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Health Man & Info Sci 2025, 12(4), 207–227

HMIS
Health Management and Information Science

Review Article

A Systematic Review of Complementary Medicine Utilization and Influencing Factors in Iran

Mohammad Sadegh Nematollahi[1], Sajad Delavari[2], Faride Sadat Jalali[2*]

[1]Student Research Committee, Department of Health Policy and Management, School of Public Health and Safety, Shahid Beheshti University of Medical Sciences, Tehran, Iran
[2]Health Human Resources Research Center, School of Health Management and Information Sciences, Shiraz University of Medical Sciences, Shiraz, Iran

Abstract:

Introduction: The integration of complementary and alternative medicine with modern medical practices has gained significant popularity in the treatment of various diseases. This trend is particularly prevalent in Eastern countries, such as Iran, which boasts a rich history of traditional medicine and a strong cultural heritage in healthcare. This study aimed to systematically review the utilization of complementary medicine and the factors influencing it in Iran.

Methods: The published articles on factors affecting complementary medicine were identified through a systematic search using related keywords in PubMed, ScienceDirect, Web of Science, Scopus, ProQuest, Magiran, and SID databases, up to 2024, in accordance with the PRISMA guidelines. The data were analyzed using the thematic analysis method. Among 2165 articles indexed in the databases, 43 were extracted.

Results: The majority of included studies were descriptive cross-sectional studies, with data collected through questionnaires and interviews. Herbal medicine was the most used therapy, especially among patients with MS (97.3%), diabetes (97.7%), and gastrointestinal diseases (100%). Prayer therapy was common in cancer (86.1%) and cardiovascular patients (94.2%), while cupping was notable in AIDS patients (52%). Research was primarily conducted in hospitals like Shiraz, Tehran, and Isfahan. Most patients in the included studies do not disclose their use of complementary medicine due to a lack of transparency in the doctor-patient relationship.

Conclusion: This review highlights the widespread use of complementary medicine in Iran, mainly herbal medicine and prayer therapy, across various patient groups. It emphasises the need for improved physician-patient communication and transparency to integrate complementary medicine safely into modern healthcare practices.

Keywords: Consumption, Complementary therapies, Traditional medicine, Alternative medicine, Patient, Iran

Article History:
Received12 : July 2025
Accepted: 6 September 2025

Please cite this paper as:
Nematollahi MS, Delavari S, Jalali FS. A Systematic Review of Complementary Medicine Utilization and Influencing Factors in Iran. Health Man & Info Sci. 2025; 12(4): 207-227. doi: 10.30476/jhmi.2025.108805.1318.

***Correspondence to:**
Faride Sadat Jalali,
Health Human Resources Research Center, School of Health Management and Information Sciences, Shiraz University of Medical Sciences, Shiraz, Iran
Email: fs.jalali@yahoo.com

Introduction

As practised today, conventional medical care is grounded in empirical knowledge and scientific studies. This means that treatments must undergo rigorous experimental stages to ensure they are both safe and effective before being accepted and utilised. Alongside conventional medical care, many patients turn to complementary or alternative medicine for treatment, pain relief, or recovery (1).

The World Health Organisation (WHO) defines complementary medicine as the collection of knowledge, skills, and practices based on Indigenous theories, beliefs, and experiences in different cultures, which aim to maintain health through prevention, diagnosis, improvement, or treatment of physical and mental illnesses (2). Integrating complementary medicine consultations alongside conventional primary health care services can increase the quality and comprehensiveness of clinical care (3). Given the rising global burden of diseases linked to modern lifestyles, it is very valuable to consider complementary medicine physicians and clinical caregivers who provide contemporary healthcare services (4).

The use of complementary medicine is widespread and continues to grow globally (5). Despite significant advances in conventional

medicine, an increasing number of people are turning to complementary medicine in both developed and developing countries (6). Traces of complementary medicine can be found in nearly every country, with many nations recognizing its role in promoting health and integrating it into their healthcare systems. In several developed countries, governments have supported complementary medicine in various aspects, contributing positively to public health (7).

In both developed and developing countries, a large part of their population uses complementary medicine to meet their health needs and achieve health. Key reasons for this trend include the unrestricted use of complementary medicine without consulting a doctor, easy accessibility, the possibility of using complementary medicine with minimal knowledge and facilities, and its lower cost compared to conventional medical services offered in hospitals and clinics (8).

For instance, a study by Lederer et al. (2021) in Germany found that 48% of patients use complementary medicine, with 80% expressing the need for doctors to be better informed about its various forms to address their treatment needs (9). Similarly, a study by Tan et al. (2021) in Turkey involving 96 epilepsy patients revealed that 76% used complementary medicine, yet only 3% informed their healthcare providers. This issue raised concerns among the medical staff, particularly nurses, about the potential adverse effects of taking complementary medicine on the disease process (10).

In recent years, health policymakers in Iran have also emphasised the development of complementary and alternative medicine (11). Iran has a rich history of complementary medicine, especially in using medicinal plants to treat various diseases, dating back over 3,000 years. This tradition is rooted in pre-Islamic Persian medicine and influenced by Greek, Indian, and Egyptian practices. Despite the tremendous pressure of modern medicine, complementary medicine remains deeply embedded in Iranian culture (12).

Various studies have explored complementary medicine in Iran. For example, a 2020 survey by Parvizi et al. in Fars Province revealed that 69% of patients used a variety of complementary and alternative medicines. Factors such as age, residence, employment status, and education influenced its use, and only three per cent of patients informed their physicians about the use of complementary medicine (13). Similarly, a 2023 study by Ghorat et al. on 376 Iranian diabetic patients revealed that 89% had used alternative medicines. The primary reasons for these patients to use complementary medicine were improved mental health, a positive attitude toward complementary medicine, and positive previous experiences (14).

Given the above, the role of complementary medicine in the treatment process and its impact on the doctor-patient relationship are of significant importance. It remains a significant concern for physicians and healthcare providers across medical centres, including outpatient clinics. As complementary medicine continues to expand globally, particularly in Iran, understanding its use, its effects on recovery, and the factors driving its adoption is crucial for effective treatment planning and enhancing healthcare provider-patient relationships. This review study aims to bridge the perceptual gap between physicians and patients by exploring the effects of various forms of complementary medicine, understanding the reasons behind its use, and improving doctor-patient communication. Ultimately, it aims to increase patient transparency about the use of complementary medicine by promoting a more informed and open-minded approach among healthcare providers.

Materials and Methods

This study is a scoping review based on the Joanna Briggs Institute (JBI) scoping review methodology framework. The study aimed to explore the use of complementary medicine among patients and the factors associated with it, following five key stages (Figure 1):

Stage 1: Defining the Research Question

A specific research question was formulated using the PCC (Population, Concept, Context) framework as follows:

Population: Patients who used traditional and complementary medicine services and treatments.

Concept: The rate and factors associated with using complementary medicine.

Context: Economic, social, cultural, and health conditions in Iran.

The research question was: *What are the rates and factors related to patients' use of complementary medicine services in Iran?*

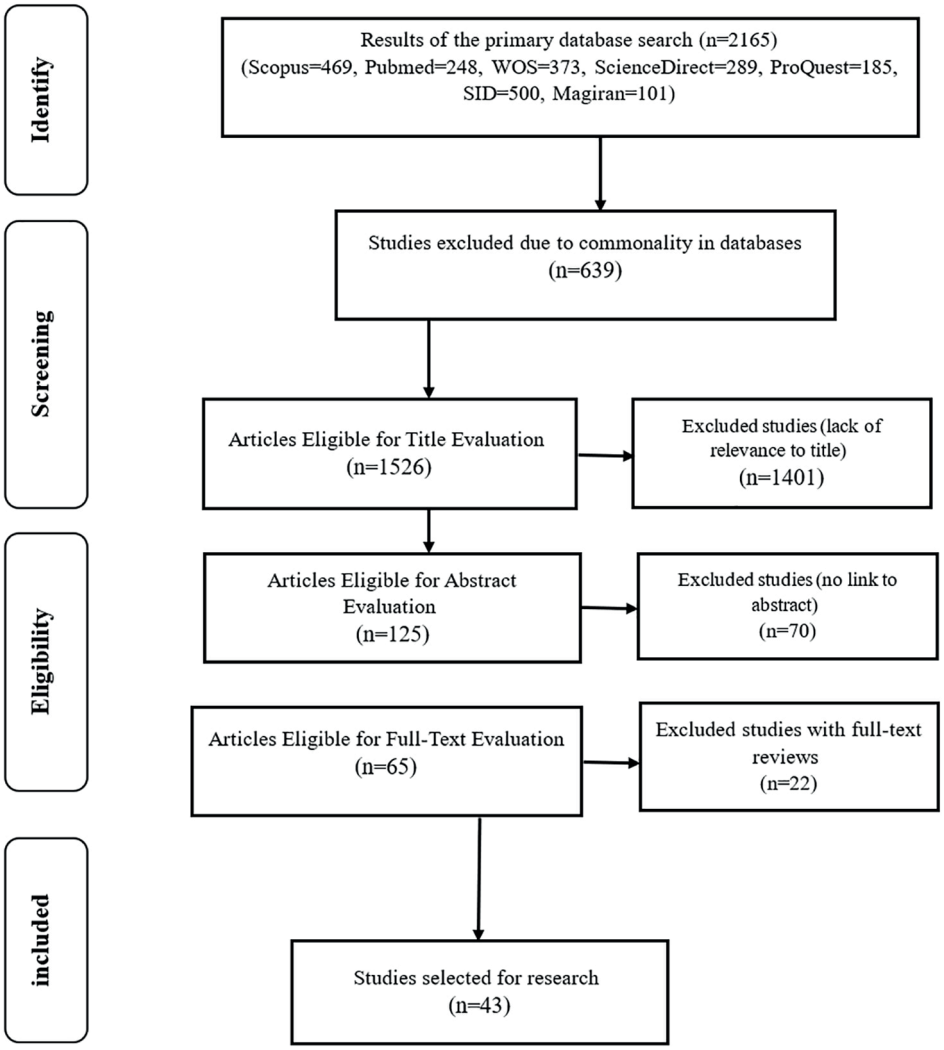

Figure 1: Prisma diagram of the steps of entering articles into the review research

Stage 2: Literature Review and Search Strategy

A comprehensive literature review encompassed all studies on the use of complementary medicine services in Iran. A systematic search strategy was developed, and relevant keywords were identified and searched across the following databases:

Domestic databases include Magiran (an Iranian journal database) and the Scientific Information Database (SID).

International databases: Scopus, PubMed, Web of Science, ScienceDirect, and ProQuest.

A total of 2,165 articles were identified and retrieved from these databases (Table 1 for details). After removing duplicates, 1,526 articles remained. These were screened based on their titles, and 1,401 articles were excluded due to irrelevance. The remaining 125 articles were further reviewed based on their abstracts, resulting in the selection of 65 articles. Ultimately, 43 articles with the highest relevance, as determined by both title and content, were included in the study.

Stage 3: Study Selection Process

These were screened based on their titles, and 1,401 articles were excluded due to irrelevance. The remaining 125 articles were further reviewed based on their abstracts, resulting in the selection of 65 articles. Ultimately, 43 articles with the highest relevance, as determined by both title and content, were included in the study.

Two researchers (MSN and FSJ) independently selected the relevant studies. In cases of disagreement, a third researcher (SD) was consulted to reach a consensus. Studies were excluded if they were review articles, letters to the editor, commentaries, or if their study population did not include patients. The quality of the included original articles was assessed using the CASP (Critical Appraisal Skills Programme) technique.

Table 1: The Search Strategy of the Research

Database	Search Strategy	Number of retrieved articles	Limitations
Scopus	((ABS (“complementary medicine” OR “complementary therapies” OR “alternative medicine” OR “alternative therapies” OR “acupuncture therapy” OR “acupuncture treatment” OR “cupping therapy” OR “cupping treatment” OR “bioresonance therapy” OR “mora therapy” OR “homeopathy” OR “mind-body therapies” OR yoga OR “traditional medicine” OR “persian medicine” OR “persian medicine” OR “iranian medicine” OR mesotherapy OR cam OR “chiropractic medicine” OR “herbal medicine” OR “substitute medicine” OR “traditional chinese medicine” OR tcm) AND ABS (iran))) OR ((TITLE (“complementary medicine” OR “complementary therapies” OR “alternative medicine” OR “alternative therapies” OR “acupuncture therapy” OR “acupuncture treatment” OR “cupping therapy” OR “cupping treatment” OR “bioresonance therapy” OR “mora therapy” OR “homeopathy” OR “mind-body therapies” OR yoga OR “traditional medicine” OR “persian medicine” OR “persian medicine” OR “iranian medicine” OR mesotherapy OR cam OR “chiropractic medicine” OR “herbal medicine” OR “substitute medicine” OR “traditional chinese medicine” OR tcm) AND TITLE (iran))) AND (LIMIT-TO (DOCTYPE , “ar”)) AND (LIMIT-TO (LANGUAGE , “English”)) AND (LIMIT-TO (AFFILCOUNTRY , “Iran”)) AND (LIMIT-TO (SRCTYPE , “j”)) AND (LIMIT-TO (PUBSTAGE , “final”)) AND (LIMIT-TO (SUBJAREA , “MEDI”) OR LIMIT-TO (SUBJAREA , “NURS”) OR LIMIT-TO (SUBJAREA , “PSYC”) OR LIMIT-TO (SUBJAREA , “SOCI”) OR LIMIT-TO (SUBJAREA , “DENT”) OR LIMIT-TO (SUBJAREA , “NEUR”))	469	Language (articles with at least English and Persian abstracts), keyword search in titles and abstracts Date: Until 2024
PubMed	(“Complementary Medicine”[Title/Abstract] OR “Complementary Therapies”[Title/Abstract] OR “Alternative Medicine”[Title/Abstract] OR “Alternative Therapies”[Title/Abstract] OR “Acupuncture Therapy”[Title/Abstract] OR “Acupuncture Treatment”[Title/Abstract] OR “Cupping Therapy”[Title/Abstract] OR “Cupping Treatment”[Title/Abstract] OR “Bioresonance Therapy”[Title/Abstract] OR “MORA Therapy”[Title/Abstract] OR “Homeopathy”[Title/Abstract] OR “Mind-Body Therapies”[Title/Abstract] OR Yoga[Title/Abstract] OR “Traditional Medicine”[Title/Abstract] OR “Persian Medicine”[Title/Abstract] OR “Iranian Medicine”[Title/Abstract] OR Mesotherapy[Title/Abstract] OR CAM[Title/Abstract] OR “Chiropractic Medicine”[Title/Abstract] OR “Herbal Medicine”[Title/Abstract] OR “Substitute Medicine”[Title/Abstract] OR “Traditional Chinese Medicine”[Title/Abstract] OR TCM[Title/Abstract]) AND (Iran[Title/Abstract]) Filters: Full text, Humans, English, Exclude preprints	248	
WOS	(TI=(“Complementary Medicine” OR “Complementary Therapies” OR “Alternative Medicine” OR “Alternative Therapies” OR “Acupuncture Therapy” OR “Acupuncture Treatment” OR “Cupping Therapy” OR “Cupping	41	
	(AB=(“Complementary Medicine” OR “Complementary Therapies” OR “Alternative Medicine” OR “Alternative Therapies” OR “Acupuncture Therapy” OR “Acupuncture Treatment” OR “Cupping Therapy” OR “Cupping	596	
	Ab OR Ti and Article (Document Types) and English (Languages) and Pharmacology Pharmacy or Chemistry Medicinal or Chemistry Applied (Exclude – Web of Science Categories) and IRAN (Countries/Regions)	373	
Science Direct	((“Complementary Medicine” OR “Complementary Therapies” OR “Alternative Medicine” OR “Alternative Therapies” OR “Acupuncture Therapy” OR “Acupuncture Treatment” OR “Cupping Therapy” OR “Cupping Treatment” OR A Therapy” OR “Homeopathy” OR “Mind-Body Therapies” OR Yoga OR “Traditional Medicine” OR “Persian Medicine” OR “Iranian Medicine” OR Mesotherapy OR CAM OR “Chiropractic Medicine” OR “Herbal Medicine” OR “Substitute Medicine” OR “Traditional Chinese Medicine” OR TCM) AND Iran) NOT Pharma NOT chemic	289	
ProQuest	title(“Complementary Medicine” OR “Complementary Therapies” OR “Alternative Medicine” OR “Alternative Therapies” OR “Acupuncture Therapy” OR “Acupuncture Treatment” OR “Cupping Therapy” OR “Cupping Treatment” OR “Homeopathy” OR “Mind-Body Therapies” OR Yoga OR “Traditional Medicine” OR “Persian Medicine” OR “Iranian Medicine” OR Mesotherapy OR CAM OR “Chiropractic Medicine” OR “Herbal Medicine” OR “Substitute Medicine” OR “Traditional Chinese Medicine” OR TCM OR “Bioresonance Therapy” OR “MORA Therapy) AND title(IRAN)	12	
	abstract(“Complementary Medicine” OR “Complementary Therapies” OR “Alternative Medicine” OR “Alternative Therapies” OR “Acupuncture Therapy” OR “Acupuncture Treatment” OR “Cupping Therapy” OR “Cupping Treatment” OR “Homeopathy” OR “Mind-Body Therapies” OR Yoga OR “Traditional Medicine” OR “Persian Medicine” OR “Iranian Medicine” OR Mesotherapy OR CAM OR “Chiropractic Medicine” OR “Herbal Medicine” OR “Substitute Medicine” OR “Traditional Chinese Medicine” OR TCM OR “Bioresonance Therapy” OR “MORA Therapy”) AND abstract(IRAN)	181	
	Ab OR Ti AND Full-Text Articles AND English (Languages) AND Scholarly Journals (Source Type)	185	
SID	The rate of complementary medicine use among patients and its associated factors in Iran (in Persian)	500	
Magiran	Complementary Medicine / Alternative Medicine and Iran (in Persian)	101	
Total		2165	

Stage 4: Data Extraction

A data extraction form (Appendix Table 1) was used to extract the data from each study. Thus, the names of the first authors, titles, year of publication, type of study, study population, and the results of the studies were recorded in the data extraction form in Microsoft Excel software.

Stage 5: Data Analysis

The extracted data were analyzed using thematic analysis. Therefore, the collected data in the last stage were coded based on the research question. After re-examining the codes and finalising and reducing them, the process of classification and aggregation of the codes continued until the main subcategories and components were identified, which in turn determined the amount and factors related to the use of complementary medicine services among patients. The results were then entered in a table (Appendix Table 1).

Results

The findings of this study revealed that most were descriptive-cross-sectional in design, with data collected through questionnaires, face-to-face interviews, and telephone calls. The results showed that in most of the studies, the relationship between the amount of consumption and demographic information, the type of disease, the duration of the disease, and the place of The studies encompassed at least two characteristics of complementary medicine use and its associated factors in patients with various conditions, including cancer, multiple sclerosis, type 2 diabetes, liver and gastrointestinal diseases, dyslipidemia, AIDS, blood coagulation disorders, peptic ulcers, asthma and chronic obstructive pulmonary disease, COVID-19, outpatients, neonates referred to the emergency room, sick children under 10 years old, pregnant women and mothers, patients with mental problems, and addicted patients.

Given the importance of complementary medicine use and its impact on the physician-patient relationship, several articles also investigated how patients disclosed their use to their physicians.

The research has primarily been conducted in hospitals and medical clinics in cities such as Shiraz, Kerman, Isfahan, Qazvin, Birjand, Tehran, Sari, Khorramabad, Kashan, Ahvaz, Fasa, Qom, Ardabil, Yasuj, and Arak. Shiraz is the leader in this field, with 14 articles published.

Figure 2 illustrates the trend of published studies on Complementary Medicine Utilisation in Iran from 2000 to 2024. As can be seen, the most significant number of studies was conducted in 2017, with seven articles.

According to Table 2, herbal medicine had the highest rate of use among other complementary drugs among patients with MS (97.3%), diabetic patients (97.7%), sick infants and pediatricians (93.3%), people with blood diseases (77.4%), people with skin diseases (89.9%), people with gastrointestinal diseases (100%), respiratory patients (85.2%), and outpatients (69.4%). Also, in cancer patients, pregnant mothers, and cardiovascular patients, prayer therapy (86.1%, 61.7%, and 94.2%, respectively), cupping (52%) in AIDS patients, and prayer (39%) in patients with addiction had the highest consumption.

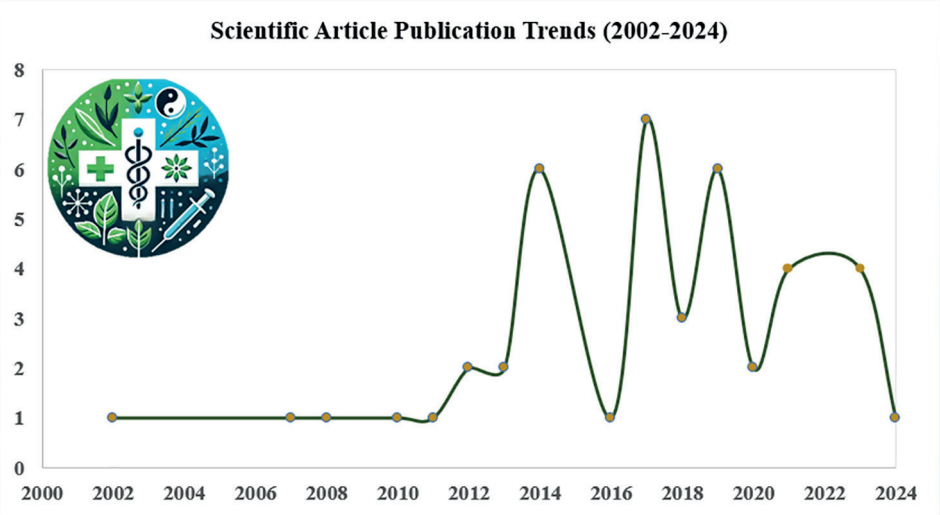

Figure 2: Trends in Publications on Complementary Medicine Utilisation (Included in this study)

Table 2: Consumption of different types of complementary medicine in different patients

Type of Disease	Type of Complementary Medicine Used	Complementary Medicine Consumption (Rate)*	References
Cancer	Energy Therapy	20%	(15-18)
	Homeopathic	15%	
	Herbal Medicine	79.8%, 7%	
	Prayer Therapy	86.1%, 75.7%	
MS	Sport	68.3%, 33.8%	(19-23)
	Yoga	87.56%, 26.4%, 17.5%, 8.9%	
	Herbal Medicine	97.3%, 97%, 64.2%, 9.2%	
	Energy Therapy	8.3%	
	Acupressure	1.7%, 3.3%	
	Vitamins	49.9%	
	Prayer Therapy	81.3%, 29.4%	
	Dietary Supplement	95%, 88.1%	
	Cupping	10.6%	
Diabetes	Diet	29.4%	(14, 24-28)
	Herbal Medicine	99.4%, 97.7%, 85.8%, 94.9%, 54%, 25.4%	
	Opioids	23.9%	
	Prayer Therapy	13.7%	
	Cupping	14.1%	
	Acupuncture	11.1%	
Blood	Herbal Medicine	77.4%, 12%	(29, 30)
	Multivitamin	29.3%, 21.3%	
	Prayer Therapy	32%	
Skin	Herbal Medicine	89.9%	(31)
Respiratory	Herbal Medicine	85.2%	(32)
Children & Infants	Herbal Medicine	93.3%, 80%, 71.8%, 30.7%	(33-36)
	Rubbing Oil	26.6%	
	Prayer Therapy	25.7%	
	Vitamins	45.7%, 41%	
Pregnant women	Massage therapy	6.4%	(37-39)
	Prayer Therapy	61.7%, 5.6%	
	Herbal Medicine	42%, 18.5%, 9.5%	
	Relaxation	4.8%	
	Acupressure	1.7%	
	Hydrotherapy	5%	
	Cupping	4%	
Digestive	Herbal Medicine	100%	(40)
	Vitamins	45.2%	
	Prayer Therapy	21.7%	
	Cupping	16.4%	
	Leech Therapy	9.4%	
Outpatient	Herbal Medicine	70.1%, 69.4%, 69.2%, 41.7%	(41-44)
	Multivitamin	54.7%, 30.2%	
	Cupping	44%	
	Travel	2.2%	
	Prayer Therapy	37.2%	
	Diet	9.4%	
Addiction	Prayer Therapy	39%	(45)
	Herbal Medicine	36.5%	
	Massage therapy	15.3%	
	Dietary Supplement	12.2%	
Cardiovascular	Herbal Medicine	92.5%	(46)
	Prayer Therapy	94.2%	
HIV	Herbal Medicine	40%	(47)
	Cupping	52%	

*Different numbers represent the percentages of complementary medicine use reported in the studies examined.

It should be noted that due to the high distribution of reported uses, the calculation of the average consumption for each complementary medicine has been omitted.

According to Table 3 and Figure 3, the factors related to the use of complementary medicine in patients in Iran were classified into four categories: individual, clinical, environmental, and psychological. The five factors associated with the use of complementary medicine in patients are acceleration of recovery, higher level of education, pain reduction, belief in its effectiveness, and recommendations from friends and acquaintances.

According to the data of Table 4, on average, 23.03% of the people do not disclose their use of complementary medicine to their physician for reasons of not asking the doctor, not being aware of the side effects of using alternative medicine, not feeling the need to express and insufficient time to express their use, believing in the lack of knowledge of the treating physician about complementary medicine, fear of the doctor's reaction, and the opposition of the previous treating physicians.

Table 3: Factors related to the consumption of complementary medicine

Category	Subcategory	References	Summary of findings
Individual factors	Level of Education	(19, 20, 26, 37, 39, 40, 43, 48)	The higher the level of education, the higher the consumption of complementary medicine.
	Employment Status	(37, 48)	Employed individuals use complementary medicine more frequently than unemployed individuals.
	Gender	(20, 21, 48-50)	Women use complementary medicine more often than men. However, two studies found no relationship between gender and the use of complementary medicine.
	Marital Status	(25)	Married people are more likely to use complementary medicine. However, in the study by Parvizi et al., no relationship was found between marital status and the use of complementary medicine.
	Location	(18, 26, 48, 49)	People living in urban areas tend to use complementary medicine more frequently.
	Age	(48, 49)	Older people tend to consume more complementary medicine.
	Ethnicities	(48)	Complementary medicine consumption varies between different ethnicities.
	The state of income	(22)	People with lower incomes tend to use more supplementary medicine.
Clinical factors	Safe Methods	(29, 38, 41, 51)	The more specific a person is that alternative methods are safe, the more complementary medicine is consumed.
	Accelerating recovery	(17, 23, 24, 30, 31, 45, 47, 50, 51)	If patients are aware that complementary medicine can accelerate the treatment process of their disease, they are more likely to increase their consumption of it.
	Preventing recurrence	(16, 46)	If the patient feels that complementary medicine prevents the recurrence of the disease, he will increase its use.
	Reducing pain	(17, 23, 24, 42, 52, 53)	The more complementary medicine reduces pain during the disease, the more it is used.
	Effectiveness	(14, 20, 25, 28, 44, 54)	The more precise and effective the observed results in people, the greater the desire to consume.
	Duration of illness	(25)	The longer the duration of the disease, the greater the consumption of complementary medicine.
	Treatment of diseases (migraine, anaemia, bleeding, obesity, cold, stomach pain, relief from diarrhoea or constipation, nausea, sexual function)	(18, 30, 36, 42, 43, 55)	By observing the effectiveness of complementary medicine in treating diseases, its consumption increases.
	Synergistic Effect on Conventional Medicine	(27, 29)	A person's belief in the simultaneous use of conventional and complementary medicine for greater effectiveness leads to an increase in the use of complementary medicine.

Category	Subcategory	References	Summary of findings
Environmental factors	Neighbors	(33)	When using CAM, neighbours were one of the most common sources of maternal information.
	Friends and acquaintances	(13, 26, 32, 33, 39)	Most patients were recommended herbal medicines by their friends and relatives (34.8%).
	Herbalists	(34)	Herbalists recommend a 30% consumption of herbal medicines.
	Family	(33, 39)	Families were one of the most common sources of maternal information when using CAM. The most frequent source of information for using herbal medicines was related to friends and family.
	Grandmothers	(34)	Grandmothers recommend consuming 70% of herbal remedies.
	Medical Staff Order	(35)	Those who had received recommendations for CAM from healthcare providers were significantly more likely to use CAM.
Psychological factors	Increased life expectancy	(51)	Life expectancy was one of the most important reasons for the desire to use complementary medicine in cancer patients.
	Peace of mind	(14, 23, 45, 47)	One of the most common reasons for the use of traditional medicine by AIDS patients was peace of mind. One of the reasons for using complementary medicine in patients with multiple sclerosis was to have peace of mind to improve their sleep and memory.
	Depression	(55)	Depression was one of the most frequent reasons for the use of complementary medicine by HIV patients.
	Previous Positive Experience	(14, 31, 35, 38)	Individuals with previous positive experiences with CAM were significantly more likely to use CAM.
	Dissatisfaction with the treating physician	(16)	The use of CAM among cancer patients was associated with dissatisfaction with their care physician (P<0.0001).

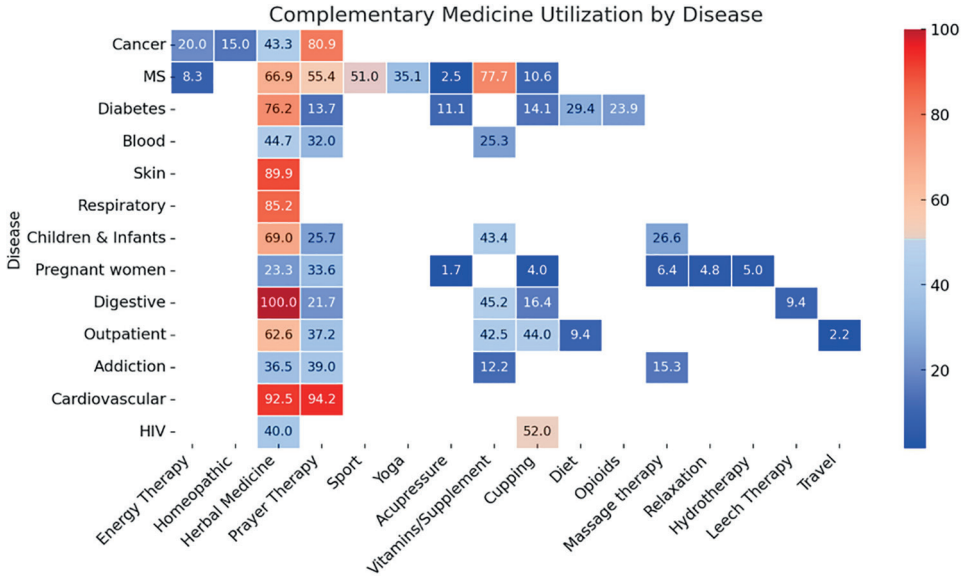

Figure 3: Complementary Medicine Utilisation by Disease (%)

Table 4: The Rate and Causes of Patients' Non-Disclosure of Complementary Medicine to the Treating Physician in Studies

The reason for not expressing it to the treating physician	Rate	Average
No questions from the treating physician	50% (51)	23.03%
Lack of knowledge about the side effects of taking complementary medicine and not asking questions to the treating physician	1.3% (33)	
Lack of feeling the need to express, and not having enough time to declare consumption	34.4% (22)	
No questions from the treating physician		
Belief in the Physician's Lack of Knowledge about Herbal Medicine		
Fear of a doctor's reaction		
Opposition from previous treating physicians		
Uncertain	3.3% (13), 16.1% (18), 23% (24), 16% (32), 1.3% (33), 16.7% (39), 55.5% (46), 37.5% (50), 23% (54), 21.3% (56)	

Discussion

Complementary and alternative medicine has gained popularity over the last two decades (57). The prevalence of CAM use in general populations varies worldwide. This study aimed to review the consumption of complementary medicine among patients in Iran and the factors associated with its use.

The findings revealed that the types of complementary medicine observed include energy therapy, prayer therapy, exercise, meditation, acupuncture, herbal medicine, diet therapy, rubbing oils, massage therapy, hydrotherapy, cupping, vitamins, multivitamins, leech therapy, nutritional supplements, mineral supplements, prayer, travel, and natural substances. Among these, herbal medicine and prayer therapy were the most commonly used forms of therapy.

According to the study by Ghamar Shooshtari et al. (2020), the reasons for the high use of herbal medicine included patients' satisfaction with its effects, pharmaceutical companies that have made it easier to access herbal ingredients and learn how to use them, and widespread information available on the internet (22). According to the studies of Anbari et al. (2014), the reasons for the high prevalence of prayer therapy were related to religious beliefs, culture, historical characteristics, the advice of the past, the failure of conventional medical treatments, dissatisfaction with them, and the desire to live a healthy life (42). The lower consumption of alternative medicines such as meditation and acupuncture, based on the study of Mahmoudian and Mousavi (2014), can be attributed to people's lack of awareness about the effects of these methods and their high cost (21).

Some individuals may prioritise complementary medicine over conventional treatments; therefore, healthcare providers must enhance their understanding of patients' beliefs and cultural backgrounds. By recognising the potential effects of herbal medicines and other complementary therapies, medical staff can help guide patients in integrating conventional medicine with their personal beliefs and insights.

The factors influencing patients' use of complementary medicine were categorized into four main groups: individual, clinical, environmental, and psychological.

Individual Factors

In the category of individual factors, education, gender, and place of residence are the main factors in patients' use of complementary medicine.

According to a study by Movahed et al. (2019), individuals with higher education tend to use complementary medicine more frequently due to their greater connection to information sources, such as mass media and social networks, as well as more extensive interaction with cyberspace (48). Additionally, according to a study by Ghaedi et al. (2017), the consumption of complementary medicine among individuals with higher education was 3.22 times higher than that of illiterate individuals (43).

Ghamar Shooshtari et al. (2020) demonstrated that women are more likely to use complementary medicine than men. The reason for this group of people's greater use of alternative medicine is the use of social messengers and participation in cyberspace conferences related to complementary medicine, as well as the greater sensitivity of women to such therapies (22). However, in some studies, such as those by Abdollahi et al. (2014) and Zafarghandi et al. (2010), no relationship was found between gender and complementary medicine consumption (38, 41). Goli et al. (2013) found that working women use complementary medicine more frequently than homemakers, likely due to greater awareness and higher social interactions (37). In the studies of Parvizi et al. (2021), it was also observed that people living in urban areas have a significantly higher consumption of complementary medicine due to greater access to alternative drugs than rural residents (13).

Clinical Factors

Among the clinical factors, the main reason for using complementary medicine was to accelerate recovery. According to the study of Amir Moezi et al. (2017), strengthening the immune system, improving overall health, reducing disease symptoms, and relieving pain are among the reasons that have led patients to use complementary medicine (17). Due to the importance of health in people and the pain and suffering caused by the disease, patients are always trying to speed up their recovery and reduce the pain and symptoms of their disease by using a variety of treatment methods.

Environmental Factors

Regarding environmental factors, the

recommendation of friends and acquaintances is the most common reason patients cite for taking complementary medicine. According to the research by Parvizi et al. (2021), the findings showed that most patients who use complementary medicine obtain their information from unverified sources, such as friends and acquaintances, who may not inform patients about side effects, appropriate dosages, and contraindications due to a lack of sufficient knowledge (13). Because patients' information about the existence and use of complementary medicines is limited, they try to find appropriate treatment methods by asking different people and sharing their disease.

Psychological Factors

Regarding the psychological factors related to complementary medicine, mental peace is the main reason patients use alternative medicine. According to the research of Mosavat et al. (2023), patients with chronic lifelong diseases such as cancer or AIDS use complementary medicine to reduce their psychological challenges and improve their quality of life. However, the study found no difference between the quality of life of those who did not use complementary medicine and those who did (55). In general, according to patients' economic, social, and psychological conditions, turning to complementary medicine is a natural choice. The factors that encourage people to use complementary medicine should be taken into account to improve the doctor's treatment planning.

Physician-Patient Communication

According to the findings, on average, only 23.03% of patients inform their physicians about the use of complementary medicine. According to the study of Ruyvaran et al. (2021), the lack of need to consult a physician about the use of complementary medicines, the belief of patients that doctors do not have sufficient knowledge and logical and helpful advice in the mode of complementary medicine are among the reasons why patients do not inform their physicians about the use of complementary medicine (56). Also, based on the research of Ghanei et al. (2012), proper communication between the physician and the patient, the physician's failure to ask the patient about the use of complementary medicine, and the failure of patients to declare the use of alternative medicine are among the reasons that have caused patients not to inform the physicians about their use and are at risk of possible side effects and even stop the treatments prescribed by their physician (24).

To address these issues, improving the physician-patient relationship is essential. By fostering open communication and mutual trust, healthcare providers can reduce the risks associated with undisclosed complementary medicine use, prevent the waste of medical resources, and enhance treatment outcomes.

Strengths and limitations

This review compiled all studies that addressed the factors influencing the use of complementary medicine among Iranian patients. These findings can be helpful for researchers in the field of complementary and alternative medicine and health policymakers to be aware of and make appropriate decisions in this field. This study examines the various factors influencing patients' use of complementary medicine by presenting a comprehensive classification of demographic, clinical, environmental, and psychological factors. Additionally, the results of this study can serve as a foundation for further local research on the factors influencing patients' use of complementary medicine.

However, the study faced certain limitations. The databases and search strategies may have restricted the scope of the findings. Furthermore, as research in this field continually evolves due to the growing importance of complementary medicine in patient care, the findings may require updates over time. Therefore, supplementary studies are recommended to explore practical strategies and actions tailored to the country's specific needs in addressing these factors.

Conclusion

This study revealed that herbal medicine and prayer therapy are the most commonly used complementary therapies in Iran. The use of complementary medicine among patients is influenced by various factors, including Demographic factors (gender, place of residence, and level of education), clinical (acceleration of recovery, reduction of pain, and effectiveness), environmental (recommendations of friends and acquaintances), and psychological (peace of mind, dissatisfaction with the treating physician, and positive previous experience) are

associated with the rate of complementary medicine use by patients.

A significant finding is that most patients do not inform their physicians about their use of complementary medicine. This lack of disclosure stems from distrust, a lack of awareness, the belief that sharing this information is unnecessary, and scepticism about the medical staff's knowledge of complementary therapies.

To address these challenges, improving the physician-patient relationship requires strategic planning, education, and decision-making at the macro level. A comprehensive, knowledge-based understanding of the use of complementary and alternative medicine, along with its determinants, can help healthcare providers design effective interventions. These interventions should focus on educating patients, evaluating the outcomes of complementary medicine use, and fostering open communication between patients and healthcare providers.

Acknowledgments

The authors would like to thank Shiraz University of Medical Sciences (SUMS) for the financial support of the research.

Authors' Contribution

MSN and FSJ did the search screening and data extraction. SD raised the research idea and supervised all phases of the research. All authors have equal contributions in drafting and reviewing the manuscript. All authors have read and approved the final manuscript.

Funding

The Shiraz University of Medical Sciences (SUMS) funded the study.

Data Availability

This research data is available and could be sent upon contact with the corresponding author.

Ethics Approval

This study reviews existing literature and does not involve direct interaction with human participants or the collection of new data. As such, ethical approval from an institutional review board or ethics committee was not required.

Conflict of Interest

There are no conflicts of interest.

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Appendix Table 1: Summary of studies used in the research

Title	Authors	Year of Publication	Type of Study	Participants	Summary of findings
Complementary medicine use among Iranian cancer patients (15)	Sajadian et al.	2002	Cross-sectional	625 Cancer Patients Referred to Imam Khomeini Hospital	One hundred seventy-nine subjects had used at least one type of complementary medicine because it was perceived as safe, accelerated healing, and increased life expectancy, among other benefits. The most common complementary medicine used in these patients was energy therapy (35%). Also, this study found that due to the lack of questions from the treating physician, 50% of the subjects had not informed them about their use of complementary medicines.
Factors predicting the use of complementary and alternative therapies among cancer patients in Iran (16)	Montazeri et al.	2007	Cross-sectional	625 Cancer Patients Referred to Medical Centres of Tehran Province	Thirty-five per cent of the subjects had used complementary medicine. Prayer therapy (75.7%) was the most commonly used alternative medicine. The two main reasons for using complementary medicine were fear of cancer recurrence and dissatisfaction with the treating physician.
Complementary Therapy in Patients with Multiple Sclerosis (19)	Payamani et al.	2008	Descriptive-cross-sectional	200 patients with multiple sclerosis were referred to the MS Society of Iran	Sixty per cent of the people used complementary medicine. The most frequent use was related to exercise (68.3%), meditation (17.5%), nutritional therapy (9.2%), energy therapy (8.3%), and acupuncture (3.3%). A significant relationship was found between complementary medicines and education level (P = 0.04).
Knowledge, Attitude, and Behaviors of People Referred to Health Centers of Tehran About Iranian Traditional Medicine (41)	Zafarghandi et al.	2010	Descriptive-cross-sectional	350 people referred to medical centres in Tehran (age group 15 years and above)	26.3% of patients were aware of complementary medicines, and 69% had used at least one complementary method. In this study, the most commonly used types of complementary medicine were herbal therapy (70.1%) and phlebotomy (2.2%). The primary reason people used complementary medicine in this study was that it had fewer side effects than conventional medicine (74.6% of participants). There was no significant relationship between complementary medicine consumption and demographic information.
Prevalence of the Use of Complementary Alternative Medicine among Diabetic Patients of the Endocrinology Clinic of Velayat Hospital, Iran, in 2012 (24)	Ghanei et al.	2011	Cross-sectional	197 patients referred to the endocrinology clinic of Qazvin Velayat Hospital	78.2% of the patients had used complementary medicine at least once. The most common methods used included a special diet (29.4%), herbal medicines (25.4%), and prayer therapy (13.7%), among others. The primary reason for using complementary medicine in these patients was to alleviate pain and expedite healing. Additionally, this study found that 77% of participants did not inform their doctor about their use of complementary medicines.
A survey of complementary and alternative medicine in Iran (53)	Abolhassani et al.	2012	Cross-sectional	5000 Referred to Public Hospitals in Iran	97.8% of the subjects had used various types of complementary medicine due to their chronic diseases. Prayer therapy (P = 0.017) was the most commonly used method in complementary medicine.

Title	Authors	Year of Publication	Type of Study	Participants	Summary of findings
Prevalence of using complementary and alternative medicine in children and its related factors in East Iran (33)	Fesharakinia et al.	2012	Descriptive-Analytical	300 mother-children referred to Vali-e-Asr Hospital in Birjand	35.6% of the mothers had used at least one type of complementary medicine. The advice of neighbours and relatives was the main reason why people used complementary medicine. Herbal medicine (93.3%), rubbing oil (26.6%), and prayer therapy (25.7%) were the most common alternative therapies used. The study found that 98.7 per cent of people were unaware of the side effects of complementary practices and did not discuss them with their doctors.
The Status of Using Complementary Medicine by Pregnant Women Referred to Health Centres in Isfahan City, Iran (37)	Goli et al.	2013	Cross-sectional	599 women were referred to the Isfahan medical centres	45.8% of the participants had used one method, and 21% had used more than one complementary medicine method during their pregnancy. The highest rates of use of complementary medicine were prayer and vows (61%), herbal medicines (18.5%), and massage therapy (6.4%). A significant relationship was found between the level of education and occupation of individuals and the number of complementary medicine methods used. Hence, the consumption of complementary medicine was higher among employed and highly educated women.
The Use of Herbal Medicines in Infants Admitted to the Emergency Department of One of the Hospitals Affiliated with Shiraz University of Medical Sciences (34)	Beheshtipoor et al.	2013	Descriptive-cross-sectional	30 Parents of Newborns Referred to the Neonatal Accident Department of a Hospital in Fars Province	Eighty per cent of the people had used herbal medicines for their babies. The primary reasons for using herbal medicines in these patients were recommendations from grandmothers (70%) and herbalists (30%). In 4.8% of the subjects, poisoning was observed after taking herbal medicines.
Knowledge and Practices on Complementary and Alternative Medicine in a Group of Iranian Pregnant Women (38)	Abdollahi et al.	2014	Descriptive	320 mothers were hospitalized in the postpartum wards of hospitals in Mazandaran province	26.8% of people used at least one complementary medicine during pregnancy because it was safe. Among these, medicinal plants (9.5%), prayer therapy (6.5%), hydrotherapy (5%), and cupping (4.1%) were the most commonly used complementary methods. In this study, it was found that having prior knowledge of complementary medicines played a crucial role in people's consumption. This study found no significant relationship between demographic information and the consumption of complementary medicine.
Using Complementary and Alternative Medicine in Multiple Sclerosis (20)	Mahmoudian et al.	2014	Descriptive-cross-sectional	400 patients with multiple sclerosis were referred to Al-Azhara Hospital in Isfahan	The use of at least one type of complementary medicine in 85% of patients, the types of complementary medicine used including natural materials (59.1%), spiritual therapies (51.5%), physical methods (39.4%) and other methods, women used complementary medicine more than men and a significant relationship was observed between the level of education and the use of complementary medicine. The most crucial reason for the popularity of complementary medicine was people's satisfaction and confidence in its effectiveness. Women were more likely than men to inform their physician about the use of complementary or alternative medicine (P = 0.031)

Title	Authors	Year of Publication	Type of Study	Participants	Summary of findings
Attitude and practice of diabetic patients towards Complementary/ alternative medicine and related factors, Sari (25)	Yousofpour et al.	2014	Cross-sectional	270 patients with diabetes in Sari	36.6% of the subjects had used at least one type of complementary medicine because of its satisfactory effects on their recovery process. Among them, medicinal plants (85%), cupping (14%), and acupuncture (11%) were the most commonly used types of complementary medicines. In this study, a significant relationship was found between marital status, duration of diabetes, and duration of treatment using complementary medicine.
Evaluation of Trends in the Use of Complementary and Alternative Medicine in Health Centres in Khorramabad (West of Iran) (42)	Anbari et al.	2014	Cross-sectional	790 people over the age of 15 were referred to medical centres in Khorramabad	79.8% of the subjects had used at least one of the complementary methods due to obesity (15.8%), migraine (14.2%), and joint pain (10.8%). Medicinal plants (69.2%) and prayer therapy (37.2%) were the most commonly used complementary medicines.
Herbal medicine use among patients with type 2 diabetes in Kashan, Iran (26)	Azizi-Fini et al.	2014	Cross-sectional	500 Diabetic Patients Referred to Medical Centres in Kashan	Fifty-four per cent of the patients used at least one type of herbal medicine. The most commonly used herb was cinnamon (24%), which was consumed daily (65.9%). The main reason people took complementary medicine was the recommendation of friends or relatives (56.9%). In this study, a significant relationship was found between the use of herbal medicines and the level of education (P = 0.01) and place of residence (P = 0.009).
Complementary and alternative medicine use in Iranian patients with diabetes mellitus (27)	Hashempur et al.	2014	Cross-sectional	239 outpatient diabetic patients were referred to one of the clinics in Shiraz	Seventy-five per cent of the people stated that they had used at least one complementary medicine during the past year. The most commonly used complementary medicine was medicinal plants (97.7%). Patients believed that the reason for using alternative medicine was the expectation of a synergistic effect with conventional medicine. 89.4% of the patients were not willing to change or stop taking alternative medicine.
Trend and pattern of using herbal medicines among people who are aware of their diabetes mellitus: results from National STEPs Surveys in 2005 to 2011 in Iran (49)	Ahmadi et al.	2016	Cross-sectional	3095 diabetic patients referred to medical centres in Iran between 2005 and 2016	The use rate of herbal medicines had increased from 11% in 2005 to 26.25% in 2016. In this study, it was found that women (24.2%), older people (24.4%), and people living in urban areas (24.13%) used herbal medicine the most.
Rate of Herbal Medicines Use during Pregnancy and Some Related Factors in Women of Ahvaz, Iran (39)	Soleymani et al.	2017	Descriptive-analytical and cross-sectional	219 mothers who gave birth were admitted to Sina Hospital in Ahvaz	Forty-two subjects (19.2%) reported a history of using medicinal plants during pregnancy. Thyme, olive oil, and pecan plants had the highest use. The main reason for using herbal medicines in people was the suggestion of their friends and family. A significant relationship was found between the level of education and the use or non-use of herbal medicines (P = 0.001). Thirty-five (83.3%) of those who had used herbal medicine had not informed their doctor.

Title	Authors	Year of Publication	Type of Study	Participants	Summary of findings
Use of complementary and alternative medicine among Iranian cancer patients in South Iran (17)	Amirmoezi et al.	2017	Cross-sectional	36 Cancer Patients Hospitalized in Amir Oncology Hospital in Shiraz	94.4% of the subjects had used at least one type of complementary medicine to relieve pain and accelerate recovery. The most commonly used supplementation method in these patients was prayer, with 86.1%. Among the medicinal plants used, mint and garlic, with 7.41%, had the highest use. Vitamin C also had the highest consumption rate among other alternative methods, at 33.3%.
The prevalence and predictors of using herbal medicines among Iranian cancer patients (18)	Bazrafshani et al.	2017	Cross-sectional	315 cancer patients through face-to-face interviews in Kerman	84.1% of the subjects used herbal medicine to relieve constipation and diarrhoea (95%). A significant relationship was found between the use of herbal medicines and living in urban areas ($P < 0.001$). In this study, only 16.1% of the subjects had informed their physician about their use of herbal medicine.
Complementary and Alternative Medicine Usage and Its Determinant Factors Among Diabetic Patients: An Iranian Case (28)	Sheikhrabori et al.	2017	Cross-sectional	294 Diabetic Patients Referred to Medical Centres in Iran	Eighty-eight point four per cent of the subjects had used at least one supplementation method. Herbal medicine, with 84.9%, had the highest use among other complementary methods. The main reason people used these medicines was that the effects of these treatments were satisfactory (69%).
Complementary and Alternative Medicines: Usage and Its Determinant Factors Among Outpatients in Southeast Iran (43)	Ghaedi et al.	2017	Cross-sectional	500 outpatients referred to medical centres in the southeast of Iran	Seventy-five per cent of the subjects had used at least one type of complementary medicine. The most common reason was the use of alternative methods to treat the common cold (32.9%). Herbal medicine (69.4%) was the most commonly used method of complementary medicine among patients. The use of complementary or alternative medicine in people with higher education was 3.22 times higher than that of illiterate people.
Use of complementary and alternative medicine among pediatric patients with hepatogastrointestinal diseases (35)	Mosavat et al.	2017	Cross-sectional	238 Parents Referred to Pediatric Gastroenterology and Hepatology Clinic, Shiraz University of Medical Sciences	Forty-nine per cent of the patients used complementary medicine. Herbal medicines (71.8%) were the most widely used alternative methods. Those who had a positive previous experience with using complementary medicine (62.1%) and those who used alternative medicine at the recommendation of medical staff (24.3%) were at a significantly higher risk.
Medicinal plants' use among patients with dyslipidemia: an Iranian cross-sectional survey (29)	Hashempur et al.	2017	Cross-sectional	195 patients with dyslipidemia were referred to two endocrine clinics in Shiraz	77.4% of the patients had used medicinal plants. The most commonly used medicinal plant among patients was Zataria multiflora. People say that the reason for using herbal medicine is that it has fewer side effects than conventional medicine, and that combining herbal medicine with conventional medicine can have more positive effects. 87.4% of the people did not decide to stop taking this medicine.
Traditional and Complementary Medicine Use in HIV/AIDS Patients in Fasa City: A Cross-Sectional Study (47)	Zarshenas et al.	2018	Cross-sectional	96 AIDS patients in the Fasa Behavioural Diseases Counselling Centre	78.12% of the people used traditional medicine, and the most common reasons for using complementary medicine were psychological relief and improved general health. Was. Among these, cupping (52%) and medicinal plants (40%) were the most commonly used types of complementary medicine.

Title	Authors	Year of Publication	Type of Study	Participants	Summary of findings
A cross-sectional study of complementary and alternative medicine use in patients with coagulation disorders in Southern Iran (30)	Bordbar et al.	2018	Cross-sectional	75 patients with bleeding disorders were referred to Dastgheib Hospital in Shiraz	49.3% of the subjects used at least one type of alternative medicine to enhance their health, alleviate anaemia, and control bleeding. The most commonly used complementary methods among patients were multivitamins (29.3%), folic acid (21.3%), prayer therapy (32%), and chamomile (12%).
The Prevalence of Complementary and Alternative Medicine Use Among Dermatology Outpatients in Shiraz, Iran (31)	Dastgheib et al.	2018	Cross-sectional	600 outpatient dermatologists referred to medical centres in Shiraz	31.1% of the subjects had taken at least one type of alternative medicine to repair and improve their skin problems. The most used complementary medicine was medicinal plants (89.9%). A significant relationship was found between individuals' knowledge of complementary medicine and their use (P<0.001).
Prevalence Of Using Complementary And Alternative Medicine, Side Effects, Associated Factors, And Sleep Quality Among Pediatric Inpatients In Settings (36)	Eshaqhosseini et al.	2019	Cross-sectional	282 children under the age of 10 were referred to outpatient treatment centres in Qom	Thirty per cent of the children used medicinal plants, 45.7% used vitamins, and 41% used minerals, with the main reasons for their use being cold treatment (18.1%) and relief of stomach pain (13.1%). Among them, thyme (39.5%), mint sweat (36.4%), and quince seed (12.79%) were the most commonly used. In this study, no significant relationship was found between the mother's education level and the use of medicinal plants.
The prevalence of using complementary and alternative medicine products among patients with pressure ulcers (40)	Karimianfard et al.	2019	Cross-sectional	299 patients with peptic ulcers were referred to the wound clinics of Shiraz medical centres	All the patients had used a variety of alternative medicines. Herbal medicine (100%), vitamins (45.2%), spiritual therapies (21.7%), cupping (16.4%), and leech therapy (9.4%) were the most commonly used complementary therapies. In this critical study, the reason for using complementary medicine was the level of education (P<0.05).
Assessment of the complementary and integrative medicine utilization among patients with multiple sclerosis using a translated and adapted version of the international questionnaire (I-CAM-QP): A cross-sectional study in Southern Iran (21)	Farhoudi et al.	2019	Cross-sectional	300 MS patients referred to medical centres in the south of Iran	Ninety-nine point three per cent of the subjects had taken at least one complementary medicine to speed up recovery and reduce the duration of the disease. Herbal medicines (97.3%), nutritional supplements (95.0%), and prayer therapy (81.3%) were the most commonly used complementary therapies among patients. There was a significant relationship between female gender and the use of complementary medicine.
Complementary and alternative medicine use among Iranian patients attending urban outpatient general practices (44)	Behnood-Rod et al.	2019	Cross-sectional	360 Patients Referred to Urban Outpatient General Offices in Iran	53.3% of the patients had used at least one type of complementary method for its effectiveness. The most commonly used complementary medicines in patients were vitamin supplements (54.7%), herbal medicines (41.7%), mineral supplements (30.2%), and therapeutic diet (9.4%), respectively. The study found that one-third of the subjects lacked sufficient information about the complementary medicine they were taking.

Title	Authors	Year of Publication	Type of Study	Participants	Summary of findings
Complementary and Alternative Medicine Use and Its Determinant Factors in Iranian Asthma and Chronic Obstructive Pulmonary Disease Patients (32)	Kheirypour et al.	2019	Cross-sectional	357 patients with asthma and chronic obstructive pulmonary disease were referred to medical centres in Ardabil province	Ninety-five per cent of the patients had consumed at least one type of complementary medicine. Herbal medicine was the most commonly used alternative method among people, with 85.2% of the population consuming it. The main reason for using complementary medicine in these patients was the recommendation of friends and relatives (77.9%). This study found that approximately 16% of people have informed their physician about complementary medicine.
Study of usage rate for various complementary and alternative medicines among people who visited non-conventional medical centres in Shiraz, Iran (48)	Movahed et al.	2019	Analytical-cross-sectional	800 Patients Referred to Six Unconventional Medical Centres in Shiraz	Sixty-eight per cent of the subjects had used complementary medicine. Herbal medicine, exercise, and traditional medicine were the most used among patients. A significant relationship was found between the use of complementary medicine and age, gender, ethnicity, education, place of birth, and occupation.
Self-reported Use of Complementary and Integrated Medicine by Patients With Multiple Sclerosis in Iran (22)	Ghamar Shooshtari et al.	2020	Analytical-cross-sectional	577 MS patients in the MS centre in Fars MS	In this study, 76 people participated, and 97% used at least one type of complementary medicine. Among them, herbal medicines (97%) and dietary supplements (88.1%) were the most used. The main reason for using complementary medicine in these patients was low income. Additionally, in this study, 56.3% of patients did not inform their physician about the use of complementary medicine, with the reasons being that they did not feel the need to express themselves and lacked sufficient time to do so.
Complementary And Alternative Medicine Usage And Its Determinant Factors Among Iranian Patients With Cancer (50)	Dehghan et al.	2020	Cross-sectional-descriptive	Patients referred to Yas Cancer Clinic in Kerman in 2016	45.9% of the subjects had used at least one type of complementary medicine, excluding prayer therapy, to accelerate their recovery. Sixty-two point five per cent of the subjects did not consult their physician about complementary medicines. The results showed that almost one in two cancer patients used complementary medicine, which was more common in women than in men.
Use of complementary alternative medicine and the associated factors among patients with depression (54)	Ashraf et al.	2021	Cross-sectional	300 depressed patients were referred to Yasouj Psychiatric Clinic in 2019	37.6% of the subjects had used a variety of complementary medicines. The most common use of complementary medicine was related to herbal medicines (97.35%) and prayer therapy (23.89%). Sixty-two point eight per cent of people reported that the main reason for using complementary medicine was its effectiveness. Seventy-seven per cent of the subjects had not informed their physician about the complementary medicines they were taking.
Prevalence and associated factors of complementary and integrative medicine use in patients afflicted with COVID-19 (13)	Parvizi et al.	2021	Cross-sectional	400 Coronavirus Patients in Fars Province Who Answered the Company's Phone Call	Sixty-nine per cent of the patients had used complementary medicine. Herbal medicine was the most widely used among other methods, with ginger (98.9%), thyme (95.3%), and black cumin (74.3%) being the most commonly used herbal medicines. Most people cited suggestions from friends and acquaintances (34.8%) as an alternative to conventional medicines. Only 3.3% of the people had informed their doctor about using this medicine.

Title	Authors	Year of Publication	Type of Study	Participants	Summary of findings
Complementary and alternative medicine usage amongst multiple sclerosis patients in Iran (23)	Ranjbar et al.	2021	Cross-sectional	194 Patients with MS Referred to Neurology Clinics of Shiraz Medical Sciences	Sixty-six point nine per cent of the patients had used complementary medicine during their illness. Herbal medicine was the most common alternative treatment method, with 64.2% of patients consuming it. The main reasons for the patient's use of alternative medicines were pain reduction, mental relaxation, and improvement of physical conditions.
Traditional and complementary medicines usage and associated factors in gastrointestinal outpatients in Shiraz, Iran: a cross-sectional survey (56)	Ruyvaran et al.	2021	Cross-sectional	244 patients with gastro-intestinal disorders were referred to outpatient clinics in Shiraz	36.5% of the patients had used at least one alternative medicine method. Herbal medicines were the most popular alternative therapies, with Zataria multiflora (60.7%) and yellow chamomile (20.2%) being the most widely used. 78.7% of the subjects did not inform their physician about using complementary medicines.
Quality of Life and Use of Complementary and Alternative Medicines among Narcotics Anonymous Patients: A Cross-Sectional Study in Southeast Iran (45)	Dehghan et al.	2023	Cross-sectional	189 Unknown Patients Addicted to Drugs in the Southeast of Iran	Sixty-six point one per cent of the subjects used at least one type of complementary medicine to improve the physical, mental, and environmental quality of life. Prayer (39%), medicinal plants (36.5%), massage therapy (15.3%), and nutritional supplements (12.2%) were the most commonly used methods of supplementation among patients. A significant relationship was found between the therapeutic prayer method and improved quality of life, compared to those who did not pray.
Prevalence of Complementary and Alternative Medicine Use and Its Associated Factors among Iranian Diabetic Patients: A Cross-Sectional Study (14)	Ghorat et al.	2023	Cross-sectional	376 Diabetic Patients Referred to the Endocrinology Clinic of Fasa University of Medical Sciences	Ninety-nine per cent of the subjects had used complementary medicine. The most common complementary medicine method in these patients was herbal medicine (99.4%). The main reasons for patients' use of complementary medicine were improved mental health, positive attitude toward complementary medicine, and positive previous experiences.
Complementary and alternative medicine use among people living with HIV in Shiraz, Southern Iran (55)	Mosavat et al.	2023	Cross-sectional	320 patients (18 to 70 years old) with a definite diagnosis of AIDS living in Fars province between 1999 and 2019	89.22% of the patients used a variety of complementary medicines. The use was higher among those with a family history of alternative medicine use (94.3%). The most common reasons for using complementary medicine in these patients were sexual dysfunction (32.4%), depression (28.3%), thirst (23.3%), and nausea (17.5%).
Complementary and alternative medicine application in cancer patients in Iran (52)	Nejat et al.	2023	Analytical-Descriptive	320 Cancer Patients Referred to Medical Centres in Arak	Forty-four point three per cent of the patients used complementary medicine. Pilgrimage, yoga, prayer therapy, and herbal medicine were the most widely used among people, respectively. 73.2% of patients used alternative medicine to improve their physical condition, and 25% used it to reduce pain.
Utilization of Complementary and Alternative Medicine among Patients with Cardiovascular Disease in Iran: A Cross-sectional Study (46)	Sharifi et al.	2024	Cross-sectional	304 patients with cardiovascular diseases in Shiraz	56.9% of the patients had consumed at least one type of complementary medicine. Herbal medicine (92.5%) and prayer therapy (94.2%) were the most used methods. 44.5% of the subjects did not inform their physician about the use of alternative medicine. The main reason for using complementary medicine was to prevent the recurrence of the disease, as well as its acute and chronic forms.