

The Public Knowledge, Attitude, and Practice of Using Herbal Medicines in Makkah Province

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Abstract

Herbal medications are being widely used as dietary supplements worldwide. A large percentage of the population uses medicinal herbs to treat certain diseases or symptoms. This study is aimed to evaluate the knowledge, attitudes, and practices of the general population. This cross-sectional study was carried out in Makkah Province from November 30th to December 31st, 2021. Data were collected and analyzed using an online questionnaire, and the survey questionnaire was validated. Response to questions was analyzed with the SPSS program. A total of 391 participants participated. Most participants were male (54.7%), and the average age was between 35-44 years old. 78.6% had college or higher education, and 66% of the participants were from Makkah. Only 13.9% of the participants said they have very good knowledge of herbal medicine. In terms of attitude, more than 91% of the respondents agreed that herbal drugs have some value in treating diseases. 65% of the participants get their knowledge from social media and the internet; the rest are about friends, TV, the medical journal, and others. The study showed that most respondents had low experience in herbal medicine and relied heavily on the internet for information. On the other hand, there was a positive attitude toward using herbal medicine. The government and Food and Drug Administration must encourage institutions to devote functionally dedicated programs and activities to enhance public awareness of herbal medicine use.

Keywords: Herbal medicine use, Phytotherapy, Saudi Arabia, Herbal products, Knowledge, Attitude

INTRODUCTION

Herbal medicine is defined as the medical use of herbs or plant products obtained from diverse sections of plants such as leaves, roots, flowers, fruit, and berries [1]. Herbal medications are widely used as dietary supplements around the world to maintain health, improve immunity, and treat disorders [2, 3]. Several studies have demonstrated that herbal medications have a variety of beneficial effects, including gastroprotective, anti-inflammatory, and anti-Helicobacter pylori properties [4].

Consumers may believe herbal treatments have fewer side effects, are less expensive, and are more effective than conventional medications, which may explain the increase in herbal medicine use [5, 6]. The global market for Herbal medications is expected to reach US\$107 billion by 2017 [7]. Herbal treatment is used between 22.3 % to 82.3 % of the time during pregnancy in the Middle East. In Saudi Arabia, the use of herbal medicine is popular [8]. According to Musaiger and Abahussain [9], the use of complementary therapies such as herbal medicine is quite common among Saudi Arabian cancer and chronic disease patients.

Although the increasing popularity of herbal preparations in the medical field, there are rising concerns about the safety of these preparations due to a lack of proper quality controls, inadequate labeling, and the absence of relevant patient information [10, 11]. Each year, an estimated 2000 hospitalizations occur in the United States because of dietary supplement consumption [12]. Many people lack the necessary information for safe medication use, resulting in unfavorable results [13]. The public knowledge, attitudes, and perspectives on herbal medicines have yet to be

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thoroughly researched in Saudi Arabia. Therefore, this study is aimed to evaluate the knowledge, attitudes, and practices of herbal medicines among the population of Makkah province, Saudi Arabia.

MATERIALS AND METHODS

Study Design

This was a cross-sectional study that include an online questionnaire that was filled to assess the knowledge, attitudes, and practices of herbal medicines among the population of Makkah province

Setting

This research was carried out in Makkah Province from November 30th to December 31st, 2021. Makkah Province is one of the 13 provinces of Saudi Arabia. It is the third-largest province by area.

Sample Size

Raosoft software was used to calculate the sample size. The minimum required survey size was 385, assuming 50% of the participants answered yes to each of the survey questions and a margin of error of 5% with a confidence level of 95%.

Inclusion and Exclusion Criteria

The inclusion criteria were adults aged 18 years and above who lived in Makkah, including both males and females.

Questionnaire/Study Instrument

The data were collected using an online questionnaire that was prepared using Google forms and reviewed by several academic staff and included personal data of the respondents, three questions to explore the public knowledge regarding using herbal medicines, five questions about the Attitudes towards herbal medicine, and seven questions about the practice of the public regarding the use of herbal medicines. The online questionnaire was prepared using Google forms and published on social media platforms such as Facebook, Twitter, Telegram, and WhatsApp.

Data Analysis

The data were collected and analyzed using an excel sheet. The descriptive data were represented as numbers and percentages. Regarding the respondents' knowledge, the mean and the standard deviation were calculated. The respondents answered knowledge questions with (very good, average, or bad). The answer very good was given a score of 3, the answer average was given a score of 2, and the answer bad was given a score of 1.

RESULTS AND DISCUSSION

The survey was filled out by 391 respondents. More than half of them were males (54.7%). More than 66 % of the respondents live in Makkah city and 22.5% of them live in Jeddah. More than 61% of the respondents have a bachelor's

degree and 17.6% of them have a higher degree. The age of 49.6% of them was between 25 and 44 years and the age of 20.7% of them was between 45 and 54 years (**Table 1**).

Table 1. Sociodemographic characteristics of the participants.

Data	No.	%
Gender		
Male	214	54.7%
Female	117	45.3%
Age groups		
18-24	69	17.7%
25-34	90	23%
35-44	104	26.6%
45-54	81	20.7%
55-64	37	9.5%
+65	10	2.6%
Education level		
Uneducated	3	0.8%
High school	80	20.5%
Bachelor's	239	61.1%
Higher education	69	17.6%
Region		
Makkah city	256	66%
Jeddah city	88	22.5%
Taif city	12	3.1%
Other	33	8.4%

Knowledge of Herbal Medicine

Table 2 shows the respondents' knowledge about the use of herbal medicine. Only 13.9% of the respondents said that they have very good knowledge of herbal medicine (good knowledge) and only 5.9% of them said that they have very good knowledge of the potential herbal-drug interactions (bad knowledge).

Table 2. The respondents' knowledge about the use of herbal medicine.

Data	Category	Number	%	Mean	SD*
How do you rate your level of knowledge about herbal medicine?	Very good	54	13.9%	2.19	0.9484
	Average	198	50.6%		
	Bad	139	35.5%		
How do you rate your level of knowledge about the potential herbal-drug interactions?	Very good	23	5.9%	1.78	0.8367
	Average	179	45.8%		
	Bad	189	48.3%		

Regarding the source of data, most of the respondents get their knowledge from the internet (40.7%) or social media (22.3%) and 17.60% of the respondents get their knowledge from their friends (**Figure 1**).

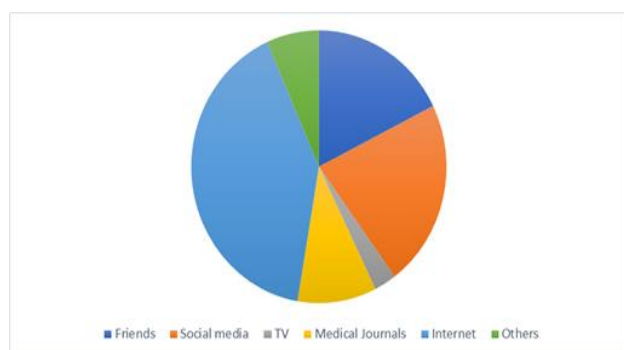


Figure 1. The source of the respondents' information

Attitudes Toward Herbal Medicine

Table 3 shows the respondent's attitudes toward the use of herbal medicine. More than 91% of the respondents agreed that herbal drugs have some value in treating diseases but only 38.9% of them said that using herbs is better than using drugs. Moreover, about 62.7% of the respondents thought that using herbs can cause side effects. More than 86% of the respondents supported the establishment of medical herbal clinics staffed by certified herbalists.

Table 3. The respondent's attitude toward the use of herbal medicine

Data	Category	Number	%	Mean	SD*
Do you think herbal drugs have some value in treating diseases?	Yes	357	91.3%	1.91	0.2821
	No	34	8.7%		
Do you think using herbs is better than using drugs?	Yes	152	38.9%	1.39	0.4881
	No	239	61.1%		
Do you think that the use of medicinal herbs may be useful in treating chronic diseases or reducing the traditional dose?	Yes	134	34.3%	1.34	0.4752
	No	257	65.7%		
Do you support the establishment of medical herbal clinics staffed by certified herbalists?	Yes	338	86.4%	1.86	0.3427
	No	53	13.6%		
Do you think using herbs can cause side effects?	Yes	245	62.7%	1.63	0.4843
	No	146	37.3%		

The Practice of Herbal Medicine

More than 83% of the respondents stated that they used herbal medicine. Only 36.0 % of them consulted a doctor or pharmacist before using herbs and 52.4% of them said that their healthcare providers advise them to stop the use of the herbal drug. About 92.1% of the respondents said that they used herbal medicine only when needed. Most of the respondents felt good when they use herbal medicine (93.3%)

and only 13.7% of them stated that they experienced side effects during the use of herbal medicine (**Table 4**).

Table 4. The respondent's practice and usage of herbal medicine

Data	Category	Number	%
Have you ever used any herbs or herbal medicine?	Yes	328	83.9%
	No	63	16.1%
Do you consult a doctor or pharmacist before using herbs? (n=328)	Yes	118	36.0%
	No	210	64.0%
When you tell your doctor about your use of the herbal drug, what was his response? (n=328)	To continue	156	47.6%
	To stop	172	52.4%
How often do you use herbs as a medicine? (n=328)	Daily	12	3.6%
	Weekly	14	4.3%
	As needed	302	92.1%
When you use medicinal herbs, how was your experience? (n=328)	Very good	91	27.7%
	Good	215	65.6%
	Bad	22	6.7%
What is the reaction of your friends and family when you use medicinal herbs? (n=328)	Encouraging	173	52.7%
	Discouraging	8	2.4%
	Not reacting	109	33.2%
	Getting afraid	38	11.6%
When using medicinal herbs, did you experience any side effects? (n=328)	Yes	45	13.7%
	No	283	86.3%

The Practice and Use of Herbal Medicine

The use of herbal medicine was common in the Makkah region. Most of the respondents in the present study said that they used herbal medicine. Similarly, Al-Yousef *et al.* revealed a high prevalence of herbal medicine use among Saudi Arabia's general population [14]. Memon *et al.* reported that the residents of the Northern Region of Saudi Arabia have shown high usage of herbal medicine [15]. Al Akeel *et al.* conducted a study about the Saudi population's knowledge, attitude, and practice among the Saudi population and found that 88.4% of the respondents stated to have used herbal medicines [8]. El-Olemy *et al.* stated that among Saudi citizens, 64% confirmed that they or one of their family members previously used one of the complementary and traditional medical treatments [16].

Knowledge of Herbal Medicine

The present study also showed that most of the respondents didn't have a good knowledge of herbal medicine and that only 5.9% of them said that they have very good knowledge of the potential herbal-drug interactions. Similarly, Bhat *et al.* reported that most of the respondents in the Udupi region lacked an understanding of medicine dosage, duration, adverse effects, and interactions [17]. Medical students in Saudi Arabia were found to be unaware of some crucial aspects of herbal medications, according to Zaidi *et al.* [18]. According to Belachew *et al.*, 51.65% of 302 participants in Western Ethiopia have a decent understanding of

complementary and alternative medicine, and roughly 78.6% are aware of it [19]. According to Al Akeel *et al.*, over 70% of the participants in their study were extremely aware of the usage of herbal medicine [8]. Furthermore, Memon *et al.* found that a significant majority of patients treated at the tertiary care level in the Northern Border Region of Saudi Arabia (93.7%) were familiar with herbal medicine use [20]. According to Bamidele *et al.*, 85% of Nigerians know how to use herbal medication [21].

Regarding the source of data, most of the respondents in the present study get their knowledge from the internet or social media. Family and friends, followed by the internet, were the most common influences for utilizing this sort of treatment, according to Al-Yousef *et al.* [15]. Only 5% of patients in tertiary care in the Northern Border Region of Saudi Arabia were consuming herbal medicine prescribed by an authorized physician, according to Memon *et al.* [20]. According to El-Olemy *et al.*, 60% of respondents in their study did not seek advice from a physician or pharmacist before utilizing any of these treatments [16].

Attitudes Toward Herbal Medicine

Most of the respondents in the present study showed a positive attitude toward the use of herbal medicine. In their study, Al-Yousef *et al.* discovered that around 51% of respondents thought herbal remedies were superior to commercially accessible prescription and over-the-counter drugs [15]. According to Bhat *et al.*, 34.07% of respondents in their study claimed that the rationale for utilizing herbal medicines was their belief that herbal medicines were more effective and had fewer negative effects [17]. According to Belachew *et al.*, 23.83% of respondents believe complementary and alternative treatment is more beneficial than traditional therapy [19]. Nalini *et al.* informed that Malaysian consumers have a favorable attitude toward medicinal plant intake [22, 23]. Furthermore, El-Olemy *et al.* stated that 46% of respondents in their study feel that complementary and traditional medicine is safe and medically effective, with 87% of those who have previously used complementary and traditional medicine have not experienced any complications [16]. According to Zaidi *et al.*, most Saudi Arabian medical students felt that herbal medicines are beneficial in maintaining and promoting health (51.3%) and treating illness (52.9%) [18].

CONCLUSION

The present study revealed that the usage of herbal medicine is widespread among the Makkah community. The study also revealed that most of the respondents had little expertise in herbal medicine and relied heavily on the internet and social media for information. On the other hand, most of the respondents in the present study showed a positive attitude toward the use of herbal medicine. The government must encourage institutions to devote functionally dedicated programs and activities to enhance public awareness of herbal medicine use.

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