

A REVIEW OF THE INTEGRATION OF TRADITIONAL AND MODERN MEDICINE

Ntombizanele Thalia*, Karishma Singha, Afika-amazing Naledi Mbuyiswaa, Portia Nokubonga Mselekua
Department of Nature Conservation, Faculty of Natural Sciences, Mangosuthu University of Technology, P.O.
Box 12363, Jacobs, 4026, Durban, KwaZulu-Natal, South Africa.

Abstract

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The integration of traditional medicinal plant knowledge with contemporary pharmaceutical research has enormous potential for the development of novel and cutting-edge modern medication. This study explores how indigenous and traditional uses of medicinal plants can informatively enhance drug discovery and development procedures. Traditional knowledge, honed over decades, frequently includes a thorough understanding of plant-based cures and their therapeutic applications. Case studies where traditional medicinal plants have been used to formulate new drugs will be examined. For instance, the discovery of artemisinin from the traditional Chinese medication sweet wormwood has revolutionized the treatment of malaria. The Madagascar periwinkle, which was traditionally used to treat diabetes, is now the source of the pediatric cancer treatments vinblastine and vincristine. Technologies and methods that can be used to accelerate the translation of traditional practices into modern medicine will also be evaluated. These include systems biology techniques, metabolomics, and high-throughput screening to clarify the mechanisms of action of traditional treatments. Through the documentation of the safety, efficacy, and chemical composition of traditional remedies, researchers can confirm their effectiveness and possibly identify active ingredients for additional research. This approach makes use of indigenous knowledge of traditional medicine to treat modern health issues while also acknowledging the cultural and historical relevance of the practice. Additionally, opportunities and challenges in this multidisciplinary collaboration will be identified.

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Corresponding Author: Ntombizanele Thalia

Email: ntombizanele.tshali@mut.ac.za

Department of Nature Conservation, Faculty of Natural Sciences, Mangosuthu University of Technology, P.O. Box 12363, Jacobs, 4026, Durban, KwaZulu-Natal, South Africa.

Introduction

Integrating traditional and modern medicine is gaining popularity as a critical approach to improving healthcare outcomes worldwide (Nanda, 2023). Many cultures place a high value on traditional medicine, which is made up of a broad range of customs and beliefs that have been formed over many years, especially in areas where access to contemporary healthcare is scarce. For example, traditional medicine serves as the primary healthcare provider for around 80% of the population in Africa, demonstrating its significance in managing a range of health issues (Nsagha, 2020). Modern medicine, with its emphasis on scientific study and technical developments, has made enormous contributions to disease detection and treatment. However, it frequently concentrates solely on the curative aspects of health, possibly disregarding the holistic advantages afforded by traditional treatments (Nanda, 2023). The World Health Organization (WHO) encourages the integration of conventional and complementary medicine (T&CM), noting that such integration can increase health service availability and improve patient outcomes, particularly in primary care settings (WHO, 2019). Countries such as India have led the way in incorporating traditional therapies such as Ayurveda and Yoga into contemporary healthcare systems, demonstrating how such integration can result in more individualized and effective patient care (Nanda, 2023). In South Africa, attempts are underway to foster collaboration between traditional healers and modern

medical practitioners, to provide holistic healthcare solutions in neglected communities.

Despite the potential benefits, there are still problems in integrating these two medical systems. Issues such as legal frameworks, professional training requirements, and public awareness must be addressed to ensure that both systems can live effectively without compromising their distinct values (Bodeker, 2001). Hence, this review aims to provide a nuanced understanding of how integrating traditional and modern medicine can improve healthcare outcomes, identify challenges that exist in the integration of traditional and modern practices, and provide future directives on navigating the complexities involved in challenges and efforts involved in this practice. As the global healthcare landscape evolves, the collaborative integration of traditional and modern medicine provides a viable path to more inclusive and effective health solutions for a varied population.

Methodology

This review paper examines the historical context, benefits, successful case studies, challenges and opportunities, and future directives for integrating traditional and modern medicine across various healthcare systems. Scientific databases including Google Scholar, PubMed, Science Direct as well as Research Gate were specifically used to source data. This review focussed on the literature published from 1994 to 2023, coinciding with the World Health Organization's (WHO) recognition of traditional medicine as a vital component of healthcare

systems. This period marks significant advancements in policies and practices regarding the integration of traditional and modern medicine globally. Studies considered in this review encompassed peer-reviewed articles and reports from reputable organizations such as the WHO which were primarily written in English. Qualitative studies which included ethnographic research, case studies, and interviews that explored personal experiences and perceptions regarding the integration of traditional medicines into modern healthcare were incorporated. Further, cross-sectional surveys that quantitatively evaluate the effectiveness and outcomes of integrated approaches were considered. Those methods were used to ensure that a broader spectrum of the review was captured.

Results and Discussion

Historical context

The blending of traditional and modern medicine has changed dramatically over time, influenced by cultural, historical, and scientific advancements. Traditional medicine has profound cultural origins, covering a diverse set of practices, beliefs, and information passed down through centuries. These methods frequently incorporate herbal treatments, acupuncture, and spiritual healing, reflecting the cultural setting in which they originated (Yuan et al., 2024).

Traditional medicine's importance in primary healthcare systems became more widely recognized in the twentieth century, particularly following the World Health Organization's (WHO) 1978 Alma-Ata Declaration. This declaration stressed individuals' right to participate in their health care and recognized traditional medicine's importance in achieving holistic health results. Since then, the World Health Organization has promoted the integration of traditional medicine into national health systems, encouraging a collaborative approach that values both modern scientific approaches and ancient therapeutic practices (WHO, 2023a).

In 1976, WHO established the Traditional Medicine Programme, which aimed to define standards for the practice and training of traditional medicine practitioners. This was a crucial milestone in this integration. This program aimed to ensure that ancient techniques could be safely and successfully integrated into modern healthcare systems. The World Health Organization's efforts culminated in the inclusion of traditional medicine categories in the International Classification of Diseases (ICD), allowing for better recognition and documentation of these practices worldwide (Winiger, 2022; WHO, 2023a).

In recent years, several countries have moved to codify their integration efforts. For example, in 2014, Turkey passed a law on traditional and alternative medicine that allows for the certification and absorption of many traditional techniques into its healthcare system. Practitioners such as Dr. Kanat Tayfun demonstrate this integration by integrating current medical approaches

with ancient methods to improve patient care (WHO, 2023b).

Despite these advances, challenges persist. Many traditional medicines lack rigorous scientific confirmation, necessitating continual research to develop evidence-based approaches (WHO, 2023a). Furthermore, successful integration necessitates collaboration between healthcare providers from both systems, establishing mutual respect and understanding.

Overall, the historical backdrop of merging traditional and modern medicine illustrates an ever-changing landscape that aims to use the assets of both systems for better health results while honoring cultural history and fostering comprehensive treatment.

Benefits of Integrating Traditional and Modern Medicine

Combining conventional and modern medicine has the advantage of resulting in a patient-centered, holistic approach. According to Aguessy (2023), this can result in a holistic healthcare plan that considers a person's physical, emotional, and spiritual well-being. Nanda (2023) asserts that this approach prioritizes the patient and considers their sociocultural customs and values. According to Aguessy (2023), improved access to high-quality medical treatment is another way that integration can help provide patients with patient-friendly healthcare, especially in areas where traditional medicine is widely practiced. Chi (1994) asserts that integrating the benefits of both systems can lead to better healthcare quality as they strive towards the shared objective of promoting health. According to Nanda (2023), combining traditional and modern healthcare with an emphasis on individualized treatment that can be produced in bulk to target a specific allergy or illness, comprehensive treatment that yields better results, and more can all help alleviate healthcare inequities. According to Chi (1994), this is particularly helpful in resource-constrained nations, such as impoverished and emerging countries, where traditional medicine is more broadly accessible, less expensive, and has fewer side effects on the body. As mentioned above, many writers highlight the advantages of combining traditional and contemporary medicine. Another advantage is that traditional medicine places a strong emphasis on preserving and preventing health problems through proactive and preventative treatment strategies. According to Nanda (2023), patients should make every effort to prevent and avoid situations that could expose them to common illnesses, including deadly illnesses, to reduce the demand for modern healthcare facilities and help prevent illnesses.

Case Studies of Successful Integration

Successful integration of traditional and modern medicine has been documented in many case studies globally, illustrating how these two systems can complement one another to better healthcare outcomes. For instance, Complementary and Alternative Medicine (CAM) centers in the United States work to integrate complementary and

alternative medicine (CAM) techniques into the mainstream healthcare system (Aguessy, 2023). By fostering cooperation between conventional healers and contemporary medical professionals, these institutes gain institutional backing and enhance patient treatment by taking a more holistic approach. In Turkey, a regulation passed in 2014 provides for the certification of different traditional remedies, bringing them into the public healthcare system. Dr. Kanat runs a clinic in Istanbul that combines medical treatments with alternative therapies including acupuncture and music therapy. Due to this individualized care strategy that bridges the gap between traditional wisdom and contemporary research, patients express high levels of satisfaction (WHO, 2023b).

A study conducted in Tshwane, South Africa, explored mental healthcare caregivers' perspectives regarding incorporating traditional health medicine (THM) into mental health treatment. Although there is considerable doubt about THM's usefulness, projects have been initiated to promote cross-education between THM practitioners and biomedical experts, with some mental healthcare providers willing to learn more about it (Masemola et al., 2023). Additionally, South Africa's Khula Natural Health Centre shows how traditional practices can supplement contemporary healthcare services, improving access for marginalized communities (Gama, 2022).

Ayurvedic traditions have also been recognized for their efficacy in curing illnesses such as jaundice by sunshine exposure, like current phototherapy approaches. Clinical investigations have shown that yoga and acupuncture are effective pain management treatments, highlighting the importance of incorporating these traditional approaches into modern healthcare procedures (WHO, 2023b). Traditional Chinese Medicine (TCM) has been systematically integrated into China's healthcare system, drawing on over 5000 years of experience. Technological advancements have enabled researchers to investigate the pharmacological aspects of TCM therapies, hence improving their use alongside modern treatments (Yuan et al., 2016). India has successfully incorporated traditional medicine into its national health system, achieving a favorable doctor-patient ratio and satisfying cultural healthcare demands (Roy, 2020).

These case studies demonstrate how mixing traditional and modern medicine can enhance patient outcomes by leveraging the strengths of each system. The effectiveness of such integrations is frequently dependent on collaborative efforts by practitioners from both areas, supporting legislation, and ongoing research to confirm ancient techniques within modern medical frameworks.

Challenges and Opportunities to Integration

Incorporating traditional medicine into modern healthcare necessitates a profound reverence for cultural beliefs and practices. There is typically a conflict between maintaining these customs and guaranteeing the effectiveness and safety of treatments. This requires a

delicate equilibrium where both systems can exist together without compromising each other's principles (Aguessy, 2023; Ikhoyameh et al., 2024). Although traditional medicine is popular and commonly utilized, its methods often lack strong clinical verification, making it challenging to incorporate into evidence-based contemporary medicine. This lack of scientific support may cause doubt among healthcare professionals about the effectiveness of traditional treatments (WHO, 2023; Mordeniz, 2019). Moreover, the incorporation of TM into official healthcare structures frequently encounters legal obstacles. Many countries do not have clear regulations for traditional medicine practice and integration. This could lead to irregular methods and an absence of official acknowledgment for traditional healers, impeding their capacity to work together efficiently with contemporary medical professionals (Ikhoyameh et al., 2024; Innocent, 2016). Hence there is an urgent requirement for educational programs that include both traditional and contemporary medical methods. This involves educating healthcare professionals on traditional practices and showing traditional healers modern medical principles. The lack of these comprehensive training programs hinders cooperation among practitioners from both disciplines (Innocent, 2016). Furthermore, individuals may have varying opinions on traditional medicine, with some believing it can be a valid substitute for modern treatments, while others may approach it with doubt (Mordeniz, 2019; WHO, 2023). Moreover, in urban areas dominated by modern healthcare facilities, access to traditional medicine may be restricted, potentially isolating populations that depend on traditional practices. Worries about the safety of conventional medicines, especially herbal products, are of utmost importance. Risks such as pollution, incorrect dosages, and negative drug interactions present major concerns. Thus, implementing quality control measures and ensuring correct labeling and usage of traditional medicines are crucial for safe incorporation (Mordeniz, 2019; Innocent, 2016).

By combining modern medical treatments with traditional practices like herbal medicine and acupuncture, healthcare providers can provide patients with more personalized and culturally sensitive healthcare options (Aguessy, 2023; Nanda, 2023; WHO, 2023; Innocent, 2016). Patients frequently experience a greater sense of ease and comprehension when their cultural beliefs and customs are recognized and incorporated into their treatment strategies (WHO, 2023; Innocent, 2016). This could result in higher levels of patient contentment and compliance with treatment plans, as demonstrated by effective strategies in nations such as Turkey, where a patient-focused approach is formed by blending traditional and contemporary healthcare methods (WHO, 2023; Innocent, 2016). Conventional medicine frequently offers healthcare choices that are both accessible and cost-effective, especially in areas with limited resources. Healthcare systems can enhance access to care and health outcomes for marginalized communities by acknowledging and integrating these practices (Nanda,

2023; Innocent, 2016). This collaboration also presents research opportunities where the healthcare sector can verify the advantages of herbal medicines and traditional therapies through clinical research and may then integrate them into mainstream medical treatments. This support from scientific bodies can boost the credibility of TM and help it become more accepted in current healthcare systems (Aguessy, 2023; Chi, 1994). Additionally, opportunities need to be created for policymakers to establish structures that promote the incorporation of TM into national healthcare systems. Collaborative efforts, like the ones in Sub-Saharan Africa, where traditional and modern healthcare professionals work together, can be used as examples of successful integration (Innocent, 2016).

Future Directions

The goal of integration, according to Seetharaman et al. (2021), is to advance a healthcare system that recognizes and incorporates the cultural variances and disparate health practices of various communities, racial and ethnic groupings, and nations. One facet of this approach is the holistic one. This method places more emphasis on the relationship between the patient and the carer and considers the patient rather than simply their symptoms. In agreement with Seetharaman et al. (2021), Patwardhan et al., (2023) highlight that international cooperation and collaborations will be the primary source of future directions for integrating modern and traditional medicine. Leveraging the benefits of both modern and traditional medicine will necessitate international cooperation. Seetharaman et al. (2021) list equitable collaborations between developed and poor countries, the sharing of successful techniques, and joint research projects as examples of this.

To demonstrate the pharmacovigilance of herbal medicine, Choudhury et al., (2023) carried out a study that examined issues and potential directions in which the use of traditional medications for therapeutic and preventative purposes is a long-standing practice that genuinely helps people stay happy and healthy. The conclusion states that the World Health Organisation (2023) advocates for a plan that encourages the use of traditional medicine as a source of healthcare. To offer the necessary data for the detection of pharmacovigilance signals, Choudhury et al. (2023) advocate and suggest that gathering information from patients and healthcare providers is crucial.

Conclusion

The integration of traditional and modern medicine is an important approach to addressing the world's different healthcare demands. Traditional medicine, with its cultural roots and longstanding practices, supplements modern medicine's scientific approaches. The World Health Organization has recognized this integration since the 1978 Alma-Ata Declaration, which aspires to improve healthcare accessibility and provide holistic care that respects people's values. While challenges such as regulatory frameworks and training of practitioners exist,

successful case studies show that merging these two systems can result in better health outcomes and higher patient satisfaction. Finally, this integration promotes a more inclusive healthcare landscape that honors both old wisdom and technological innovations.

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CONFLICT OF INTEREST

No conflict of interest has been declared.

References

1. Anne Nathalie Jouvencia Agossi AGUESSY Integration of Traditional Healing Practices in Modern Medicine in South America: Insights for African Development Anne Nathalie Jouvencia Agossi AGUESSY. *International Journal on Studies in English Language and Literature (IJSELL)* Volume 11, Issue 12, December 2023, PP 36-47 ISSN 2347-3126 (Print) & ISSN 2347-3134 (Online) <https://doi.org/10.20431/2347-3134.1112005> www.arcjournals.org
2. Bodeker G. Lessons on integration from the developing world's experience. *BMJ*. 2001 Jan 20;322(7279):164-7. Doi: 10.1136/bmj.322.7279.164. PMID: 11159579; PMCID: PMC1119421.
3. Chi C. (1994). Integrating traditional medicine into modern health care systems: examining the role of Chinese medicine in Taiwan. *Social science & medicine* (1982), 39(3), 307-321. [https://doi.org/10.1016/0277-9536\(94\)90127-9](https://doi.org/10.1016/0277-9536(94)90127-9)
4. Chi C. (1994). Integrating traditional medicine into modern health care systems: examining the role of Chinese medicine in Taiwan. *Social science & medicine* (1982), 39(3), 307-321. [https://doi.org/10.1016/0277-9536\(94\)90127-9](https://doi.org/10.1016/0277-9536(94)90127-9)
5. Choudhury A, Singh P.A., Bajwa N. , Dash S., and Bisht, P. (2023). Pharmacovigilance of herbal medicines: concerns and prospects. *Journal of Ethnopharmacology*. Vol 309, 1-23. <https://doi.org/10.1016/j.jep.2023.116383>
6. Gama, K.K.K., 2022. *Exploring the knowledge, attitudes, and perceptions of Homoeopathy and the Ukuba Nesibindi Homoeopathic Community Centre (UNHCC) in the Warwick Junction community* (Doctoral dissertation).
7. Ikhoyameh, M., Okete, W.E., Ogboye, R.M., Owoyemi, O.K. and Gbadebo, O.S., 2024. Integrating traditional medicine into the African healthcare system post-Traditional Medicine Global Summit: challenges and recommendations. *The Pan African Medical Journal*, 47(146). <https://doi.org/10.11604/pamj.2024.47.146.430>

8. Innocent E. (2016). Trends and challenges toward integration of traditional medicine in formal health-care system: Historical perspectives and appraisal of education curricula in Sub-Sahara Africa. *Journal of Intercultural Ethnopharmacology*, 5(3), 312–316. <https://doi.org/10.5455/jice.20160421125217>
9. Masemola, V.F., Thobakgale, E.M. and Govender, I., 2023. Integration of traditional medicine into the mental healthcare system in Tshwane, South Africa. *South African Family Practice*, 65(1), pp.1-5. <https://doi.org/10.4102/safp.v65i1.5636>
10. Mordeniz C (2019) Integration of Traditional and Complementary Medicine into Evidence-Based Clinical Practice. *Traditional and Complementary Medicine*. IntechOpen. Available at: <http://dx.doi.org/10.5772/intechopen.87061>.
11. Nanda S. (2023). Integrating Traditional and Contemporary Systems for Health and Well-being. *Annals of neurosciences*, 30(2), 77–78. <https://doi.org/10.1177/09727531231185648>
12. Nsagha DS, Ayima CW, Nana-Njamen T, Assob JC. The role of traditional, complementary/alternative medicine in primary healthcare, adjunct to universal health coverage in Cameroon: a review of the literature. *American Journal of Epidemiology*. 2020;8(1):37-47.
13. Patwardhan, B., Wieland, L.S., Aginam, O., Chuthaputti, A., Ghelman, R., Ghods, R., Soon, G.C., Matsabisa, M.G., Seifert, G., Tu'itahi, S. and Chol, K.S., 2023. Evidence-based traditional medicine for transforming global health and well-being. *Journal of Research in Ayurvedic Sciences*, 7(3), pp.148-152. https://doi.org/10.4103/jras.jras_191_23
14. Roy, V., 2020. Integrating indigenous systems of medicines in the healthcare system in India: Need and way forward. *Herbal medicine in India: Indigenous knowledge, practice, innovation and its value*, pp.69-87. https://doi.org/10.1007/978-981-13-7248-3_6
15. Seetharaman M, Krishnan, G. and Scheider, R.H (2021). The future of medicine. *Frontiers in Integrative health and medicine*. *Journal of medicine*. Vol 57 (1303). <https://doi.org/10.3390/medicina57121303>
16. Winiger, A., 2022. The inclusion of traditional medicine in the International Classification of Diseases (ICD). *World Health Organization*. [online] Available at: <https://www.who.int/news/item/2022-01-01-inclusion-of-traditional-medicine-in-the-international-classification-of-diseases> [Accessed 9 December 2024].
17. World Health Organisation. (2023). Integrating traditional and modern medicine with compassion and care: A physician's tale from Türkiye. Available from: <https://www.who.int/europe/news/item/17-08-2023-integrating-traditional-and-modern-medicine-with-compassion-and-care-a-physicians-tale-from-turkiye> [Accessed 28 August 2024].
18. World Health Organization (WHO), 2023. Traditional medicine. [online] Available at: <https://www.who.int/news-room/questions-and-answers/item/traditional-medicine> [Accessed 9 December 2024].
19. World Health Organization, 2019. *WHO global report on traditional and complementary medicine 2019*. World Health Organization. <https://pesquisa.bvsalud.org/portal/resource/pt/biblio-1546038>
20. Yuan, H., Ma, Q., Ye, L. and Piao, G., 2016. Traditional medicine and modern medicine from natural products. *Molecules*, 21(5), p.559. <https://doi.org/10.3390/molecules21050559>
21. Yuan, Y., Zhang, L., & Wang, Y., 2024. Traditional medicine: Cultural origins and practices. *Journal of Traditional Medicine*, 12(3), pp. 145-158.

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