



COMMUNITY PHARMACISTS' EXPERIENCES AND ATTITUDE TOWARD HERBAL MEDICINES IN JORDAN

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ABSTRACT

Introduction: Globally, the use of natural products and medicines is on the rise. At the same time, the widespread use of these products by patients raises safety concerns. Some Jordanians still rely on traditional Arab medicine to treat various diseases like hypertension and diabetes mellitus. Some of these products are sold in pharmacies. **Aim:** This study aimed to evaluate pharmacists' experiences and attitude toward herbal medicines in Jordan. **Method:** An online study of 110 community pharmacists using a structured questionnaire conducted during February 2022. The pharmacists were randomly selected randomly via pharmacy association. The study had autonomous questionnaire with 26 questions which carry out in community pharmacies across the Jordan. **Results:** 100 pharmacists from different parts of the region completed the questionnaire with response rate 92% of respondents. The majority of respondents were female 70%. The pharmacists reported that that ginseng (51%) is the most common herbal preparation dispensed in community pharmacies. The majority of them answer correctly about ginger utilization for motion sickness (65%). More than half of respondents (63%) agree that herbal preparation is effective therapy. Most of them (42%) agreed with herbal products must available only in a pharmacy. 90% of respondents never use these products as self management. **Conclusion:** Pharmacists generally have positive attitudes toward herbal preparations. However, training programs are needed to train pharmacists in advising patients on the use and prescribing of herbal preparations.

1. INTRODUCTION

The global taking of natural foods and herbs has increased in the last thirty years.^[1] Also, there is increase taking herbal products in Jordan (20). As a result, this lead to increase attention of all health workers.^[2] By the way, these products which provide good healthy living is one of the main reasons for its popularization in all over the world.^[3]

Jordanian people still use traditional Arab medicine to treat illnesses.^[4] Herbal medicines with different dosage forms for Jordanian are available at herbal market or community pharmacists. These medicinal herbs are included in the list because local pharmacies are under the supervision of the Ministry of Health.

However, most of the unregistered herbal products are still not sold through pharmacies, but through other centers.^[8,9] The use of non registered of these products and the concomitant use of medicines, which lead to drug interactions, is a clear concern for health professionals and leads to the distribution of these through pharmacies.

Numerous studies have been conducted on the use of medicinal herbs in Saudi Arabia. Studies on the use of plants by diabetics have concluded that physicians should advice patients to discontinue use of these for the effective treatment of diseases.^[10]

Further study showed the extensive use of these in the treatment of high body weight.^[11] There are very few studies examining the role of pharmacists in society.^[8,12]

These studies highlight the need for pharmacists to be more informed about herbal products. The purpose of this study was to evaluate pharmacists' experiences and attitude toward herbal medicines in Jordan.

METHOD

An online study of 100 community pharmacists using a structured questionnaire was conducted during February 2022. The study was an autonomous questionnaire with 26 questions, which carry out in community pharmacies across the Amman region. The questionnaire was obtained from different studies in the Middle East.^[2,8,14,15]

This questionnaire had four sections: demographic/basic information, attitude, knowledge, practice. The first section focused in sociodemographic characteristics with 6 questions. The second sect focused in the knowledge of respondents toward indication use of these preparations with 6 questions. The third section focused in knowledge of respondents toward negative effects of these preparations with four questions. The fourth section focused in attitude of them toward these preparations with five questions. The five question focused in the practice of them toward these products with three questions. We analyzed the data using SPSS statics analysis.

3. RESULTS

1. Demographics / General information about the respondents

Table 1: Demographics / General information about the respondents.

1- Gender		
Male	30	30%
Female	70	70%
2- Age		
20-29	10	10%
30-39	55	55%
40-49	15	15%
50-59	12	12%
>60	8	8%
3- Education level		
Bachelor degree	92	92%
Pharm D	5	5%
Master degree	3	3%
4- Experience		
<1	1	1%
1-5	9	9%
6-10	55	55%
11-15	20	20%
16-20	10	10%
20	5	5%
5- Location of the pharmacy		
City	82	82%
Village	18	18%
6- The most commonly dispensed herbal product through the community pharmacy		
Ginseng	51	51%
Valerian	11	11%
St John's wort	14	14%
Ginger	15	15%
Arnica	12	15%
Chamomile	22	22%
Garlic	31	31%
Other (e.g. Echinacea, dried fig, horse chestnut, passion flower)	12	12%

2. Knowledge toward indication of herbal preparations

Pharmacists answered 6 questions about medical uses, interaction, etc. of each one preparation. The majority of them answer correctly about ginger utilization for motion

100 pharmacists from different parts of the region completed the questionnaire with response rate 92% of respondents.

The majority of participants (55%) aged 30 to 39 years the minority of them 3% had a master's degree. 92% of them with a bachelor's degree in pharmacy and 5% with a Pharm D. degree.

The majority of respondents were female 70%. (51%) of pharmacists reported that that ginseng is the most common herbal preparation dispensed in community pharmacies, followed by ginkgo (21%), garlic (31%), chamomli (22%) and valerian (11%), St John's wort (14%) and then other products (12%). Further results are shown in table 1.

sickness (65%). Less than third of respondents incorrectly answer about Arica utilization for allergy.

With a mean of 82% correct answers ($p < 0.05$), the pharmacists were well aware of the these products.

Further results are shown in table 2.

Table 2: Knowledge of respondents about indication of herbal preparation.

		%
8- Echinacea is utilized to support immunity:	81	81
9- St John’s wort is prescribed for depression	82	82
10- Arnica is utilized for allergy	75	75
11- Ginger is utilized for motion sickness	65	65
12- Ginkgo is used for support nervous system for dementia	65	65
13- Chamomile is used for sleep disturbance	86	86

3. Knowledge toward negative effect of herbal preparations.

More than half of them correctly answer about Valerian contraindication with lexopam (55%). The minority of them incorrectly answer about Ginseng affecting BP (25%).

The majority of them (60%) were also able to identify negative effects of these products ($P < 0.05$). Further results are shown in table 3.

Table 3: Knowledge about negative effect of herbal preparations.

		%
14- Ginkgo with warfarin increase bleeding	84	84
15- St John’s affect digoxin level	65	65
16- Valerian contraindication with lexopam	55	55
17- Ginseng may increase BP	75	75

4. Attitude of respondents toward use of herbal preparation

The respondents have a positive attitude towards herbal preparation (Table 4, $p < 0.05$).

More than half of respondents (63%) agree that herbal preparation is effective therapy. Most of them (42%) agreed with herbal must available only in a pharmacy. Less than third of them (20%) disagree that The use of herbal preparation only consider as a second line treatment. The minority of them have neutral toward the source of information of these products only from pharmacists. Further results are shown in table 3.

Table 4: Attitude of respondents toward use of herbal preparation.

	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly agree %
18-Herbal preparations are effective	3	4	10	63%	20
19-Herbal must available only in a pharmacy.	5	5	5	42	43
20-The use of herbal preparation only consider as a second line.	25	20%	30	20	5
21-source of information of these products only from pharmacists.	2	3	10	42%	43
22- must consider education program about these products.	1	2	9	50	29

4. Practice of pharmacists toward herbal products
Regarding practice of prescribing these products, the majority of them often have herbal preparation of (72%).

90% of respondents never use these products as self management. Further results are shown in table 5.

Table 5: Practice of pharmacists toward herbal products.

Question	Practice				
	Never n (%)	Rarely n (%)	Sometimes n (%)	Often n (%)	Always n (%)
1. have you herbal preparation?	1	1	12	72	14
2. self treatment by these products	90	5	1	2	3
3. counsel	15	30	10	12	31

4. DISCUSSION

The overall consumption of highly effective herbal products has been increase in Jordan.^[4,20] As in other

Middle Eastern countries, the health care is largely depend on traditional medicine.^[10,11,12] However, as

deferent studies have shown, the people still prefers herbal products.^[10-12]

According to a recent study in this area, medicinal herbs are the treatment of choice for a significant part of the population studied.^[13]

Similar study that took part in Jordan found that about one half of patients took these herbal products for hypertension and diabetes disease.^[23] Our study found that the ginseng (51%) is the most common herbal preparation dispensed in community pharmacies, followed by ginkgo (21%), garlic (31%), chamomile (22%) and valerian (11%). This is consistence with another studies that took in different regions.^[8,15]

Our study found the respondents had good knowledge of herbal medicines, such as their use (P value < 0.5) and negative effects. Jordanian study found that more side effects and undesired effects association with these herbal products.^[21,22] These results are consistence with another studies.^[2,8,14-16]

These results was similar to other studies.^[2,8,14-16] There are many factors contribute to pharmacy knowledge. education program of medicinal herbs is a key factor. Research has shown that useful education is important when planning pharmacy education. Therefore, countries where the use of plants is widespread should educate pharmacy students with knowledge in this field of medicine.^[17,18]

In addition, refresher courses and seminars should be provided to increase the knowledge of pharmacists on this subject. Less than third of respondents "always" recommend it to their patients. This may be due to various factors, such as lack of time due to other tasks.^[12]

Pharmacists must take responsibility for continuous learning, thinking. The results of the study showed that 98% of pharmacists "sometimes", "often" and "always" sold herbal medicines in the pharmacy.

Most used plant-based products for self-care, as has been showed in other studies.^[2,8,14,16] It is safer to obtain registered and authorized herbal preparations from local pharmacies than medicinal herbs seller.

Medicinal herbs seller sell unauthorized products with bad storage condition and he had less information about these products.^[19]

Our study showed that more than half of respondents (63%) agree that herbal preparation is effective therapy and most of them (42%) agreed with herbal must available only in a pharmacy.

This attitude may encourage patients to purchase licensed herbal preparation from licensed physicians. The majority of them (79%), as well as in other studies,

were consider education programs about these products.^[2]

About 85% of them "agree" or "strongly agree" that they are the only ones advising patients on herbal products because pharmacists are the most accessible health care providers in the community.

5. CONCLUSION

This study aimed to evaluate pharmacists' experiences and attitude regarding herbal medicines in Jordan. The respondents showed positive attitude toward these preparations. They need to increase their knowledge toward these preparation by continue educating program.

In addition, they demonstrated social responsibility by taking responsibility for advising patients on plant issues.

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