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SHORT COMMUNICATION





Alternative and complementary medicine: A look at the general culture

Medicina alternativa y complementaria: Una mirada a la cultura general

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ABSTRACT

This paper explores the world of traditional medicine and complementary and alternative medicine from a multicultural perspective. It begins by highlighting the importance of traditional medicine in various cultures and its vital link to the cultural identity of ethnic groups. It then differentiates between traditional medicine and complementary/alternative medicine, explaining that the former is part of a specific culture, while the latter is used in conjunction with or in place of conventional medicine. The paper highlights how traditional and complementary medicine often seek to balance the physical, spiritual and experiential aspects of health and how these practices are rooted in culture and nature. Numerous alternative and complementary therapies, such as herbal medicine, acupuncture, reflexology, yoga, and aromatherapy, are mentioned, and it is emphasized that these therapies are based on natural and noninvasive approaches. In addition, the relationship between traditional medicine and Western medicine is discussed, and how in some places they are being harmoniously combined to provide holistic health care. The example of intercultural medicine in Cuba is mentioned, where scientific medicine, traditional Chinese medicine and natural and traditional medicine are integrated. The importance of preserving and respecting the traditions and practices of traditional medicine of indigenous cultures, such as Mapuche medicine in South America, is emphasized. It is mentioned that these traditions not only treat individual diseases, but also seek to maintain balance with nature and culture. In conclusion, it is emphasized that traditional and complementary medicine offer a different perspective on health and wellness, and it is important to approach them critically and with proper medical guidance. These practices can offer holistic approaches to health care and are an integral part of cultural diversity in health care.

Keywords: Traditional Medicine; Alternative Medicine; Complementary Medicine; Culture; Phytotherapy; Acupuncture; Multiculturalism.

RESUMEN

Este artículo explora el mundo de la medicina tradicional y la medicina alternativa y complementaria desde una perspectiva multicultural. Comienza destacando la importancia de la medicina tradicional en diversas culturas y su vínculo vital con la identidad cultural de los grupos étnicos. Luego, se diferencia entre la medicina tradicional y la medicina complementaria/alternativa, explicando que la primera es parte de una cultura específica, mientras que la segunda se utiliza en conjunto o en lugar de la medicina convencional. El artículo destaca cómo la medicina tradicional y complementaria a menudo buscan el equilibrio entre los aspectos físicos, espirituales y experienciales de la salud y cómo estas prácticas están arraigadas en la cultura y la naturaleza. Se mencionan numerosas terapias alternativas y complementarias, como la fitoterapia,

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la acupuntura, la reflexología, el yoga y la aromaterapia, y se enfatiza que estas terapias se basan en enfoques naturales y no invasivos. Además, se discute la relación entre la medicina tradicional y la medicina occidental, y cómo en algunos lugares se están combinando armoniosamente para brindar una atención de salud integral. Se menciona el ejemplo de la medicina intercultural en Cuba, donde se integran la medicina científica, la medicina china tradicional y la medicina natural y tradicional. Se destaca la importancia de preservar y respetar las tradiciones y prácticas de la medicina tradicional de las culturas indígenas, como la medicina Mapuche en América del Sur. Se menciona que estas tradiciones no solo tratan enfermedades individuales, sino que también buscan mantener el equilibrio con la naturaleza y la cultura. En conclusión, se destaca que la medicina tradicional y complementaria ofrece una perspectiva diferente de la salud y el bienestar, y es importante abordarlas de manera crítica y con orientación médica adecuada. Estas prácticas pueden ofrecer enfoques holísticos para el cuidado de la salud y son parte integral de la diversidad cultural en la atención médica.

Palabras clave: Medicina Tradicional; Medicina Alternativa; Medicina Complementaria; Cultura; Fitoterapia; Acupuntura; Multiculturalismo.

INTRODUCTION

Since the beginning, humans have had to fight diseases with "traditional medicine." With time, this type of medicine has been modified, and even in some places, the use of medicinal plants, minerals, and other natural elements has been lost.

In our culture, it responds to the immediate need to solve health problems. It has been known since immemorial and is a practice performed by doctors or healers.

An essential characteristic of traditional medicines is their vital link with the cultural being, both individual and social-cultural. (1,2)

Tradition becomes the transmitter of knowledge accumulated and bequeathed from generation to generation, which maintains the identity and culture of the original groups of different world cultures, such as the Mapuche ethnomedicine, which has ancestral origins, having its own traditional Mapuche medicine and is still practiced today.⁽³⁾

Each society evolves with time and reaches its development following its pattern, model, and path of evolution. In the same way, it has happened with the traditional cultures and Western society (counting the variants of countries and regions). (4) As a result, nowadays, different alternative and complementary therapies have origins in different cultures.

In this way, we can question whether traditional and complementary medicines are the only elements that help to perpetuate culture and maintain the cohesion and identity of groups or whether they fulfill specific objectives and purposes.

According to the WHO, it is the total of knowledge, skills, and practices based on theories, beliefs, and experiences of different cultures, explainable or not, with a long history, used to maintain health, prevent, diagnose, improve, or treat physical and mental illnesses, while complementary medicine, also called alternative medicine, are health care practices that are not part of conventional medicine. Medicine is specific to a social group, to a culture, since therapeutic systems are constructed according to the cultural characteristics of the groups. If cultures vary, the ways of understanding health and disease and how to approach problems and provide solutions will also vary. Thus, from the ancient shamanic culture in Asia and indigenous America, traditional medicines have been developed over time, following traditions.⁽⁵⁾

DEVELOPMENT

According to Peter Brown, conventional medicine is one more ethnomedicine in our Western society, just as there are others: Mapuche ethnomedicine and traditional Chinese ethnomedicine due to the result of the search for solutions to health problems within a culture that is appropriate to the characteristics of each group.

In recent times, there has been a resurgence of therapies in the health system, especially ancestral medicine, with good growth and expansion of the use of natural products, sustained through beliefs, knowledge of widespread knowledge, practices, and resources from this knowledge, in a socio-cultural context and those who exercise the community of a people to solve empirically specific health problems despite the scope of scientific medicine.⁽⁶⁾

Currently, there is a WHO strategy on traditional medicine, which helps to find solutions and have a broad vision regarding improving health. This was officially initiated with the declaration of alma ata in 1978, inviting Member States to seek and achieve the active participation of the population, taking advantage of

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their knowledge in this area of medicine, considering their needs, local resources, and social and cultural characteristics.

In Argentina, in the province of Misiones, the law recognizes traditional and complementary medicine, thus giving a regulatory framework to practices and therapies not framed within conventional medicine, allowing patients to opt for complementary treatments.

On the other hand, there is a difference when we talk about alternative medicine; it refers to non-conventional practices used instead of conventional medicine. On the other hand, when we talk about complementary medicine, it refers to non-conventional practices used in conjunction with conventional medicine.⁽⁷⁾

Traditional medicine generally looks beyond the body, trying to balance both the observable (affected) and the spiritual and experiential.

Traditional medicine, natural therapies, and Western medicine can be combined beneficially and harmoniously. (8)

Medicinal and aromatic plants play an essential role in people's health care. Until the advent of modern medicine, man depended on them to treat his illnesses. Human society of all ages has accumulated much traditional knowledge about the use of medicinal plants. About 80% of the population in most developing countries still uses traditional medicine derived from plants to satisfy primary health needs.⁽⁹⁾

As we know, medical practices have been going on for centuries, where there are different types of treatments, but first, let us define:

- Medicine: We can define medicine as the sum of knowledge, techniques, and practices based on theories, beliefs, and experiences based on studies, either x-rays or laboratory tests, given to maintain physical and mental health, according to WHO.⁽¹⁰⁾
- Disease: We define disease as the alteration or deviation of the physiological state in one or more body parts, generally known causes, manifested by signs and symptoms, characteristics, and whose evolution is more or less predictable. Taking into account these concepts, we will develop the medicine. (11)

Different alternative and complementary therapies

A wide variety of therapies are grouped under the topic of alternative and complementary medicine. These are:

- Phytotherapy: Using plants or herbs for medicinal or therapeutic purposes.
- Acupuncture: It is an ancestral Chinese technique that uses different types of needles inserted into the body through the skin to treat diseases.
- Moxibustion: It is a technique that treats body ailments by applying heat at a certain distance from the skin through the burning of the mugwort plant, already dried and compressed, in pure form.
- Massage therapy is a technique performed by massaging the body to relax. A relaxing massage is designed to relieve muscle tension and promote general well-being. On the other hand, there is the therapeutic massage, which consists of various techniques used in some medical conditions.
- Chiropractic: It is a practice that deals with the diagnosis, care, and prevention of the musculoskeletal system.
- Reflexology: An ancient practice in China, Egypt, and India that applies pressure on the feet and hands, called "reflex zones" with the thumb, finger, and hand. They hold the theory that the body's organs belong to regions of the foot. Moreover, with pressure applied to a particular region, healing occurs.
- Aromatherapy: It is the use of essential oils inhalation to improve the individual's psychological and physical well-being.
- Yoga: It is the set of physical-mental disciplines, concentration, flexibility, strength, and vitality. This practice connects the body, breath, and mind.
- Reiki: It is a technique that tries to achieve the healing of physical and mental illnesses using the hands (sender) to transmit universal vital energy to an individual (receiver).
- Pranic healing is an art/science in which the healer uses prana ("the breath of life"), projecting it to the person to alleviate, heal and prevent disease. Prana is the body's vital energy that keeps it healthy and alive.
- Equine therapy is a therapeutic discipline where horses rehabilitate people with physical and mental problems for a better quality of life.
- Hydrotherapy: It is a treatment that uses water, subjecting it to temperature changes, either hot or cold, to treat a disease or maintain health.
- Curanderismo: It is the holistic approach to healing the mind, body, and spirit, using natural elements to heal both the physical and spiritual.
- Natural health remedies: Natural medicine is gaining more popularity due to the excellent rejection

of the use of chemicals in many areas of health. It is an alternative to the use of drugs and antibiotics that are used to treat minor illnesses and physical ailments. (12)

Alternative medicine has three basic principles:

- 1. Natural Medicine does not treat diseases, but people. Therefore, the individual is conceived as a whole.
- 2. this discipline aims to enhance the natural healing power of the human body. The physician must help the patient throughout the healing process and trust the body's ability to self-regulate its organism.
- 3. The remedies and techniques used to treat patients must be natural and non-aggressive. The Hippocratic maxim should always be followed, i.e., do no harm to the patient. (13)

Conditions that traditional and complementary medicine treats

It treats various conditions, some of which are acute, such as headaches, sore throats, colds, and flu. Moreover, they also treat chronic diseases such as migraines, gastrointestinal problems, gynecological, arthritis, physical injuries, and other trauma using natural medicine, as long as it is not a life-threatening condition. (14)

Medicinal plants are also very useful in treating psychological problems such as stress, anger, anxiety, nervousness, etc.

In addition, any natural treatment must be accompanied by good lifestyle habits and a healthy diet according to the needs of each person.

What makes Western medicine different from the rest?

No medicine is better or worse. A therapeutic system is valid if it solves or helps to solve health problems. Traditional medicines generally look beyond the body, trying to rebalance both the affected observable aspects and those of a spiritual, experiential, and emotional nature.

Traditional practitioners say combining traditional therapeutic systems with Western western-technological-scientific ones is possible, but each one explains its reasons. Each system has its particularities. Conventional hospital doctors see and cure Some situations and problems (surgery, central respiratory infections, heart problems, etc.). Others are better treated by traditional doctors, mainly diseases that have to do expressly with culture. Some are trained in the healing tradition of their people and have a long history in the study of disease. Thus, they combine traditional medicine with the Western vision, using remedies from their tradition and patent medicines according to the need. Medicine tends to be intercultural as cultures come into contact with each other. (15)

In China, TCM (Traditional et al.) not only contains the traditional characteristics of a therapeutic system related to its cultural context but also has elements of academic purification and others from Western science. Increasingly, the elements are being used together. In Latin America and Mexico, traditional doctors are trained, in addition to the traditions of each one, in schools, university courses, conferences, and other procedures of permanent training. There is more and more demand from the population for systems such as traditional Chinese medicine, homeopathy, naturopathy, and the ways of healing of the traditions of each people, next to Western medicine. (16)

In Russia, there is an essential tradition in phytotherapy and neuropathy. There is also a revival of the old shamanic culture gradually to the vital context of the different groups. In almost all of the East, the millenary traditional Chinese medicine and its intercultural variants treat millions yearly.

There is an official example of intercultural rapprochement in Chile with the Makewe Pelale Hospital and the herbal pharmacy in Temuco. In Mexico, traditional Mexican medicine is increasingly being developed along with Chinese medicine in its intercultural aspect. There are educational organizations that teach them, such as Tlahui. Universities such as Chapingo offer training courses for traditional doctors and those trained in Western science. (17)

In Cuba, there is an integral and integrated health system in which scientific medicine, Chinese medicine, and traditional and natural medicine are related together as intercultural medicine. The official Cuban therapeutic system, mixed, is an example of ecocultural medicine. Cuba's health curricula include phytotherapy, acupuncture, and natural and traditional medicines. Research on natural products that meet the population's needs has been promoted. Cuban health professionals have a high level of training. The University of Holguin offers international courses to foreign professionals as a sample of the high degree reached in apitherapy, phytotherapy, diverse natural techniques, and intercultural Chinese medicine. (2,18)

In China, when looking at the sky, the clouds, the wind, the sun, and the stars, everything is related in balance, without complications, and everything flows. Therefore, there are no diseases. The Chinese apply the same principle to the body and its parts. The energies of nature are influential and responsible for the health of the environment and individuals. At the popular level, all this is enriched by ancient traditions of supernatural elements intervening in nature, life, and the destiny of individuals. (19)

In northern Argentina and Bolivia, traditional doctors have much knowledge about phytotherapy and know

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at what time how to perform remedies to treat kidney problems, pressure, and abdominal pain, among others. It also serves to counteract the symptoms of COVID-19. The preparation of herbs, such as chips, matico, lemon, and honey, relieved the symptoms of the disease. (20)

Traditional medicine as eco-cultural medicine

The ethnomedicines of native cultures, traditional Mexican medicine, and traditional Chinese medicine (different from Western medicine) are natural and cultural medicines. Tradition is the support to receive adequate information to achieve good organization, procedure, and safe transmission. Traditions must be taken into account in order to accommodate indigenous groups to progress.

Nature and culture form a unity and a dynamic reality in most traditions of indigenous cultures. Natural resources serve for survival and are conceived as "brothers" with whom one lives together. When Nature gives, it is necessary to give back in return.

Ethnomedicine in this context adapts to the physical reality and what is specified in the tradition. Ecocultural medicine is a (varied) system that conceives natural remedies not as a means to an end but as elements with which one interacts, having cultural characteristics that influence the behavior and life of these individuals. The intervention of this medicine is not only done on the patient but on him integrally (as an element of Nature), the natural environment, the social environment, and the cultural environment; if there is a balance of the broad reality, health is achieved and maintained. Any imbalance in the planes of the multi-reality (physical-symbolic) could cause diseases in people.

Mapuche Ethnomedicine

Mapuche medicine is part of the "cultural entity" of one of the original peoples of South America. It is an ethnomedicine system established since ancient times with its characteristics, and others shared in essence to almost all Amerindian ethnomedicines. If Nature gets sick, human beings get sick, and vice versa. The relationship with the earth can be altered and give rise to diseases (called by the Mapuche Mapuche kutran). Traditional health, from Patagonia to the mountains of the Sierra de Oaxaca, is based on equilibrium, understood as the balance of forces coming from Nature, the human being, culture, spiritual beings, and the cosmos (with the Higher Self). (21)

Some authors affirm a deep kinship between the cultures of the original American groups. Could we take this kinship back to the migrations of Siberian peoples who began to cross Bering some 35,000 years ago? When the mechanisms of transmission of traditions worked one hundred percent, not only myths were passed from generation to generation, but also many other elements, aspects of the culture and science of these groups, among them the concepts and ideas of health, social organization and the way of understanding the world and relationships with Nature. The Mapuche people resisted the Spanish conquerors' advances and maintained internal cohesion for a long time until their conquest by the Chilean State. (22)

Mapuche ethnomedicine has been preserved to the present day, being the object of study and interest of researchers and others. There are several references to it in documents of intercultural encounters and different sites specialized in Mapuche information online.

The Mapuches distinguish between ailments and disharmonies arising from characteristics of the Mapuche idiosyncrasy and culture. Diseases and illnesses that can be treated by the specialist of western science, winka kutran (infections, traumatological problems, problems that require surgical interventions, etc.). Mapuche medicine has a specific vision of the disease and relates it to the group, its members, nature, the world of beliefs, and the cosmos.⁽²³⁾

Therefore, to re-harmonize an altered situation, botanical means are used, and rites and ceremonies gather the community around vital ancestral practices to ensure the cures and the very existence of the Mapuche people as such. The idea of joint and integral action to achieve the balance that means health is also present in the thinking of cultures in the Mesoamerican, Siberian, Asian, and other traditions. (24)

From a contemporary and multicultural perspective, the Mapuche traditional medical system constitutes an abundant, diverse, and well-preserved ethnomedicine, with elements related to other Amerindian and possibly Siberian ethnomedicines, a fact that interests anthropology in order to deal with the health problems of these people, according to their tradition.

In Mapuche medicine, the Machi is the person in charge of carrying out the ancestral practice of the native peoples to maintain health, well-being, and balance with the environment. Through therapeutic rituals in which remedies are prepared with herbs or natural elements as the main elements, they carry out ceremonies accompanied by melodies, dances, and rites. In traditional cultures, talking about health goes beyond the simple well-being of the body. Specialists and ethnomedical not only work to rebalance the person who is sick or has problems but also think about the group and the correct relations of people, groups with the environment and resources, according to the norms of this culture.⁽²⁵⁾

CONCLUSIONS

In conclusion, traditional medicine and alternative and complementary medicine provoke a continuous interest in today's society at a global level, which aims to provide a different vision of wellness and health. These medicines are very varied, allowing us many options; they are quick, less invasive, and, in some cases, economical ways to cure or prevent some ailments and specific diseases that do not require surgical interventions.

It is necessary to approach them critically and accompany them with proper medical guidance. Therefore, with the support of research offered by multicultural medicine about traditional and alternative medicine, they work together and offer us a holistic approach to health care.

REFERENCES

- 1. Vega Oviedo JA. Formación, ejercicio y prestación de servicios en medicina alternativa y terapias alternativas y complementarias: ¿existen políticas públicas formuladas o implementadas en Colombia? 2010.
- 2. Quintero Barbón CM. La medicina alternativa y complementaria en los programas de pregrado de medicina 2015.
- 3. Urrego Mendoza DZ, Ángel Macías MA, Salazar Serrano R. Conocimiento, actitud y aceptación acerca de la medicina alternativa, en los médicos-profesores de la Escuela de Medicina de la Universidad Industrial de Santander. Revista de la Universidad Industrial de Santander Salud 2012;44:45-55.
- 4. Beltrán-Dussán EH. What is alternative, complementary, and integrative medicine? Revista de La Facultad de Medicina 2022;70:e91413-e91413. https://doi.org/10.15446/revfacmed.v70n4.91413.
- 5. Urrego Mendoza DZ. Abordaje de la Medicina Alternativa como sistema médico complejo en la Universidad Nacional de Colombia. Revista de la Facultad de Medicina 2010;58:155-6.
- 6. Guardado Núñez G, Ocampo Neyra L. Centro de medicina complementaria y alternativa. Repositorio Institucional UNIFÉ 2016.
- 7. Peña A, Paco O. Medicina alternativa: intento de análisis. Anales de la Facultad de Medicina 2007;68:87-96.
- 8. Llerena CS, Meza GE, Quispe GC. Situación de la enseñanza de la medicina tradicional y complementaria en las facultades de medicina. Revista Peruana de Medicina Integrativa 2022;7:102-7. https://doi.org/10.26722/rpmi.2022.v7n2.19.
- 9. Beltrán Dussán EH. ¿Qué es la medicina alternativa, complementaria e integrativa? Revista de la Facultad de Medicina 2022;70:112-52.
 - 10. Castro JJH. La mal llamada medicina alternativa. Revista Ciencias de la Salud 2017;15:5-7.
- 11. Alternative medicine, evidence based medicine, bioethics ProQuest s. f. https://www.proquest.com/openview/86b96afa8c1010033eab7b78b3361d94/1?pq-origsite=gscholar&cbl=1536336 (accedido 24 de octubre de 2023).
- 12. The public debate over alternative medicine: The importance of finding a middle ground ProQuest s. f. https://www.proquest.com/openview/c8690d88ba524800fcdc2b27fd54a69f/1?pq-origsite=gscholar&cbl=32528 (accedido 24 de octubre de 2023).
- 13. Dipierri JE. Impacto e integracíon entre la medicina alternativa y la convencional. Cuadernos de la Facultad de Humanidades y Ciencias Sociales Universidad Nacional de Jujuy 2004:241-63.
 - 14. Al-Dawood KM. ALTERNATIVE MEDICINE: WHICH WAY FORWARD? J Family Community Med 2000;7:13-5.
- 15. Bruguera Cortada M. Medicinas alternativas, complementarias, naturales o no convencionales. HUMANITAS, HUMANIDADES MÉDICAS 2003;1:107-14.
 - 16. Martínez Santos Y, Logroño Torres T, Palacín Nieto L. Medicinas alternativas y complementarias en el

ámbito sociocultural actual. Metas enferm 2012:16-9.

- 17. Hernández OM, Arenas LD. Uso de la medicina complementaria y alternativa. Escepticismo de la medicina occidental. Rev Med Inst Mex Seguro Soc 2004;42:235-8.
- 18. Peña A, Paco O. Alternative medicine: Intent of analysis. Anales de la Facultad de Medicina 2007;68:87-96.
- 19. Agudelo LFG. Conocimientos, actitudes y prácticas de algunos médicos colombianos acerca de la medicina alternativa y/o complementaria. Archivos de Medicina (Manizales) 2017;17:326-37. https://doi.org/10.30554/archmed.17.2.2060.2017.
- 20. Aguilar Ferro AI. Salud pública y medicina tradicional: Una mirada a la experiencia Maya del cáncer en Guatemala. Thesis. Universidad del Valle de Guatemala, 2014.
- 21. Abdel-Rahman SM, Nahata MC. Perspectives on Alternative Medicine. Ann Pharmacother 2007;41:1268-71. https://doi.org/10.1345/aph.140061.
- 22. Lara Cuellar L. Hacia una caracterización de los programas de posgrado en medicina alternativa en Colombia 2011.
- 23. Federspil G, Vettor R. Can Scientific Medicine Incorporate Alternative Medicine? The Journal of Alternative and Complementary Medicine 2000;6:241-4. https://doi.org/10.1089/acm.2000.6.241.
- 24. Garc F. Reflexiones en Torno al Movimiento Corporal Humano desde una Perspectiva Multidimensional y Compleja. Ciencia e Innovación en Salud 2013. https://doi.org/10.17081/innosa.1.1.88.
- 25. Eumelia G María. Estrategias de investigación social cualitativa: El giro en la mirada. Fondo Editorial FCSH; 2018.

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