

Original article

Patterns of Herbal Medicine Use and Associated Health Beliefs Among Adults in Zawia, Libya: A Cross-Sectional Study

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Abstract

Herbal medicine (HM) remains a primary healthcare resource in many developing countries, including Libya, due to cultural heritage and perceived safety. However, the lack of localized data on usage patterns and health beliefs poses challenges for patient safety and integrated healthcare. This study was conducted to investigate how adults in Zawia, Libya, use herbal medicine and what they believe about it. A descriptive cross-sectional study was conducted among 200 adult residents of Zawia using a structured questionnaire. Data were collected between February and March 2026 and analyzed using SPSS version 26. The study found a very high prevalence of HM use, with 94.5% (n=189) of participants reporting current or past use. The primary motivations for use were recommendations from friends or family (37.6%) and perceived effectiveness (32.3%). The most used herbs were Mint (62.4%), Chamomile (41.3%), and Ginger (29.6%). Health food stores (38.1%) and home cultivation (29.1%) were the leading sources of herbal products. One major finding: more than half (50.8%) never tell their doctors they use herbs. While 30% of participants recognized the potential for negative drug-herb interactions, a majority (60%) remained neutral, indicating a gap in definitive knowledge. The widespread use of herbal medicine in Zawia, coupled with low levels of disclosure to healthcare providers and limited awareness of potential interactions, highlights an urgent need for public health education and enhanced pharmaceutical care. Integrating traditional practices into formal healthcare consultations is essential to ensure patient safety and optimize therapeutic outcomes.

Keywords. Herbal Medicine, Health Beliefs, Drug-herb Interactions, Zawia, Libya.

Introduction

Herbal medicine (HM) has been an integral part of healthcare systems worldwide for centuries, particularly in developing countries, where it often serves as the primary form of treatment due to its accessibility, affordability, and cultural acceptance [1,2]. The global resurgence of interest in natural remedies has further propelled the use of HM, with a significant proportion of populations, especially in the Arab world, relying on these traditional practices [3,4]. Studies indicate that up to 80-85% of the Arab population utilizes herbal remedies, reflecting a deep-rooted cultural and historical connection to traditional medicine [5,6].

Even though many people use herbs, we still don't have enough detailed research, especially for our region. We need to know how people use them, what they believe, and whether herbs interact with regular drugs. Libya, a country with a rich heritage of traditional practices, is no exception. While some studies have explored general attitudes towards HM and its use during specific periods, such as the COVID-19 pandemic, or among demographics like pregnant women, detailed investigations into the broader adult population's usage patterns and health beliefs are limited [7,8,9]. This lack of localized data can hinder healthcare providers from offering informed guidance and ensuring patient safety, especially given the potential for drug-herb interactions (DHIs) [10,11].

To address this knowledge gap by looking at how adults in Zawia use herbal medicine and what they think about it. By focusing on a diverse urban population, this research aims to provide valuable insights into the prevalence, motivations, commonly used herbs, sources of information, and communication practices regarding HM use. Also, it seeks to explore the health beliefs associated with HM, including perceptions of safety and awareness of potential interactions with conventional medications.

The primary aim of this study was to assess the patterns of herbal medicine use and associated health beliefs among adults residing in Zawia, Libya.

Methods

The study employed a descriptive cross-sectional design to investigate the patterns of herbal medicine use and associated health beliefs among adults in Zawia, Libya. Zawia was selected as the study setting due to its diverse population and accessibility, providing a representative sample for understanding herbal medicine practices in a Libyan urban context. The data collection for this research was conducted over two months, specifically from February to March 2026.

Study Population and Sampling

The target population for this study comprised adult residents of Zawia, Libya. A convenience sampling method was utilized to recruit participants. The sample size for the study was 200 participants, all of whom completed the questionnaire.

Data Collection Instrument

A structured questionnaire was used as the primary data collection instrument. The questionnaire was developed based on a thorough review of existing literature and validated instruments used in previous studies on herbal medicine use and health beliefs in the Arab world [16, 22, 31]. This ensured the content validity and reliability of the instrument for the Libyan context. The questionnaire included sections on sociodemographic characteristics, patterns of herbal medicine use, types of herbs used, sources of information, health beliefs regarding herbal medicine, and communication with healthcare providers.

Inclusion and Exclusion Criteria

To ensure the homogeneity and relevance of the study population, the following inclusion and exclusion criteria were applied:

Inclusion Criteria

Adults aged 18 years and above, Residents of Zawia, Libya, during the study period, individuals who provided informed consent to participate in the study, and Individuals capable of understanding and responding to the questionnaire (either in Arabic or English).

Exclusion Criteria

Individuals under the age of 18 years, Non-residents of Zawia. Individuals who declined to provide informed consent, and Individuals with severe cognitive impairments or communication barriers that would prevent accurate completion of the questionnaire.

Ethical Considerations: Ethical approval for the study was obtained from the Institutional Review Board of the University of Tripoli Al-ahlia (Department of Pharmaceutical Sciences). All participants were informed about the study's purpose, their right to withdraw at any time, and the confidentiality of their responses. Written informed consent was obtained from each participant before data collection.

Data Analysis: Data collected from the questionnaires were analyzed using the Statistical Package for the Social Sciences (SPSS) software, version 26. Descriptive statistics (e.g., frequencies, percentages) were used to summarize the socio-demographic characteristics of the participants and the patterns of herbal medicine use.

Results

The study conducted to investigate the patterns of herbal medicine use and associated health beliefs among adults in Zawia, Libya. The results are based on data collected from 200 participants through a structured questionnaire.

Demographic Characteristics of Participants

The demographic profile of the study population is summarized in Table 1. A total of 200 participants completed the survey. Most respondents were young adults, with 50.5% (n=101) falling in the 18-25 age group, followed by 19% (n=38) in the 26-35 age group. Females represented 75% (n=150) of the sample, while males accounted for 25% (n=50). Regarding educational attainment, the sample was highly educated, with 75% (n=150) holding a university degree and 10% (n=20) having postgraduate qualifications. In terms of marital status, 65% (n=130) were single and 31.5% (n=63) were married. Economically, most participants (74%, n=148) reported an approximate monthly income of less than 3,000 Libyan Dinars.

Table 1. The demographic data for the participants

Variables	N (%)
Age:	
18-25	101 (50.5)
26-35	38 (19)
36-45	24 (12)
46-55	20 (10)
≥56	17 (8.5)
Gender:	
Female	150 (75)

Male	50 (25)
Educational Level:	
Primary	1 (0.5)
Intermediate	10 (5)
Secondary	19 (9.5)
University	150 (75)
Postgraduate	20 (10)
Marital Status:	
Single	130 (65)
Married	63 (31.5)
Divorced	6 (3)
Widowed	1 (0.5)
Approximate Monthly Income:	
< 3000 Libyan Dinar	148 (74)
3000 – 6000 Libyan Dinar	39 (19.5)
>6000 Libyan Dinar	13 (6.5)

Patterns of Herbal Medicine Use

The prevalence and patterns of herbal medicine use among the participants are detailed in Table 2. The study found a very high prevalence of herbal medicine use, with 94.5% (n=189) of respondents reporting current or past use.

Motivations for Use

The primary reason cited for using herbal medicine was recommendations from friends or family (37.6%, n=71), followed by perceived effectiveness (23.3%, n=44) and the belief that herbal remedies have fewer side effects (22.2%, n=42). Only a small fraction (0.5%) cited distrust of conventional medicine as a reason.

Commonly Used Herbs

The most frequently used herbs were Mint (62.4%, n=118), Chamomile (41.3%, n=78), and Ginger (29.6%, n=56). Other notable herbs included Black Seed (13.8%, n=26). 4.2.3 Sources and Frequency Participants obtained their herbal medicines from various sources, with health food stores being the most common (38.1%, n=72), followed by home cultivation (29.1%, n=55) and pharmacies (14.8%, n=28). Regarding the frequency of use, 40.2% (n=76) used herbal medicine “as needed,” while 30.7% (n=58) used it “rarely.” Only 5.3% (n=10) reported daily use.

Communication with Healthcare Providers: A significant finding was the lack of communication between users and healthcare professionals. Over half of the herbal medicine users (50.8%, n=96) reported that they “never” informed their doctor about their use of these products. Only 14.3% (n=27) stated that they “always” informed their physician.

Table 2. Patterns of Herbal Medicine Use

Variables	N (%)
Do you currently use herbal medicine or have you used it in the past?	
Yes	189 (94.5)
No	11 (5.5)
If yes, what are the main reasons for your use of herbal medicine? (Select all that apply)	
Perceived effectiveness	44 (23.3)
Fewer side effects	42 (22.2)
Lower cost	11 (5.8)
Recommendations from friends/family	71 (37.6)
Distrust of conventional medicine	1 (0.5)
Cultural/religious reasons	7 (3.7)
Other	37 (19.6)
What types of herbal medicines do you commonly use?	
Chamomile	78 (41.3)
Mint	118 (62.4)
Ginger	56 (29.6)

Turmeric	6 (3.2)
Black Seed	26 (13.8)
Aloe Vera	5 (2.6)
Other	38 (20.1)
What is your source for obtaining herbal medicines?	
Traditional herbalists	20 (10.6)
Pharmacies	28 (14.8)
Health food stores	72 (38.1)
Home cultivation	55 (29.1)
Internet	18 (9.5)
Other	31 (16.4)
How often do you use herbal medicine?	
Daily	10 (5.3)
Weekly	23 (12.2)
Monthly	22 (11.6)
Rarely	58 (30.7)
As needed	76 (40.2)
Do you inform your doctor about your use of herbal medicine?	
Yes, always	27 (14.3)
Sometimes	66 (34.9)
No, never	96 (50.8)

Health Beliefs Associated with Herbal Medicine

(Table 3) outlines the participants' beliefs regarding the safety and potential risks of herbal medicine.

Safety Perception

When asked if herbal medicine is safer than conventional medicine, the majority of respondents (68%, n=136) remained neutral. However, 16.5% (n=33) strongly agreed with this statement, while 15.5% (n=31) strongly disagreed.

Awareness of Interactions

Regarding the potential for negative interactions between herbal and conventional medications, 30% (n=60) of participants strongly agreed that such interactions could occur. However, a significant majority (60%, n=120) held a neutral stance, indicating a potential gap in definitive knowledge or awareness regarding drug-herbal interactions (DHIs).

Table 3. Health Beliefs Associated with Herbal Medicine

Variables	Responses
I believe herbal medicine is safer than conventional medicine.	
Strongly Disagree	31 (15.5)
Neutral	136 (68)
Strongly agree	33 (16.5)
I believe herbal medicine can negatively interact with conventional medications.	
Strongly Disagree	20 (10)
Neutral	120 (60)
Strongly agree	60 (30)

Discussion

The prevalence of herbal medicine use in Zawia is particularly high– 94.5% have used it at some point. This matches what other studies in the Arab world have found: traditional medicine is still a big part of healthcare here [12]. The reliance on recommendations from friends and family (37.6%) as a primary motivation for HM use showed the significant role of social networks and cultural heritage in shaping health behaviors in Libyan society [13].

The perceived effectiveness and the belief that herbal remedies are safer with fewer side effects were major drivers for HM use. This perception of safety, however, often lacks scientific backing and can lead to the unsupervised use of potent botanical agents [14]. Studies by Beshna et al. have highlighted that while patients often turn to natural products, there is a critical need for better pharmaceutical care and

monitoring to prevent adverse events [15]. Specifically, research conducted in Libyan hospitals by Beshna and colleagues found a high prevalence of potential drug interactions, particularly with commonly used medications like aspirin, which could be further complicated by the concurrent use of herbal remedies [16].

The most frequently used herbs in this study—Mint, Chamomile, and Ginger—are well-known for their therapeutic properties in treating minor ailments such as digestive issues and respiratory symptoms [17]. However, the lack of communication between users and healthcare providers is a worrying sign. Over 50% of respondents reported never informing their doctors about their HM use. This finding aligns with broader regional data suggesting a "communication gap" that may increase the risk of drug-herb interactions (DHIs) [18].

Also, not many people know about possible bad interactions – 60% of those we asked weren't sure either way. This lack of definitive knowledge is particularly risky for patients with chronic conditions who may be on multiple conventional medications [19]. As noted in the work of Beshna, the role of the pharmacist is crucial in bridging this gap, yet there is a need for enhanced training and awareness among healthcare professionals to effectively counsel patients on the safe integration of herbal and conventional therapies [20].

Conclusion

Herbal medicine is clearly very common in Zawia – 94.5% of people use it. It's not just a backup; for many, it's the first thing they try. Culture and the belief that herbs are safe drive this.

But we also found a real problem: more than half of users never tell their doctors they take herbs. And most people don't know that herbs can sometimes react badly with regular medicines. That's risky.

To address these issues, healthcare providers should start asking patients about herbs. And we need to teach the public that 'natural' doesn't always mean 'safe'. More studies are needed to see exactly how herbs and drugs interact in Libyans, so we can give clear advice.

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