

Healthy Lifestyle and Complementary and Alternative Medicine

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Having a healthy lifestyle is one of the main personal goals, and multiple behaviors can be used to achieve this goal. However, people do not always develop appropriate health behaviors. One of the consumption alternatives is the use of complementary and alternative medicine (CAM), which has been increasing significantly in recent years, although not always adequately. This study aimed to determine whether CAM use is associated with a healthy lifestyle in Spanish adults. To achieve these objectives, 2486 adults were interviewed as part of the 2018 Barometer of the Centro de Investigaciones Sociológicas about their lifestyle and CAM use. The findings show a relationship between healthy lifestyle and CAM use; our study shows that there are significant differences between people with healthier lifestyle and those with less healthy lifestyles in some of CAM use, such as herbal medicine, meditation, yoga, nutritional therapies, and acupuncture. **KEY WORDS:** *complementary and alternative medicine (CAM), health condition, lifestyle, nutrition, physical activity* *Holist Nurs Pract* 2021;000(000):1–7

The report prepared by the World Health Organization¹ on strategies for the period 2013–2014 states that complementary and alternative medicine (CAM) is an important part of health care because of its benefits. However, primarily due to CAM plurality and complexity, we can easily define what CAM is, as it refers to multiple types of therapies or practices that are not part of, or fully integrated into, conventional medicine in a given setting. The system encompasses a range of medical treatment approaches generally considered different from those used in conventional Western medicine.² Thus, the US National Center for Complementary and Alternative Medicine (NCCAM)³ states that “alternative medicine” implies the use of CAM as a substitute for conventional medicine (eg, taking a special diet for the treatment of a disease instead of its conventional treatment). Complementary medicine combines conventional treatments with other

medicines (eg, the use of acupuncture to reduce a patient’s discomfort).

Most research on CAM shows the importance of the social context in which people take care of their health and illnesses.^{2,4} In our case, the research focuses on Spain, an environment where interest in CAM has been increasing in recent years.⁵ However, several reviews show that, although interest in the use of CAM seems to be increasing, there are no clear opinions on its usefulness.⁶ It even appears that the opinions of health professionals may differ widely as to CAM usefulness and efficacy.⁷

With regard to “healthy lifestyle,” previous studies have shown results linking certain behaviors, for example, physical activity or eating habits, to a healthier lifestyle.⁸ However, there is no clear and unanimous definition of the concept of “healthy lifestyle.” Over time, this concept has come to include certain behaviors of individuals such as smoking and alcohol use or overweight problems that affect people’s health.^{9–11} Despite numerous studies employing a measure of healthy lifestyle, no single measure has emerged as a standard and very little has been published on the prevalence of healthy lifestyles.¹²

In this context, while individuals may use CAM as a complement to conventional medical practices, it may be that for certain groups of people the use of CAM is also part of a healthy lifestyle that emphasizes

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The authors thank CIS (Centro de Investigaciones Sociológicas, Spain). Database is free and available at: http://www.cis.es/cis/opencm/ES/1_encuestas/estudios/ver.jsp?estudio=14383.

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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DOI: 10.1097/HNP.0000000000000476

preventive health care. People may also use CAM as part of a healthy lifestyle that promotes well-being.¹³

The aim of this study was to conduct a preliminary analysis of the relationship between healthy lifestyle and the use of CAM for the case of residents in Spain, using the Spanish Barometer 2018 survey of the Centro de Investigaciones Sociológicas (CIS).

MATERIALS AND METHODS

Study design and participants

To develop the study, the data provided by the CIS study (no. 3205) of the February Barometer (2018) have been used (www.cis.es/cis/openm/ES/1_encuestas/estudios/ver.jsp?estudio=14383). In the study conducted in February 2018, analysis of one of the topics was related to CAM. The methodology followed to select the sample under study was multistage, stratified by clusters, with selection of the primary sampling units (municipalities) and secondary sampling units (sections) in a proportional random way and of the last units (individuals) by random routes and quotas of sex and age. Survey estimates of sampling error for the total sample of 2486 showed that this was accurate within ± 2 percentage points, with a 95.5% CI and under the assumption of simple random sampling.

The 2018 CIS study contained questions on sociodemographics, personal health behaviors, and knowledge and use of CAM, among others. Age was originally classified as an open-ended question (later recoded). Marital status was classified as married, single, widowed, separated, or divorced. Employment was defined as being in paid employment in the previous week, classified as employed, unemployed, retired/pensioned, student, and household duties. Years of education, household income, and religion were identified.

Outcome measures

Healthy lifestyles, such as diet, sleep, physical activity, and the absence of addictive behaviors, are strongly associated with a decrease in cardiovascular disease, cardiovascular mortality, and all-cause mortality¹⁴⁻¹⁶; however, the underlying pathophysiological mechanisms leading to these effects are not fully understood.¹⁷

Research has also shown that a healthy lifestyle is a combination of behaviors and is associated with lower

mortality and better health outcomes.¹² Thus, following the proposals of various authors, healthy lifestyle can be understood as a multidimensional construct made up of the objective and subjective aspects of each individual.¹⁸

Four lifestyle-related questions were used in the CIS questionnaire. In all cases, these are personal assessments. The first refers to health status, the second to diet, the third to general lifestyle, and the fourth to frequency of physical activity.

The questions on CAM identified were derived from previously validated questionnaires,¹⁹ and participants were asked about their knowledge and use of a range of CAM therapies, as well as their satisfaction with these medicines (only those who had used them in the last 12 months).²⁰

Participants were asked about 20 CAM therapies (plus the option of others). They were asked whether they had used one (or several) in the last 12 months. In addition, they were asked about the reasons for using CAM (and adapted to Spain).²¹ Reasons were separated into general and particular reasons (only those who had used them). Finally, they were asked about the sources of information they have used to learn about CAM.

Data collection procedure

The population generally targeted by CIS surveys is of Spanish nationality and older than 18 years, but on occasions, these surveys are aimed at the entire resident population in Spain. Although the size and characteristics of the sample vary according to the objectives of the survey, CIS surveys usually take a minimum sample of 2500 people.

The use of ethical research protocols and trained interviewers helped ensure the quality of the data collected. Interviews for the 2018 CIS study were conducted from February 1 to 12, 2018. Those selected to participate in the CIS survey do so on a voluntary basis, and their collaboration is essential to achieve results that reflect the views of society as a whole. All responses are anonymous, protected by the corresponding laws on statistical confidentiality and data protection. Responses are used as aggregates, without individual references of any kind.

Statistical analysis

All statistical analyses were performed using IBM SPSS software (IBM SPSS Statistics for Windows,

release 24.0; IBM Corp, Armonk, New York). Descriptive statistics were calculated for sociodemographic questions, for personal health behaviors, and for questions on CAM. Second, analyses of differences (*t* test, Pearson's chi-square) were performed in order to analyze the existence, or not, of significant differences in relation to the use of CAM. This was based on the healthy lifestyle of the respondents and the sociodemographic variables considered. Finally, to classify respondents according to their level of personal health behaviors, a cluster analysis was used to obtain groups of people with similar behaviors according to their healthy lifestyle.

RESULTS

The response rate was 99.44%, and a total of 2486 people completed the survey: 51.4% of the participants were women and 48.6% were men. The average age of the participants was 51.1 years. They were married (51.4%) or single (33.2%); employed (44.3%) or retired-pensioned (27.2%); and Catholic (66.9%).

Healthy lifestyle

To classify respondents according to their level of healthy lifestyle, a cluster analysis was used to obtain groups of people with similar behavior. Two groups were obtained, which we called "healthy" (*n* = 1566) and "unhealthy" (*n* = 881).

They were asked about self-assessment of their health status, diet, general lifestyle, and frequency of physical activity or sports. Table 1 shows the results for the total sample as well as the results for each of the two groups. Overall, more than half of the respondents rated these items as good, especially those in the "healthy" items where 75% consider themselves to have a good or very good healthy lifestyle. In contrast, almost half of the "unhealthy" respondents rate it as fair or worse. We can highlight the large differences in the level of physical activity. In the healthy group, more than 80% do this type of activity every day (or almost every day), while in the unhealthy group, more than 65% of the sample never do it.

Use of Complementary and Alternative Medicine

Table 2 shows the results for the use of 20 CAM therapies during the last 12 months ordered according

TABLE 1. Healthy Lifestyle Groups^a

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	Total, %	Healthy, %	Not Healthy, %
Health condition ^b			
Very good	13.7	16.4	9.3
Good	54.2	58.6	46.9
Regular	23.7	19.3	31.3
Bad	7.0	4.9	10.3
Very bad	1.5	0.8	2.2
Feeding ^b			
Very healthy	14.5	17.9	8.7
Pretty healthy	56.1	60.9	48.4
Something healthy	22.4	17.8	30.9
Unhealthy	6.2	3.0	11.2
Nothing healthy	0.9	0.3	0.8
Lifestyle ^b			
Very healthy	11.5	14.7	6.2
Pretty healthy	53.8	62.4	40.4
Something healthy	26.7	20.6	38.3
Unhealthy	6.7	2.0	13.4
Nothing healthy	1.3	0.3	1.7
Physical activity ^b			
Everyday	25.1	39.5	0.0
Several times a week	28.3	44.6	0.0
Once a week	7.7	11.7	0.7
Sometimes in the month	4.1	4.2	4.0
Once a month or less	10.8	0.0	29.5
Never or almost never	24.0	0.0	65.8

^aFrom the authors' analyses of data from the Spanish Barometer of the Center for Sociological Research.

^b*P* < .01, χ^2 test, healthy versus not healthy.

to the level of use of the total sample (data in percentage). Respondents were allowed to list more than 1 CAM modality. In addition, data for the 2 groups are shown according to their healthy lifestyle.

Data show a lower use (at least 1 CAM in the last 12 months) than other studies conducted in other countries.^{5,20,22,23} In the Spanish case, the use of CAM was 31.97% for the surveyed population compared with 61.7% in Scotland,²⁴ and 79% also in Scotland 2 years later,^{22,25} or 63% in the United States.²³ This situation may be due to a low utilization of CAM therapies in a standard Spanish health care system⁵ and to a high satisfaction of Spaniards with traditional medicine.²⁶ On the contrary, low utilization may deprive potential beneficiaries of the advantages that these therapies can provide.

In our case, only 3 of the CAM therapies had been used by more than 10% of the respondents. The use of this medicine was higher among the healthy group (7 medicines exceed 10% use) than among the unhealthy

TABLE 2. Use of Complementary and Alternative Medicine^a

	Total, ^b %	Healthy, ^b %	Not Healthy, ^b %
Therapeutic massage	20.4	21.5	19.6
Herbal medicine ^c	16.9	18.9	13.9
Meditation ^c	10.4	12.8	6.0
Homeopathy	9.8	11.0	7.9
Yoga ^c	9.6	12.7	3.7
Reiki	9.6	10.7	7.8
Osteopathy	9.5	10.6	7.7
Naturopathy	8.8	9.4	8.0
Floral therapy	8.0	9.4	5.3
Nutrition therapy ^c	7.4	9.5	3.0
Qi-gong (or Chi-kung)	7.2	9.3	0.0
Chiropractic	6.9	7.4	6.0
Music therapy	6.8	7.2	6.4
Ayurveda	6.5	7.5	3.3
Reflexology	6.4	7.5	4.3
Acupuncture ^c	6.2	7.9	3.4
Spiritual healing	5.6	6.6	3.6
Therapeutic magnets	5.0	5.8	3.5
Chinese traditional medicine	3.5	3.9	2.8
Hypnotherapy	2.1	2.7	0.8

^aFrom the authors' analyses of data from the Spanish Barometer of the Center for Sociological Research.

^bRespondents were allowed to list more than 1 complementary and alternative medicine therapy.

^c $P < .01$, χ^2 test; significant differences Healthy versus Not healthy.

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group, although the differences were significant for only 5 of 20 CAM therapies.

Regarding the use of different CAM therapies in the last 12 months, it had already been mentioned that the level of use was not very high and there were few differences between the healthy and unhealthy groups. However, for a better understanding of the results, if the consumption of CAM is categorized according to the NCCAM³ proposal,²⁷ changes in the levels of use can be observed. Briefly, the different categories are as follows:

- Biologically based therapies (BBTs) use naturally occurring substances to affect health.
- Alternative medical systems are complete systems that include a defined philosophy and explanation of disease, diagnosis, and therapy.
- Mind-body interventions (MBIs) are based on the theory that mental and emotional factors can influence physical health. Behavioral, psychological, social, and spiritual methods are used to preserve health and prevent or cure disease.

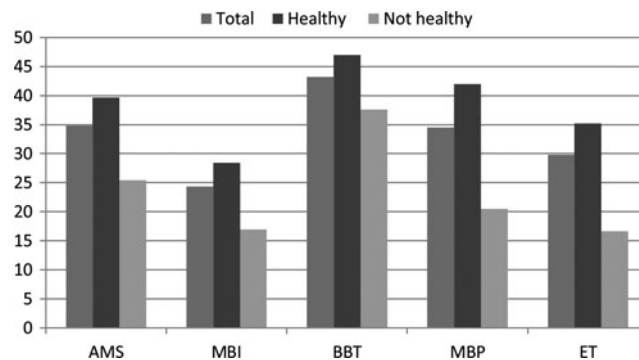


FIGURE. Use of categorized complementary and alternative medicine. From the authors' analyses of data from the Spanish Barometer of the Center for Sociological Research. AMS indicates alternative medicine systems = acupuncture, Chinese traditional medicine, homeopathy, Ayurveda, naturopathy; MBI, mind-body interventions = hypnotherapy, spiritual healing, meditation, yoga, music therapy; BBT, biological-based therapies = herbal medicine, nutrition therapy; MBP, manipulative body-based practices = chiropractic, osteopathy therapeutic massage, reflexology; ET, energy therapies = Reiki, floral therapy, qi-gong (or chi-kung), therapeutic magnets.

- Body manipulative therapies treat various conditions through bodily manipulation. These therapies are based on the belief that the body can regulate and heal itself and that its parts are interdependent.
- Energy therapies are based on a core belief in the existence of a universal life force or subtle energy that resides in and around the body (vitalism). These therapies also encompass the use of external energy sources (electromagnetic fields) to influence health and healing.

At the level of the "total" sample analyzed (Figure), almost 50% used BBTs and 35% used alternative medicine systems, while less than 25% used MBIs. If we compare the groups analyzed, the healthy group used all CAM therapies to a greater extent than the unhealthy group. These differences are especially important with regard to the use of body manipulative practices and energy therapies.

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Table 3 (section a) provides reasons why respondents think people use CAM, or general reasons; more than 40% of them did not have a specific reason or did not trust the results of traditional medicine. No significant differences were identified between the two groups. Table 3 (section b) provides the question that refers to the personal reason for using CAM); this question was answered only by those respondents who had used a CAM in the last

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TABLE 3. Main Reasons for Use of Complementary and Alternative Medicine^a

	Total, %	Healthy, %	Not Healthy, %
a. Why people use CAM? (n = 2345), general reasons			
People believe and trust them without a specific reason	21.3	21.8	20.8
CAM cures diseases and ailments for which conventional medicine does not work	18.8	18.3	19.8
CAM helps to have a healthy and balanced life	15.2	16.3	13.3
CAM relieves the side effects of conventional medical treatments (with medicines)	14.2	14.2	14.3
People believe that conventional medicine is sometimes harmful to health	11.1	11.3	10.9
CAM prevents diseases and ailments	8.9	8.8	9.1
Another reason	1.2	1.3	1.1
People do not know	8.7	7.3	10.4
People do not answer	0.6	0.7	0.5
b. Main personal reason to use CAM (n = 806), personal reasons			
CAM helps to have a healthy and balanced life	30.8	32.9	24.8
CAM cures diseases and ailments for which conventional medicine does not work	27.7	26.2	31.3
CAM prevents diseases and ailments	15.3	16.6	12.1
People believe and trust them without a specific reason	10.4	10.3	10.7
CAM relieves the side effects of conventional medical treatments (with medicines)	8.2	7.1	11.2
People believe that conventional medicine is sometimes harmful to health	3.2	2.9	4.2
Another reason	1.7	1.5	2.3
People do not know	0.5	0.5	0.5
People do not answer	2.2	2.0	2.8

Abbreviation: CAM, complementary and alternative medicine.

^aNo significant differences were found. From the authors' analyses of data from the Spanish Barometer of the Center for Sociological Research.

12 months. There were no significant differences between the two groups. Some differences in the order of choice between the two groups can be highlighted. For the healthy group, the most important reason for using CAM was to have a balanced and healthy life (32.9%). On the contrary, the unhealthy group indicated as a first reason why traditional medicine cannot cure their illnesses or ailments (31.3%).

With regard to the sources of information on CAM that respondents usually use, the result, from our point of view, is worrying, as the most common source of information is friends and family (63.7%), followed by the Internet (22.4%), leaving the third most common source of information received from health professionals (22.11%). For the unhealthy group, the information obtained from books and magazines is of unusual use (8.9%).

For reasons why respondents do not use CAM or do not use them to a greater extent, more than 25% of respondents indicated because they were not interested (or did not need them), 15% considered the results of traditional medicine to be sufficient, and only 8% did not use them because they believed they were not effective or because they might have side effects (1.8%). In this analysis, there were no differences between the two groups analyzed.

DISCUSSION

This study examines the relationship between a healthy lifestyle and the use or nonuse of CAM among the Spanish adult population. As a source of information, we used data provided by the Barómetro 2018 of the CIS, which among other topics included aspects related to CAM. First, we ranked respondents according to their assessment of certain behavioral factors associated with a healthy lifestyle. The results show that, in general, respondents indicate that their lifestyle to be healthy. Approximately 64% of the respondents classified themselves within the healthy group, and 34% as unhealthy, according to their assessment of their lifestyle.

Following Xue's²⁸ recommendations, this article attempts to better understand the reasons for the sudden growth in popularity of CAM in the developed world. In this regard, this article focuses on the use of CAM in the setting analyzed, Spain, and shows that it is lower than in other studies consulted.^{20,22,25} Only 31.97% of the Spanish population uses this type of therapy. Perhaps, the reason for this can be found in cultural aspects together with government support.⁴ Not surprisingly, the use of these therapies has been a controversial focus of attention in Spain. The use of

CAM is lower than that in other studies conducted in different sociodemographic settings. In our case, Spain, none of the 20 CAM therapies included in the study exceed 22% of use among respondents, with the majority below 10% of use. If the CAM therapies are grouped by treatment category, only those based on biological records (phytotherapy, nutritional therapy) approach 50% of the use.

For the relationship between healthy lifestyle and the use of CAM, our study shows that there are significant differences in the use of CAM between people with healthier lifestyles and those with less healthy ones in some medicines: phytotherapy, meditation, yoga, nutritional therapy, and acupuncture. According to Guerrero-Montoya and León Salazar,²⁹ lifestyle is more than an external behavior and also relates to psychological and spiritual dimensions. As the authors state, lifestyle is a human construct, the product of the interaction between genetic, educational, social, economic, and environmental factors. In this scenario, people with a healthier lifestyle find these medicines as part of a way of life, more spiritual and connected to more natural therapies. The main reason for using CAM is not clear. The most common opinion is that there is no clear reason for doing so (more than 20%) or because conventional medicine does not seem to work. In this regard, a recent study³⁰ concluded that the use of CAM in women breast cancer survivors improved their perception of their lifestyle. Respondents do not believe that people use CAM as a preventive therapy for medical problems or for a balanced life. However, when asked about their personal motive for using CAM, more than 30% of the healthy respondents indicate that it is for a healthy and balanced life. Some studies³¹ even reveal that mothers think that CAM therapies are more natural and safer than traditional medicines. On the contrary, respondents of the unhealthy group used CAM as an alternative to conventional medicine because they thought that it did not solve their problem (31.3%). In addition, those who did not use CAM indicated that the main reasons were that they do not need this type of medicine or that conventional medicine already provides solutions to their health problems. Few people did not use CAM because they considered them useless or ineffective.

Limitations

Finally, like any other research study, this one is not without certain limitations. Therefore, first, it is

important to point out that, although the CIS is a large and representative survey, there are associated limitations. The results provided are limited to the Spanish population and cannot be extrapolated to other countries. Second, all the data are self-reported and the reliability and validity of all the questions analyzed have not been studied.

CONCLUSIONS

If we were to draw up a profile of a Spanish user of CAM, according to the CIS data used, we could define this user as a person who thinks that people believe and trust them for no specific reason but who personally thinks that CAM can help them have a healthy and balanced life and who accesses these medicines through the recommendations of their friends or acquaintances. From the point of view of nursing practice, and recommendations for future research, we could indicate the usefulness of recommending the use of CAM to patients that positively affects their physical and mental health. This alternative should always go hand in hand with conventional therapies.

In this sense, and in accordance with the special situation of the use of CAM in Spain, more public and private policies are needed for their correct use. Thus, in the first place, as a consequence of the degree of satisfaction with traditional medicine and the use of CAM, it would be desirable to improve the satisfaction of its users. For example, the use of certain CAM could be incorporated into the public health system. It would also be necessary to deepen the knowledge on the decline of CAM use and nonuse.

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