oman, herbal remedies are considered as over the counter (OTC) drugs and thus are easily available through pharmacies in

different pharmaceutical dosage forms such as tablets, capsules, syrups, extracts etc. Self medication of herbal medicines is very much prevalent among populations due to the irrational claims or advertisements by manufacturers through different mass media. Patients use herbal medicines either alone or in combination with other conventional medicines without informing the treating physician, which may lead to serious clinical implications.<sup>5</sup>

Community pharmacists are the most accessible healthcare providers and according to a study conducted in the US, they are more queried from patients about herbal products than ever before.<sup>6</sup> Similar studies have also been conducted in Nigeria,<sup>7</sup> United Arab Emirates,<sup>8</sup> and Saudi Arabia,<sup>9</sup> to assess the knowledge and attitude of community pharmacists towards the use of herbal drugs. Pharmacist being the link between the patient and drug usage, can play an important role in creating awareness and advising the patients about the rational, safe and proper use of these medicines.<sup>10</sup> However, to advice in a proper manner, pharmacist must have knowledge about the therapeutic indications, dosing, side effects, toxicology and potential interactions of herbal medicines with modern medicines. Therefore, the present study was conducted with an aim to assess the knowledge, attitude, awareness and dispensing practices among community pharmacists in Muscat region towards the specific use and safety of herbal drugs.

## Methods

Muscat is the capital city of Sultanate of Oman, a gulf country with a developing healthcare system, located in the Southeastern portion of the Arabian peninsula. More than 140 private pharmacies are located across Muscat city providing round the clock healthcare services to the public. Thirty-five community pharmacies were randomly selected based on their geographical distribution (i.e. north, south, east and west) in Muscat city and a cross sectional survey was conducted during May-June 2010. A total of 100 pharmacists participated in the study. Data collection was carried out using a structured self administered questionnaire, especially designed for this study. The questions were mainly close ended or Multiple choice type and were distributed to the pharmacies after validating the questionnaire for readability, question design and length by a pilot study on 5 pharmacists.

Data were analyzed using SPSS v. 13.0. Categorical variables were described using frequency distribution and percentages.

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Mean and standard deviation were calculated for age variables and median for experience.

## Results and Discussion

A total of 100 interviews were conducted with a 100% response rate. The mean age of pharmacists was 32.6 years (SD: 5.6), 66% of the respondents were men and 34% were women. More than half of the pharmacists (58%) were Indian while Omani pharmacists constituted 20% of sample with a median duration of 8 years experience. The majority of the pharmacists (90%) were interested in attending continuing medical education programs to update and improve their current knowledge on herbal drugs, while 45% of the respondents acquired knowledge about herbal medicines mainly by studying Pharmacognosy during formal pharmacy education in college. However, 30% of the pharmacists rely on the internet, magazines and product leaflets to update their knowledge about herbal medicines. Few pharmacists mentioned that they also obtained information from medical sales representatives. (Table 1)

**Table 1:** Pharmacists characteristics, attitude, and opinion about herbal drugs.

Variable	% of participants
<b>Section 1: General information</b>	
<b>Age (in years)</b>	
20-29	52
30-39	39
>40	9
Average =32.6, SD=5.6	
<b>Gender</b>	
Male	66
Female	34
<b>Nationality</b>	
Omani	20
Indian	58
others	22
<b>Experience (in years)</b>	
<5	26
5-10	50
>10	24
<b>Section 2: Categories of drugs that are most commonly dispensed</b>	
Cough preparations	54
General health tonic	23
Slimming agents	10
Others	13
<b>Section 3: Source of information about herbal drugs</b>	
Study of Pharmacognosy in college/ university	45
Books/magazine/Product leaflets	21
Media/internet	9
Other sources (sales representatives, symposium, friends)	25

**Table 1:** Pharmacists characteristics, attitude, and opinion about herbal drugs

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Variable	% of participants
<b>Section 4: Opinion regarding increase usage of herbs</b>	
Herbs are safe	26
Herbs are natural	46
People do not trust allopathic medicines because of their cost and side effects	10
Others	18
<b>Section 5: Are you interested in updating your knowledge about herbal drugs</b>	
Yes	90
No	10
<b>Section 6: Opinion regarding effectiveness of Herbal drugs</b>	
Effective	51
Some what effective	18
Not effective at all	31
<b>Section 7: Who usually asks for herbal drug counseling</b>	
Children	13
Adults	62
Elderly	25

According to pharmacists' opinions; cough preparations (Thyme or ivy leaves extract) were the most widely dispensed drugs (54%), followed by rejuvenators and vitalizers (ginseng, 23%) and slimming agents (10%). A total of 62 pharmacists believed that mostly middle aged adults seek counseling on herbal drugs followed by elderly (25%) and children (13%).

The Pharmacists' view regarding the recent trend in increase dosage of herbs suggested that a considerable proportion of the respondents believed that herbs are safe (26%), effective (51%), natural (46%) and nowadays people do not trust conventional medicines because of their cost and side effects (10%). Three herbal drugs namely dried Ivy leaves extract, Ginseng and St. John's wort were selected to evaluate the pharmacists knowledge about the safety of herbs (Table 2). The pharmacists were asked 11 questions pertaining to the therapeutic use, herb-drug interaction, adult dose and the most common side effect of the selected herbs and it was observed that more than 3/4<sup>th</sup> of the pharmacists had good knowledge of the therapeutic indication (89%, 82% and 86% respectively), and adult dose (79%, 84%, and 81% respectively) of Ivy leaves extract, Ginseng and St. John's wort. However, only 1/3<sup>rd</sup> of the participants could recognise possible drug-herb interaction and around 50% of the participants were unaware of any interaction reported in the literature between the selected herbs and common drugs used in the management of chronic diseases like hypertension and diabetes.

**Table 2:** Pharmacists knowledge of therapeutic indication, dose, side effect and interaction of three selected herbal drugs

Statement	Correct response (%)	Incorrect response (%)	Do not know (%)
1. Dried Ivy leaves extract is used in symptomatic treatment of inflammatory bronchial disease.	89	11	-
2. St. John's wort is indicated in treatment of depression.	82	18	-
3. Ginseng is commonly used as a general health tonic.	86	14	-
4. Is it safe to take Dried Ivy leaves extract along with Antibiotics?	29	18	53
5. Is there any interaction between Ginseng and oral hypoglycemic agents	27	26	47
6. Does St. John's Wort interact with digoxin?	23	26	51
7. Insomnia is the common side effect of Ginseng.	45	51	4
8. St. John's wort can cause photosensitivity in some patients.	49	45	6
9. What is the adult dose of Ginseng per day?	84	15	1
10. Adult dose of dried Ivy leaves extract is 2-3 teaspoonful three times a day.	79	21	-
11. What is the daily adult dose of standardized extract of St. John's wort?	81	20	1

Thus it can be concluded from the current study that community pharmacists are very much aware of upsurge in herb usage as a number of people seeking their advice on herbal drugs is on the rise. They are increasingly being sought out as sources of information regarding herbal medicines as they are easily accessible.

Majority of the respondents have a belief on the effectiveness and safety of herbal products reflecting a positive attitude towards dispensing herbal medicines but their knowledge about the side effects and herb-drug interaction was found to be inadequate for an effective advising and patient counseling.

## Conclusion

In order to provide the optimal care and counseling for patients who use herbal drugs, pharmacists need to be well informed about the use and safety of herbs. This can be achieved by providing education and training to the practicing pharmacists by organizing continuing medical education programs focussed on safety, potential harmful effects and rational use of herbal medicines.

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