



Trend and use of Complementary and Alternative Medicine in Gastroenterology Patients

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ABSTRACT

Introduction: The present study was conducted to evaluate the prevalence of trend and use of complementary and alternative medicine in patients referring to the Gastroenterology clinics in Mashhad.

Methods: The present cross-sectional study was performed at Gastroenterology clinics affiliated with Mashhad University of Medical Sciences. The study began in December 2015 and ended in March 2017. The study subjects (n=751) were randomly selected from patients referring to Gastroenterology clinics in the city of Mashhad. Patients responded to the questions through interviews. The collected data were analyzed by SPSS-16 statistical software.

Results: This study was conducted on 751 patients referring to gastroenterologists; of whom, 274 (48.36%) were male and 476 (38.63) were female. According to the results, the most popular complementary and alternative medicine treatments were respectively herbal medicine, cupping therapy and acupuncture. A significant difference was observed in the means at its faction with complementary and alternative medicine between those who believed in it and those who did not (p=0.001); but, no significant difference was detected in mean satisfaction with complementary and alternative medicine between patients with different occupations (p=0.193). There was also a significant difference in the number of patients between the group of patients receiving chemical medication and the group of patients receiving complementary and alternative medicine therapies (p=0.005). No significant difference was found in the level of satisfaction with complementary and alternative medicine between participants referring to the Gastroenterology clinics for different causes (p=0.431); nonetheless, the highest satisfaction was observed in patients with malignancy, and the lowest satisfaction was detected in patients with esophageal disorders.

Conclusion: This study indicated the high prevalence of complementary and alternative medicine in Iran. The worldwide popularity of complementary and alternative medicine should not be overlooked, therefore; current medical treatment systems need to be revised and modified.

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Introduction

Despite the advances in medical sciences and the prevalence of evidence-based medicine, many people are still looking for other types of therapy, such as homoeopathy, acupuncture, chiropractic, energy therapy, dietary supplements, cupping therapy, leech therapy, etc(1).

These widely used therapeutic methods, formed based on either the ancient medical traditions or the contemporary medical concepts, are generally called Complementary and Alternative Medicine (CAM)(2).

The United States' National Center for Complementary and Integrative Health (NCCIH) includes a subset called complementary medicine systems (alternative systems). The bases of these integrative systems are theoretical and practical concepts plus a spectrum of interventions. In North America, these complementary medicine systems include traditional medicine, acupuncture, Traditional Chinese Medicine, and the Traditional Hindu Medicine or Ayurveda. The CAM refers to a set of therapeutic methods, such as homoeopathy, herbal medicine, Traditional Iranian Medicine, chiropractic, acupuncture, energy therapy, massage therapy, Ayurveda, etc. Although these therapeutic methods are not common in hospitals and medical clinics, they are widely accepted and used by patients.

According to the theories of CAM, the human body has inherent mechanisms to maintain its health and treat its illnesses. The goal of CAM is to activate these inherent mechanisms and mobilize emotional and spiritual forces to maintain health and combat diseases. In CAM, all aspects of patients' lifestyles are considered, and recommendations on diet, physical activities, and stress management techniques are provided based on those considerations. The CAM highly focuses on the physician-patient relationship.

CAM practices are holistic considering humans as a whole consisting of physical, mental, and social dimensions; they pay attention to all these human dimensions during the treatment process(3). Public awareness of/enthusiasm for the use of CAM is increasing, making it a form of health care services(4). Although there is an interaction between CAM practices and classic forms of treatments, physicians are often unaware of the use of CAM by their patients (5). CAM is used in the treatment of various diseases, but the pattern or the path of its effectiveness has not been fully understood(6).

One of the fields, in which the use of CAM seems to be more common, is gastrointestinal diseases; people suffering from such diseases can somehow eliminate their symptoms by us-

ing CAM therapies (6). Considering the increasing use of CAM therapies by patients along with the entry of non-specialists into the field of community health and the severe consequences of their involvement, the study of patient's willingness to use these therapies seems quite important. On the other hand, evaluating the levels of patients' satisfaction with CAM therapies helps us respond professionally and scientifically to the needs of society and pave the way for the development of a proper and scientific context for the management of such therapeutic practices.

Moreover, due to physicians' lack of training on CAM practices, non-specialists persons have increasingly entered the field of community health, and we see numerous patients caught in the trap of such frauds; some of these patients have to undergo irreversible problems or complications due to delays in their treatments.

Therefore, due to the importance of the field of health and healing in the physical and mental health of the community and the need for full understanding and awareness of patients' needs and new tendencies and to respond properly to those tendencies, we decided to examine the tendency of patients referring to Gastroenterology clinics in Mashhad to the use of CAM therapies.

Materials and Method

The present cross-sectional study was performed at Gastroenterology clinics affiliated with Mashhad University of Medical Sciences. The study began in December 2015 and ended in March 2017. The study subjects (n=751) were randomly selected from patients referring to Gastroenterology clinics in the city of Mashhad. After explaining the research objectives and stages and obtaining their informed consent, the participants entered the study. Patients in each clinic were given the study's form and checklist, which were completed by the researcher during the interview process.

CAM therapies in this study included acupuncture, herbal medicine, leech therapy, cupping therapy, massage therapy, chiropractic, diet therapy, reflexology, homoeopathy, yoga, tai chi, etc. Gastroenterology clinics were selected based on their distribution across the city, and in such a way that both private and public clinics were covered. After collecting the required data, they were entered into the SPSS-16 software. The results were presented as descriptive and analytical statistics including means, standard deviations (for quantitative variables), frequencies, frequency percentages, Tables, and Figures (for qualitative variables).

Statistical analyses were conducted using the

Kolmogorov-Smirnov test and paired t-test, or its nonparametric equivalence (i.e. Wilcoxon test) ($p=0.05$).

Results

Demographic Characteristics of the Participants

In the present study, 751 patients referring to gastroenterologists participated. Of the total participants, 274 (36.48%) were male and 476 (63.38%) were female; most of the patients were in the age range of 30-40 years ($n=161$; 21.5%); the lowest

and the highest frequencies were related to respectively unemployed patients (3.3%) and housewives.

(41.5%); 435 (57.9%) patients had a high school diploma or did not finish high school (57.9%), 160 (21.3%) had associated or undergraduate degrees, 109 (14.5%) were illiterate, and 45 (5.9%) had graduate degrees; 624 (83.1%) were married and 499 (66.4%) were residents of Mashhad. The demographic characteristics of the participants are presented in Table 1.

Table 1. Demographic Characteristics of the Participants

Variable	Number (%)	Variable	Number (%)
Gender		Age (years)	
Male	274 (36.4)	>20	44 (5.9)
Female	476 (63.3)	20-30	149 (19.9)
		30-40	161 (21.5)
Place of Residence		40-50	147 (19.7)
Mashhad	499 (66.4)	40-60	132 (17.6)
Other Cities in Khorasan Province	112 (14.9)	60-70	81 (10.8)
Villages in Khorasan Province	70 (9.3)	>70	34 (4.5)
Out of Khorasan Province	67 (8.9)		
Educational Level		Occupation	
Illiterate	109 (14.5)	Farmer	31 (4.1)
High school Diploma/Below High School	435 (57.9)	Worker	29 (3.9)
Associate Degree/Undergraduate Degree	160 (21.3)	Employee	154 (20.5)
Graduate Degree	45 (5.9)	Self-Employed	140 (18.6)
Marital Status		Housewife	312 (41.5)
Single	122 (16.2)	University Student	59 (7.9)
Married	624 (83.1)	Unemployed	25 (3.3)
Divorced	4 (0.5)		

Frequency Distribution of Participants' Reasons for Referring to Gastrointestinal Clinics

As can be seen in Figure 1, the stomach and duodenum-related causes were the most frequent reasons for referring to gastrointestinal clinics

($n=338$; 45%). Then, abdominal pain ($n=112$; 14.9%) and gastrointestinal bleeding ($n=64$; 8.5%) were the second and the third causes of referring to gastroenterology clinics.

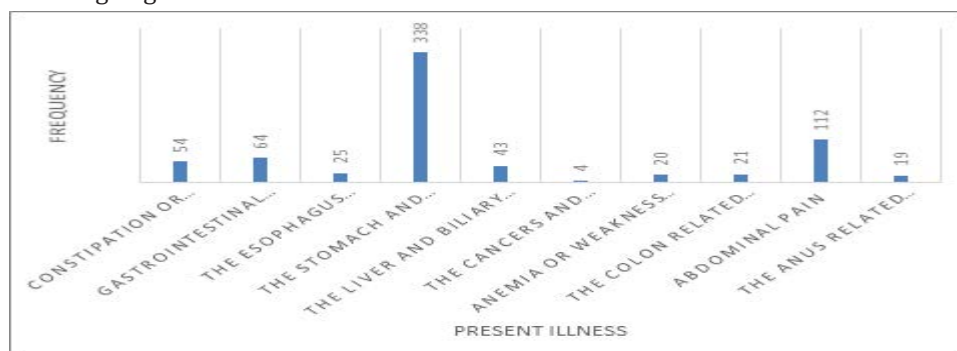


Figure 1. Frequency Distribution of Participants' Reasons for Referring to Gastrointestinal Clinics

Frequency Distribution of Participants who used CAM

As can be seen in Figure 2, 464 (61.8%) patients had experienced CAM therapies before the present study was conducted, and 221 (29.4%) patients did report no history of such therapies. Among CAM users, 368 (79.3%) patients considered the use of

CAM therapies effective, and 95 (20.5%) patients considered them ineffective. Among those who had no history of CAM use, 52 (23.5%) patients believed in the effectiveness of CAM therapies, and 163 (73.8%) patients did not believe in such treatments.

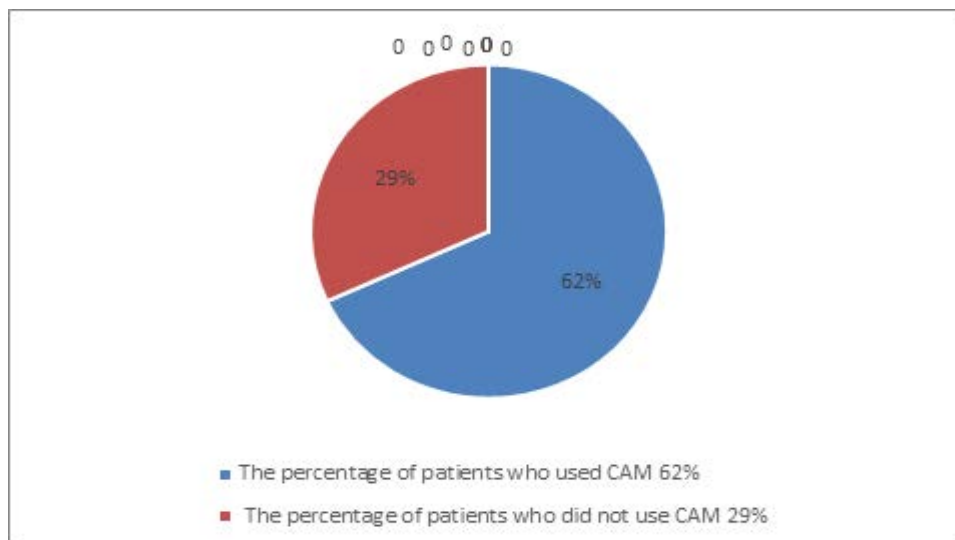


Figure 2. Frequency Distribution of Participants who used CAM

Frequency Distribution of Different CAM therapies used by their users

Among the different CAM therapies, the highest frequency was related to herbal medicine (80.4%), and cupping therapy, acupuncture, and leech therapy had respectively the second, the third, and the fourth-highest frequencies. The frequency distributions of different CAM therapies used by the present study participants are presented in Table 2.

Table 2. Frequency Distribution of Different CAM therapies used by their users

Type of Complementary Medicine	Frequency (%)
Herbal Medicine	407 (80,4)
Cupping Therapy	98 (13)
Leech Therapy	25 (4,8)
Chiropractic	2 (0,6)
Cupping Therapy	10 (1,3)
Massage	10 (1,9)
Yoga	12 (2,3)
Homeopathy	2 (0,4)
Diet Therapy	18 (3,5)
Reflexology	1 (0,2)
Tai Chi	1 (0,2)
Acupuncture	39 (7,6)

Users' Satisfaction with CAM vs. Their Satisfaction with Chemical Drugs

Among CAM users, 375 (75.2%) patients were satisfied with CAM, while 124 (24.8%) persons were not. Among chemical drug users, 332 (69.5%) patients were satisfied with their medication and 146 (30.5%) were not. No significant difference was observed in the level of satisfaction with CAM between different age groups ($p=0.146$). Nonetheless, the highest level of satisfaction with CAM was observed in the age group of 40-50 years ($\text{mean}=6.40\pm 3.29$) and the lowest level of satisfaction was detected in the age group of >70 years ($\text{mean}=5.09\pm 3.85$).

The average levels of satisfaction in the male and female participants were respectively 5.90 ± 3.25 and 5.66 ± 3.41 . The results of the Mann-Whitney test showed no statistically significant difference in the average level of satisfaction with CAM between men and women ($p=0.549$). The average levels of satisfaction with CAM in patients who believed in it and those who did not were respectively 6.95 ± 2.51 and 2.33 ± 1.54 ; the difference was statistically significant ($p=0.001$). In this study, the average level of satisfaction with CAM was compared between single (5.64 ± 3.19) and married (5.87 ± 3.31) patients and no significant difference was detected ($p=0.589$).

Similarly, no significant difference was observed in the average level of satisfaction with CAM between patients with different occupations ($p=0.193$). Though, the highest and the lowest levels of satisfaction were respectively observed among farmers

(6.31 ±3.50) and unemployed (5.25 ±3.60) patients.

The results of the Chi-square test indicated a significant difference in the number of patients between those who received chemical medication and those who used CAM therapies ($p=0.05$). Tukey's test was performed separately between different levels of education and the results indicated a significant difference in the level of satisfaction with CAM between the group of patients with high school diploma/unfinished high school and those with undergraduate degrees ($p=0.012$).

Comparison of Patients' Satisfaction with CAM between Patients Referring to Gastrointestinal Clinics for Different Reasons No significant difference was found in the level of satisfaction with CAM between patients referring to gastroenterology clinics for different reasons ($p=0.431$). However, the highest and the lowest levels of satisfaction were respectively observed in those referring to gastroenterology clinics for malignancies (7.33 ±2.51) and those referring to gastroenterology clinics for the esophagus-related causes (5.33 ±3.77).

Discussion

The present study was conducted on 751 individuals, from all patients referring to Mashhad gastroenterology clinics. Most of the participants were 30-to-40-year-old women. Concerning occupational status, the lowest frequency was related to unemployed patients and the highest frequency was related to housewives. More than half of the participants had high school diplomas. The highest frequency was related to married patients, who were also Mashhad residents. Stomach and duodenum-related causes were the most frequent reasons for patients' referred to gastroenterology clinics, and abdominal pain and gastrointestinal bleeding were the second and the third most frequent causes.

61.8% of the participants had used at least one of the CAM therapies before the study began; 79.3% considered CAM therapies effective and 20.5% considered them ineffective. Moreover, 23.5% of patients, who had never used CAM therapies before, considered such therapies effective based on their social and religious beliefs.

The most popular CAM therapies were respectively herbal medicine, cupping therapy, acupuncture, and leech therapy. Over 70% of patients who used herbal medicine, cupping therapy, and acupuncture were fully satisfied with their effectiveness. Similarly, most of the patients, who also received chemical drug-based treatments, were satisfied with the effectiveness of those drugs. In this study, patients' satisfaction with CAM was determined based on a scale ranging from 1 to 10; the results indicated a high level of satisfaction.

concerning the relationship between CAM use and demographic characteristics of CAM users. For example, in a study, conducted in Isfahan on urban population, women used CAM more than men, but the difference was not statistically significant. Most of the CAM users were less than 49 years old, but CAM use was significantly lower in people with higher educational levels. Hung et al. studied patients with gastrointestinal problems in New York and reported similar results to those reported here(9). In that study, no significant difference was observed in demographic characteristics of the patients (age, gender, marital status, educational level, occupational status, etc.) between the two groups of CAM users and control, but most of the CAM users had higher educational levels as well.

Previous studies have shown that most CAM users consider it effective and are satisfied with its effectiveness. For example, Dosset examined more than 43000 American patients and showed that more than %80 of people using CAM therapies to alleviate their gastrointestinal problems considered them effective and highly satisfactory therapeutic methods (6). Similarly, Verhoef examined patients with gastrointestinal issues and reported that %92 of CAM users were satisfied with its effectiveness (10).

The results of the present study showed %72.2 satisfaction and %24.8 dissatisfaction with CAM practices, which were in line with the results of other studies. %73.4 of patients, who had never used CAM, considered it ineffective and sometimes a form of fraud or marketing practice. Many comparative studies have shown that using CAM is more in line with philosophical beliefs and values concerning health and life. For example, a quarter of patients participating in the present study considered CAM therapies effective -due to their religious beliefs- without having any history of CAM use.

In some studies, it has been stated that dissatisfaction with standard treatments has encouraged patients to use CAM therapies; but the results of the present study and results of other studies have challenged this statement. In this study, the level of satisfaction of patients, who used standard treatments, was %69.5, which was slightly lower than the level of CAM users' satisfaction.

Moreover, a significant difference was detected in the number of patients between the group of patients receiving standard treatments and the group of patients using CAM therapies. Those, who used standard treatments, were also more likely to use herbal medicines. This can be explained in two ways: first, patients who have more severe health conditions accept all sorts of treatments, so that the use of both standard

and CAM therapies is high in these patients. Second, the reason for this connection may be related to Lanher's reports on his study results in Italy. He reported that people, who have a skeptical characteristic, do not usually stay under the treatment of one doctor and constantly change their doctors; these people also use CAM therapies more than other groups (11). In Dosset's study, patients' most common reasons for referring to gastrointestinal clinics were respectively indigestion, abdominal pain, and food allergies (6).

In our study, the most prevalent causes were respectively related to digestive disorders (reflux, heartburn & epigastric pain), abdominal pain, and upper gastrointestinal bleeding following an ulcer. In this study, unlike the US study, the prevalence of food allergy was very low, but indigestion and abdominal pains were highly prevalent among the examined patients.

Limitations and Strengths/Weaknesses of the Study

The present study had a large statistical population. It was the first Iranian study examining the use of CAM on gastrointestinal patients. Moreover, several factors were simultaneously examined in this research project. The data were collected by medical students through face-to-face interviews, through which patients' ambiguities were eliminated and their questions regarding the study's objectives were answered.

Face-to-face interviews with patients provided researchers with interesting insights. Proper cooperation between the private and the public sectors provided researchers with adequate coverage of patients with relatively even distribution.

Examining only the urban population is among the limitations of the present study. Furthermore, face-to-face interviews were conducted merely based on the patients' reports. The collected data were not documented. Some people's biases during face-to-face interviews could prevent the clear transmission of patients' ideas. In this study, the severity and duration of patients' illnesses were not examined. Finally, patients who used CAM only once were not distinguished from those who used it frequently.

Conclusions

The results of this study indicated the high prevalence of CAM in Iran. The worldwide popularity of CAM should not be overlooked. This finding indicates that the current medical treatment systems need to be revised and modified.

Conflicts of Interest

The authors declare no conflicts of interest

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