

Future of Traditional Medicine

Matthew N. O. Sadiku¹, Uwakwe C. Chukwu², Abayomi Ajayi-Majebi³, Sarhan M. Musa¹

¹Roy G. Perry College of Engineering, Prairie View A&M University, Prairie View, TX, USA

²Department of Engineering Technology, South Carolina State University, Orangeburg, SC, USA

³Department of Manufacturing Engineering, Central State University, Wilberforce, OH, USA

ABSTRACT

Traditional medicine occupies a significant place in the healthcare system around the world. It promises a way to a more balanced life in stressful times. The consumption of medicinal plants has caused an increasing practice in herbal medicines (including Ayurveda, Chinese traditional medicines, and alternative therapies). Today, the world is growing up with complementary medicine due to vast benefits for life long. The traditional medicines now coexist and complement Western medicine throughout Africa, Asia, and Latin America. The future of traditional medicine is not just convenient, affordable, and available, but designed around the customers' needs. This paper addresses the possible futures of traditional herbal medicines.

KEYWORDS: *traditional medicine, Chinese traditional medicine, herbs, future*

How to cite this paper: Matthew N. O. Sadiku | Uwakwe C. Chukwu | Abayomi Ajayi-Majebi | Sarhan M. Musa "Future of Traditional Medicine" Published in International

Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-6 | Issue-1, December 2021, pp.1301-1307,

URL: www.ijtsrd.com/papers/ijtsrd48011.pdf



Copyright © 2021 by author (s) and International Journal of Trend in Scientific Research and Development Journal. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0) (<http://creativecommons.org/licenses/by/4.0>)



INTRODUCTION

Human history is essentially the history of medicines used to treat and prevent various diseases. As different as our world is to that of our ancestors, we are still afflicted with many of the same ailments. Our life and survival would have been impossible without the use of plants and plant products. Medicinal plants have made some extraordinary advances in the last 100 years. As lofty profession as medicine is, it has not always gotten it right. Some practices that were once seen as controversial (such tradition medicines) is now standard of care. It is common to hear concerns about pharmaceutical companies marketing their products and influencing physicians [1]. Natural products from plants, animals, and minerals have been the basis of the treatment of human disease. A large portion of modern medicines worldwide are derived from natural products. Today, traditional medicines are in demand and their popularity is increasing daily. They have been used to treat cut wounds, skin infection, swelling, aging, mental illness, cancer, asthma, diabetes, jaundice, scabies, venereal diseases, snakebite, and ulcer [2].

Tradition medicine (TM) is called traditional for a reason: it is old fashioned. It refers to the combination of indigenous practices of medicine and several therapeutic experiences of many previous generations for the treatment, control, and management of illnesses. It entails health practices, approaches, knowledge, and beliefs incorporating plant, animal, and mineral based medicines, spiritual therapies, manual techniques, diagnose, and preventing illnesses or maintaining well-being. TM has been used to cure many diseases including skin diseases, tuberculosis, diabetes, jaundice, hypertension, mental disorders, cancer, cardiovascular care, erectile dysfunction, and AIDS [3].

Western medicine is more common today. The traditional Chinese medicine (TCM) is a good example of a popular traditional medicine. A distinction is made between Chinese and Western medicine. The two medical practices can exist side by side. TCM's roots lie in 1st millennium B.C. TCM covers five main areas: acupuncture, massage, plants and herbs, dietary therapy, and qigong exercises. The

most widely known form of TCM treatment is acupuncture, shown in Figure 1, which has become part of Western medical healthcare practices [4]. China continues to attract a large number of foreigners annually. It still holds a mystic charm to the West. At its heart sits traditional Chinese medicine (TCM), which continues to hold the world's fascination as nations around the world try to grapple with the burdens of providing healthcare for ever-growing populations. Many Chinese doctors are often reluctant to use Chinese medicine because it is not lucrative. Although many Western doctors still regard TCM with suspicion, the World Health Organization officially recognize TCM in its global compendium [5]. The Chinese government works towards the survival of TCM and plans for the mutual learning and integration with Western medicine [6].

An urgent global need is to find an effective and economic way to overcome all ailments of humanity. This will require integrating traditional medicine and Western medicine together. This integrative system of medicine is the only way to move forward. It forms the basis for the medicine of the future [7].

FUTURE OF HERBS

Herbal medicines are the result of experiences of generations of practicing physicians of indigenous medicines for over hundreds of years. They refer to using a plant's seeds, berries, roots, leaves, bark, or flowers for medicinal purposes. Today, herbal medicines are in great demand in the developing world for primary healthcare. The use of herbal remedies throughout the world exceeds that of the conventional medicines by two to three times. The number of patients seeking alternate and herbal therapy is growing exponentially [8]. Statistics have revealed that about four billion people worldwide rely on plants or herbs as source of treatment. Herbal remedies have been used around the world for centuries to prevent and treat diseases. The increasing popularity of herbal medicine in recent times is due to the belief that all natural products are safe, cheaper, and easily available. Research efforts have been made in both developed and developing nations to scientifically evaluate and validate the herbal medicines.

Figure 2 shows some herbal medicine [9].

The global herbal medicine market continues to grow on account of the increasing popularity of herbal products in developed nations. It is segmented based on product type, application, and geography. Based on product type, the market is divided into medicinal part, medicine function, and active ingredient. Based on application, the market is classified into traditional Chinese medicine, Indian traditional medicine,

African traditional medicine, and many others. By geography, it is analyzed across North America, Europe, Asia-Pacific, and LAMEA [10]. Workers packing medical herbs for patients at a hospital in China are shown in Figure 3 [11].

The herbal medicine is becoming more mainstream as there is improvements in the value of herbal medicine in the treating and preventing disease. The future of herbal medicine is inevitable integration of tradition and modern medical practices. This trend has been noticed by the World Health Organization (WHO). It can be achieved only when there is strong collaboration between government and all the actors in healthcare industry. The national governments should also institute pharmacovigilance unit for herbal medicine just like for conventional medicines. All the stakeholders must invest in research and development in order to properly integrate herbal medicine with conventional medicine [12].

FUTURE OF TRADITIONAL MEDICINE

Although the main consumers of medicinal plants have been the local population, the field has started to attract a number of foreign researchers who have discovered the value and efficacy of the traditional medicine. This interest has increased over the years. Medicinal chemists, pharmacologists, and the pharmaceutical industry worldwide have also come to consider traditional medicine (man commonly-used species) as a source that can be used in the preparation of synthetic medicine. For example, with the help of globalization, traditional Chinese medicine (TCM) has been widely used outside the Chinese community. Renowned hospitals outside Asia Pacific, like Mayo Clinic in the USA and the University College London Hospitals in the UK, have set up departments specializing in alternative forms of medicine including TCM. When TCM becomes global, it is important to understand local laws in order to protect its usage.

In recognition of the global importance of traditional medicine, the World Health Organization (WHO) has called for the incorporation of traditional medicine in public health services. The WHO is trying its best to facilitate the global standardization of the TM and herbal medicines. It recently announced that it will set up a Global Center for Traditional Medicine in India, which will become the center for global wellness. The center will strengthen the evidence, research, training, and awareness of traditional and complementary medicine [13].

The WHO's Traditional Medicine Program (TRM) has been responsible for promoting research and development of traditional, thereby impacting the healthcare of about four billion people worldwide. All

25 collaborating centers work together with the TRM to promote the safe and effective use of traditional medicines. The proper use of TM, its development, and its integration into national healthcare systems are in line with TRM. Such integration may be a means of expanding primary care in the modern health sector. In the future, traditional medicine will coexist with modern medicine. Medicinal plant research will depend on the development and the application of modern scientific methods, in the assessment of safety and efficacy [14]. Current academic institutions must include training qualified traditional medical doctors in every nation.

BENEFITS

TCM has its own advantages and disadvantages in managing diseases. The high cost of drugs and increase in drug resistance to common diseases like malaria has caused the therapeutic approach to alternative traditional medicine. Alternative medicine works better for just about everything else specially for chronic disease.

The TM market has grown at an expressive rate worldwide. This may be attributed to many important factors such as the belief that herbal drugs are free from side effects, safety of herbal medicines, and efficacy of herbal medicine in the treatment of some diseases where conventional therapies have proved to be inadequate. In order to address the problem of drug shortage or high cost, many health-oriented ministries are now encouraging the use of local medicinal plants for disease treatment. Figure 4 illustrates the future of herbal medicine [15].

CHALLENGES

It is difficult to deny the limitations of traditional medicine, which include improper dosage, low hygiene standards, and the secrecy of some healing methods. To reach a stage where herbal medicine becomes integrated into conventional treatment, some issues have to be addressed. For most of the traditional practices, information about efficacy, safety, and quality is poor. The proper dosage of these remedies is scarce or nonexistent. While traditional herbal products are heterogeneous, they contain several challenges to quality control, and the regulatory process. For example, the challenges and progresses in TCM are depicted in Figure 5 [16].

Not everybody is happy with the modernization and globalization of TM. Some in the medical community claim WHO overlooked the potential toxicity of some herbal medicine, poor diagnosis, unknown efficacy, and lack of evidence that TM works. They are concerned that TM will jeopardize the health of unsuspecting consumers worldwide. Some animal rights advocates claim it

will further endanger animals such as the tiger, pangolin, bear, and rhino, whose organs are used in some TCM cures [17].

The lack of healthcare systems in rural areas leads to inadequate technical services and poor quality care. This often compels local people to treat themselves using medicinal herbs before going to a traditional practitioner or a modern doctor. High demand of TM now appears to be endangering supply. Although medicinal herbs are a major source for new drug discovery, a great number of them may likely go into extinction, majorly due to deforestation. Loss of indigenous knowledge on TM is fast increasing and this may continue until the younger generations are adequately enlightened about the importance of TM [18]. There is a lack of political will among political leaders to support the research and development of local medicines. This leads to a lack of state-of-the-art equipment to promote R&D, quality control, and quality assurance of traditional medicine [19].

Herbal medicine and modern medicine are interrelated for practical values.

Integrating them should be a top priority. Herbal medicines need to be translated into modern drug developments and clinical evaluations. For example, although herbals drugs from Ayurveda are gaining popularity, no injectable Ayurvedic drug is available to manage the acute diseases at the moment. Therefore, researchers should intensify effort for developing standardized drugs.

CONCLUSION

The prospects for incorporating traditional medicines into the modern healthcare system are quite high. Traditional medicine needs to be officially legalized and made part of the mainstream healthcare system in every country. Although the future may seem oblique for the amalgamation of both the modern and traditional medicine, it is a win-win situation. The integration of traditional medicine and modern practice will bring about a controlled practice, more responsible, and well harmonized medicine and collaboration among healthcare practitioners.

The safety, efficacy, and effectiveness of TM are still controversial in China and the rest of the world. The global market for traditional medicine is expected to grow. The future of traditional medicine is bright. More information on the future of TM can be found in the books in [20-22] and the following related journals:

- Journal of Herbal Medicine
- Journal of Medicinal Plants Studies
- Journal of Ethnopharmacology.

- Chinese Journal of Integrative Medicine
- The Development of Nutraceuticals and Traditional Medicine
- Journal of Ethnobiology and Ethnomedicine
- African Journal of Traditional, Complementary and Alternative Medicine
- Journal of Traditional Medicine & Clinical Naturopathy
- Current Traditional Medicine
- Journal Herbmed Pharmacology
- International Journal of Traditional Medicine and Applications

DISCLAIMER

The information in this paper is for enlightenment purposes only and should not be used as a replacement for professional diagnosis and treatments. No content on this paper should ever be used as a substitute for direct medical advice from your doctor or other qualified clinician. Always consult your healthcare provider before making any health-related decisions.

REFERENCES

- [1] S. Roberts, "The future of medicine: A brief history of alternative medicine and my hope for the future," <https://www.phopkinsmd.com/the-future-of-medicine/>
- [2] S. Verma and S. P. Singh, "Current and future status of herbal medicines," *Veterinary World*, vol.1, no. 11, November 2008, pp. 347-350.
- [3] M. S. A. Khan and I. Ahmad, "Chapter 1 - Herbal Medicine: Current Trends and Future Prospects," *New Look to Phytomedicine*, 2019, pp. 3-13.
- [4] B. Curley, "Acupuncture may be effective at reducing indigestion symptoms," May 2020, <https://www.healthline.com/health-news/acupuncture-effective-reducing-indigestion-symptoms>
- [5] M. A. Karanja, "Is traditional Chinese medicine the future of global healthcare?" June 2020, <https://www.beijing-kids.com/blog/2020/06/06/traditional-chinese-medicine-future-global-healthcare-differences-tcm-western-medicine/>
- [6] C. Abbey, "New law sparks debate over future of traditional Chinese medicine," June 2017, <https://www.cnn.com/2017/06/29/health/china-new-law-traditional-chinese-medicine-tcm/index.html>

- [7] "The future of medicine," February 2019, <https://www.krithika.net/the-future-of-medicine/>
- [8] S. K. Pal and Y. Shukla, "Herbal medicine: Current status and the future," *Asian Pacific Journal of Cancer Prevention*, vol. 4, no. 4, August-December, 2003, pp. 281-288.
- [9] "Is the future of medicine rooted in the past?" February 2019, <https://sites.psu.edu/globalhealthissues/2019/02/06/is-the-future-of-medicine-rooted-in-the-past/>
- [10] "Herbal medicine demand and trends 2024," <http://www.rnrmarketresearch.com/contacts/request-sample?rname=1937471>
- [11] L. J. Xian, "Future of traditional Chinese medicine," November 2020, Unknown Source.
- [12] Y. O. Ahmed, "Herbal medicine: Past, present and future," June 2019, https://www.researchgate.net/publication/333868025_HERBAL_MEDICINE_PAST_PRESENT_AND_FUTURE
- [13] Taboola, "WHO to set up global centre on traditional medicine In India: PM Modi," November 2020, <https://www.ndtv.com/india-news/who-to-set-up-global-centre-on-traditional-medicine-in-india-says-pm-modi-2324771>
- [14] G. B. Mahady, "World health and international collaboration in traditional medicine and medicinal plant research," in D. Eskinazi (ed.), *What Will Influence the Future of Alternative Medicine? A World Perspective*. World Scientific, 2011, pp.89-103.
- [15] Northlines, "Future of herbal medicine," September 2020, <https://www.thenorthlines.com/future-of-herbal-medicine/>
- [16] R. Mirzaeian et al., "Progresses and challenges in the traditional medicine information system: A systematic review," *Journal of Pharmacy & Pharmacognosy Research*, vol. 7, no. 4, 2019, pp. 246-259.
- [17] K. Hunt, "Chinese medicine gains WHO acceptance but it has many critics," May 2019, <https://www.cnn.com/2019/05/24/health/traditional-chinese-medicine-who-controversy-intl/index.html>

- [18] E. C. Chukwuma, M. O. Soladoye, and R. T. Feyisola, "Traditional medicine and the future of medicinal plants in Nigeria," *Journal of Medicinal Plants Studies*, vol. 3, no. 4, 2015, pp. 23-29.
- [19] C. N. Fokunang, "Traditional medicine: Past, present and future research and development prospects and integration in the national health system of Cameroon," *African Journal of Traditional, Complementary and Alternative Medicine*, vol. 8, no. 3, 2011, pp. 284–295.
- [20] F. Murad, A. Rahman, and Ka Bian, *Herbal Medicine: Back to the Future: Volume 1, Vascular Health*. Bentham Science Publishers, 2019.
- [21] F. Murad, A. Rahman, and Ka Bian, *Herbal Medicine: Back to the Future: Volume 2, Vascular Health*. Bentham Science Publishers, 2019.
- [22] P. K. Mukherjee (eds.), *Traditional Medicine and Globalization- The Future of Ancient Systems of Medicine*. Kolkata, India: maven Publishers, 2014.



Figure 1 Acupuncture can help people with recurring indigestion [4].



Figure 2 Traditional herbal medicine [9].



Figure 3 Workers packing herbs for patients at a hospital in China [11].



Figure 4 The future of herbal medicine [15].

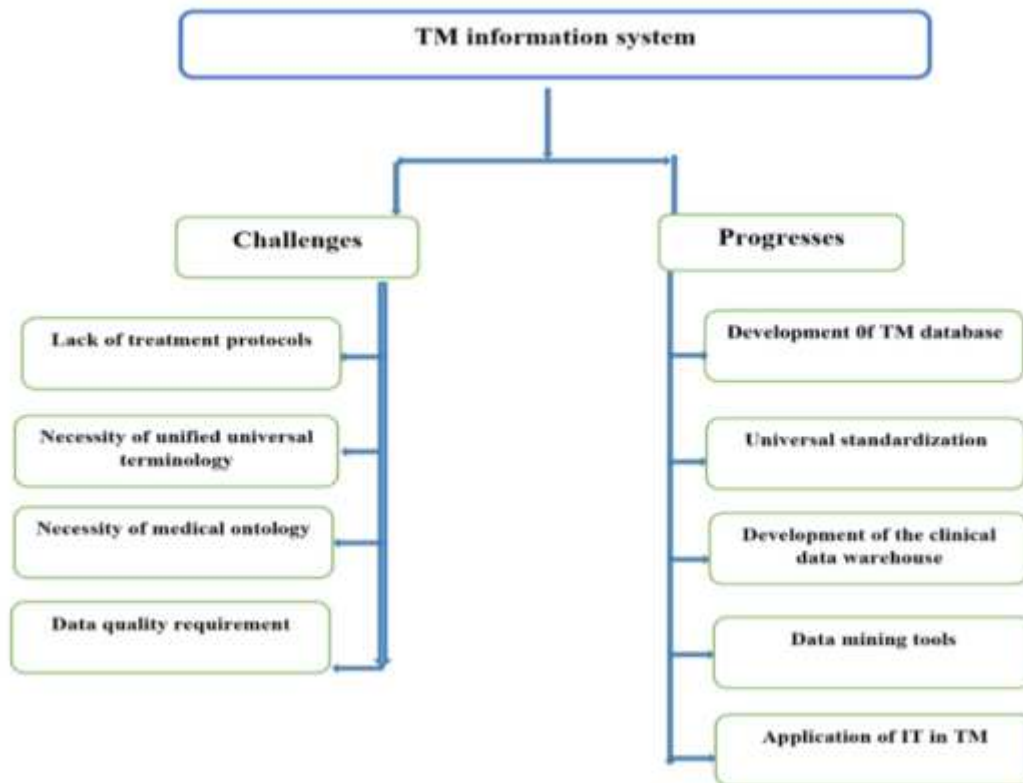


Figure 5 Challenges and progresses in TCM [16].

