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The Legal Framework of Herbal Medicines in Light of the Right to Health: A Mini Review

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ABSTRACT

In recent decades, the use of herbal medicines has expanded dramatically, establishing these natural resources as strategic assets within global health systems. With over sixty thousand plant species recognized for their medicinal properties, the application of these botanicals now extends far beyond traditional healing practices, reaching advanced medical research, pharmaceutical industries, public health initiatives, cosmetics, and emerging technologies. This concise review employs a comparative and interdisciplinary approach to examine the legal status of herbal medicines in Iran. The analysis draws upon national documents, existing regulations, and international agreements, including the Convention on Biological Diversity (CBD), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and guidelines issued by the World Health Organization (WHO). The study reveals that, despite general references in Iran's Constitution and developmental plans, there is a notable absence of a dedicated, specialized, and autonomous legal framework for herbal medicines. Current legislation is largely derived from general pharmaceutical laws, which do not adequately address the unique characteristics and needs of this sector. Furthermore, the lack of binding enforcement mechanisms and coordination with domestic legal systems has created significant gaps in the equitable management and sustainable use of these vital resources. Establishing a comprehensive, culturally adapted legal framework is essential to safeguard health rights, promote sustainable development, and ensure the protection of herbal resources. Such a framework would facilitate safe, effective, and equitable access to herbal medicines while preserving these invaluable resources for current and future generations.

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Introduction

Since ancient times, medicinal plants have been an inseparable part of human healthcare systems (Petrovska, 2012). Thanks to their bioactive compounds, these plants have played a pivotal role in the prevention, treatment, and management of diseases (Dar et al., 2023). The diverse climatic conditions, rich biodiversity, and the presence of traditional and indigenous knowledge surrounding medicinal plants offer unparalleled potential for advancing sustainable development goals, reducing pharmaceutical dependence, and improving public health (Sen and Samanta, 2015). The impact of medicinal plants extends beyond therapeutic applications, influencing cultural, economic, and environmental spheres as well (Sen and Samanta, 2015). The preservation of these valuable resources and their responsible utilization require the formulation of scientific strategies, the design of comprehensive legal frameworks, and investment in interdisciplinary research (Jain, 2007). Within this context, herbal medicines products derived from medicinal plants serve as a crucial bridge between traditional medicine and contemporary medical science (Moerman, 2009). Today, such medicines enjoy a growing prominence in the healthcare systems of many countries (Rupani and Chavez, 2018). The rising demand for herbal medicines not only reflects a widespread public interest in natural therapies but also highlights the urgent need to revisit laws and policy frameworks governing their use (Rupani and Chavez, 2018).

A review of the legal frameworks related to herbal medicines, particularly in developing countries, reveals significant challenges. The absence of comprehensive legislation, lack of coordination among relevant institutions, and the deficit of clear, coherent policies have posed serious obstacles to the safe, effective, and equitable use of these medicines (Saraf, 2012). In Iran, despite its rich biodiversity, favorable climate, and longstanding heritage of traditional medicine, a comprehensive and specialized legal system dedicated to regulating herbal medicines has yet to be established (Zaboli et al., 2-016). At the international level, various instruments including the Convention on Biological Diversity (CBD) and guidelines issued by the World Health Organization (WHO) emphasize principles such as sustainable development, conservation of plant genetic resources, and ensuring fair and equitable access to these resources (Bragdon et al., 2012; Negahban et al., 2019; Mirzaeian et al., 2021).

In this regard, the right to health as a fundamental pillar of human rights forms the primary foundation for legal analyses concerning access to, safety of, efficacy of, and regulatory oversight over herbal medicines (Toebes, 2001; Leary, 1994). This right entails guaranteeing that all individuals enjoy an acceptable standard of physical and mental health, constituting an inherent and inalienable human entitlement (Leary, 1994). This principle is explicitly recognized in foundational international documents, including the Universal Declaration of Human Rights and the International Covenant on Economic, Social and Cultural Rights (Backman et al., 2008; Yamin, 2005). With respect to herbal medicines, the interpretation of the right to health demands universal access to safe, effective, and quality herbal products; moreover, production, distribution, and consumption systems for these products must operate within strict legal and regulatory frameworks to prevent threats to public health (Mpinga et al., 2013; Vargas-Pelaez et al., 2014).

A comparative and analytical examination of these international instruments alongside Iran's domestic legal frameworks is indispensable for strengthening health governance in the herbal medicine sector. This review article aims to chart a strategic, interdisciplinary pathway for reinforcing the legal foundations of this field, guided by the overarching principle of the right to health.

Methodology

This study employed a narrative mini-review design, incorporating a comparative and interdisciplinary approach. The primary aim was to evaluate the legal framework governing herbal medicines within Iran's health system in the context of the fundamental human right to health, while simultaneously drawing comparisons with relevant international legal standards and documents.

The research process was carried out through the following stages:

Source Identification and Search Strategy

A systematic literature search was conducted using major academic databases, including PubMed, Scopus, Web of Science, Google Scholar, and SID. In addition to scholarly sources, national laws and regulations of the Islamic Republic of Iran, policy documents, and international legal instruments—such as the Convention on Biological Diversity (CBD), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and guidelines issued by the World Health Organization (WHO) were thoroughly examined.

Keywords and Search Terms

The search was conducted using both English and Persian keywords. Key terms included: "Herbal Medicine," "Right to Health," "Traditional Medicine," "Legal Framework," "Health Policy," and "International Health Law," along with their Persian equivalents to ensure comprehensive coverage of relevant literature in both languages.

Inclusion and Exclusion Criteria

Sources were included if they focused on the legal aspects of herbal medicines, health policy, or human rights particularly the right to health.

Studies lacking a legal perspective or direct relevance to herbal medicine and health-related themes were excluded.
Only academically credible sources such as peer-reviewed journal articles, official government documents, and internationally recognized treaties and conventions were considered.

Data Analysis

The collected data were analyzed using qualitative and comparative content analysis methods. The information was thematically categorized into two primary areas:
Analysis of national legal frameworks in Iran pertaining to herbal medicines
Comparative review of international legal experiences and standards
This dual-focus approach allowed for an in-depth examination of how Iran's legal structures align with or diverge from global health and legal norms concerning herbal medicine.

Results

Legal and regulatory obstacles remain among the principal challenges in the production and distribution of medicinal plants. The "right to health" is a fundamental human right explicitly emphasized in the Constitution of the Islamic Republic of Iran as well as in international documents. This right guarantee universal access to appropriate health and pharmaceutical services. Its scope encompasses proper treatment, access to pharmaceutical information, and protection of society against drug-related risks (Zamani and Danqan, 2006). Laws pertaining to medicinal plants are formulated with the objective of safeguarding public health. These regulations oversee the production, distribution, and consumption of such products to ensure consumer rights are upheld. Within Iran's pharmaceutical legal framework, there exist provisions designed to protect producers and distributors alike, with the ultimate goal of preserving community health. One foundational statute in this domain is the "Pharmaceutical Affairs Act" enacted in 1986, which outlines, across 25 articles, the responsibilities of relevant institutions regarding production, import, distribution, quality control, and the operation of healthcare centers. This legislation aims to guarantee the quality and safety of medicines and has undergone revisions in recent years (Hosseini, 2012). Continuous review of these laws is essential to strengthen public health protection. Moreover, the principle of the "right to health" has consistently played a central role in policymaking related to the safety and production of both herbal and synthetic medicines (Mehmaryani, 2012).
Medicinal plants are harvested extensively from natural ecosystems and play a significant role in treating various illnesses. They hold a distinguished place both in traditional Iranian medicine and modern healthcare systems. These plants contain bioactive compounds with applications in pharmaceuticals, nutrition, and cosmetic industries (Buso, 2020). However, relentless and sometimes unsustainable harvesting carries environmental and economic consequences (Buso, 2020). The use of medicinal plants, deeply rooted in cultural traditions and beliefs, has surged in demand nationally and globally, exerting increased pressure on natural reserves and making sustainable resource management imperative (Izzo et al., 2021).
Furthermore, medicinal plants constitute a vital source of livelihood for local communities, especially rural and economically disadvantaged populations. They play a critical role in the income generation of impoverished households. Beyond their economic value, these plants are interwoven with traditional healthcare practices and bear significant cultural and social importance. In many regions, collecting, processing, and selling medicinal plants serve as the primary income source for numerous individuals (Izzo et al., 2021). The convergence of economic, cultural, and environmental values renders medicinal plants a multifaceted and strategic resource. The benefits derived from these plants are palpable not only for producers but for society as a whole. Such attributes elevate medicinal plants as key contributors to sustainable development, health system strengthening, and public welfare enhancement. In many parts of the world, particularly in Africa, Asia, and Latin America, traditional knowledge about medicinal plants has been transmitted across generations, becoming an integral component of healthcare provision. In these areas, the use of herbal medicines is prevalent and widely accepted due to their affordability, accessibility, and cultural compatibility (Avadisians, 2011). Some countries have formally integrated traditional medicine into their public health systems. For example, in 2016, the Chinese government formulated and implemented a comprehensive policy to fully integrate traditional Chinese medicine into the national health system by 2020 (Avadisians, 2011). This initiative reflects a strategic governmental acknowledgment of indigenous capacities to promote health and respond to societal needs.
The right to health is an essential, fundamental human right encompassing everyone's access to medical and health services. However, this right extends beyond mere access to healthcare facilities and includes broader determinants such as quality of life and social and environmental conditions. It transcends geographic, economic, and cultural boundaries and is recognized as a universal principle. International human rights documents

have underscored the significance of this right (Heydari, 2016). In 1978, the World Health Organization (WHO) defined health not merely as the absence of disease or infirmity but as a state of complete physical, mental, and social well-being. Accordingly, health is acknowledged as a fundamental human right, though its precise definition remains complex (Heydari, 2016). One of the main challenges in defining this right lies in its dependence on factors such as age, biological conditions, and individual circumstances. Thus, health can vary from person to person. The absence of disease does not necessarily equate to complete health (Raeesian, 1984). Consequently, the right to health encompasses not only freedom from illness but also rights such as access to healthcare, social support, and appropriate living conditions (Raeesian, 1984).

Another factor complicating the definition of the "right to health" is the diversity of institutions and dimensions involved in health. While international documents mainly emphasize physical and mental health, sometimes spiritual and faith-related dimensions are also acknowledged (Neyinani, 2020). In the realm of physical health, data and assessment criteria are relatively clear and widely accepted. Conversely, evaluating mental and spiritual health presents more challenges. An individual may be physically healthy and in suitable living conditions yet experience poor psychological or spiritual well-being. This indicates that the definition of health must include physical, psychological, social, and even spiritual dimensions. Such diversity complicates the identification and implementation of the right to health (Neyinani, 2020).

Since the "right to health" constitutes a core component of a dignified life aligned with global standards, enacting comprehensive laws in the fields of health and public hygiene is of great importance. These laws should guarantee rights such as justice, equality, freedom from poverty, and the empowerment of individuals both physically and mentally (Vaziri, 1991). Ensuring public health is a primary responsibility of governments and international organizations and can serve as a key indicator in assessing social security (Vaziri, 1991). Accordingly, international cooperation among countries in this domain is essential. The WHO's efforts toward realizing this fundamental right have been pivotal and can serve as a model for other international bodies (Vaziri, 1991).

Guaranteeing the "right to health," whether through domestic legislation or under the umbrella of fundamental human rights principles, plays a crucial role in reinforcing social support systems for citizens (Argharnia, 2016). The Constitution of the Islamic Republic of Iran explicitly addresses this issue in Articles 29 and 43, which affirm the public's right to adequate health and medical services (Argharnia, 2016). Moreover, the country's developmental laws—including social, cultural, and economic statutes and the 20-year vision document underscore the prominent role and growing importance of this right within national policy frameworks (Argharnia, 2016). The 20-year vision of the Islamic Republic of Iran emphasizes concepts such as health promotion, spiritual welfare, justice, security, and development, aligning with the system's overarching goals (Hosseini, 2012). These factors illustrate the significance of laws and regulations in institutionalizing the right to health and reveal the extent to which Iran's health system can contribute to realizing citizens' fundamental rights (Hosseini, 2012). Around the world, legislators have enacted appropriate legal and executive measures to secure health and healthcare-related rights. The main objective of these efforts is to uphold human dignity, ensure equitable access to medical and caregiving services, and elevate the general health level of society. These laws also facilitate effective interaction and collaboration among health-related institutions (Ziaeibeygdeli and Heydari, 2012).

A study showed that access to social security including retirement, unemployment, old age, disability, orphanhood, accidents, and the need for health and medical care, whether through insurance or other mechanisms is recognized as a universal right. According to this perspective, the government bears the responsibility of providing essential financial services and support to all citizens through public funds and participatory revenues. Furthermore, this approach underlines both personal and societal responsibility in preserving individual and public health (Nabasi, 2011).

A study also highlights that, beyond the principles outlined, other constitutional provisions in Iran emphasize the importance of health. For example, report obliges the government to promote public welfare, eliminate poverty, and prevent harm arising from inadequate nutrition, housing, employment, medical treatment, and care particularly for vulnerable populations (Avadisians, 2011). Additionally, Iran has implemented a wide range of national laws and regulations in the health sector and has joined various international conventions and treaties that affirm and protect the right to health. Under international law, this right is universally recognized as a fundamental human right, to be upheld without discrimination based on race, religion, gender, ethnicity, or cultural background (Heydari Shirazi, 2016). Closely tied to the right to life and human dignity, the right to health is interdependent with other essential rights. Consequently, establishing and enforcing effective legal frameworks to safeguard this right is

considered a crucial obligation within all legal systems (Heydari Shirazi, 2016).

The Legal Framework for Medicinal Plants in Light of the Right to Health

In all modern legal systems, the "right to health" is recognized as a fundamental human right and serves as a cornerstone for the formulation of numerous laws and regulations across various health-related domains. One of the most significant areas under this umbrella concerns the use of medicinal plants in the prevention and treatment of diseases (Tavana, 2016). Within the legal framework of the Islamic Republic of Iran, there exist well-defined and structured regulations specifically addressing herbal medicines. Notably, the "Regulations on the Licensing Procedures for the Production of Herbal Products" mandate in Clause 2, Report showed that all producers of herbal medicines must fully comply with the standards pertaining to manufacturing, licensing, storage, and distribution. This legal framework reflects the legislature's serious commitment to ensuring the quality, safety, and efficacy of herbal products, with the ultimate aim of safeguarding and promoting public health.

The legislative history of health and medical regulations in Iran dates back over a century, with the earliest formal steps taken approximately 113 years ago, in 1906 (1285 in the Iranian calendar). The first Medical Practice Act was enacted in 1911 (1290 Iranian calendar) (Tavana, 2016), followed by the Pharmaceutical and Pharmacy Law of 1955 (1334 Iranian calendar), which structured the country's pharmaceutical system prior to the Islamic Revolution (Tavana, 2016). The revolution ushered in profound and fundamental changes in governance, which were reflected in the health and pharmaceutical legal system including those governing herbal medicines. Today, Iran maintains a comprehensive set of laws, regulations, and bylaws that oversee strict supervision, safety assurance, and efficacy evaluation of medicines, alongside protecting patient rights (Tavana, 2016). The Food and Drug Administration has also issued numerous guidelines and directives to regulate the production, import, distribution, and marketing of herbal medicines. These regulations clearly delineate the legal responsibilities of manufacturers, importers, distributors, and pharmacists, emphasizing the fair, safe, and standards-compliant distribution of medicines in line with international norms (Tavana, 2016). The overarching goal of this regulatory structure is to protect public health, elevate the quality of pharmaceutical services, and ensure equitable access to safe and effective medicines for all patients.

Distributors occupy a crucial position within the herbal medicine supply chain; ensuring the accurate, regular, and quality-controlled provision of these products is vital for patient access. When herbal medicines are procured and distributed systematically and in accordance with requisite standards, they can significantly advance the objectives of the health system. Conversely, irregular and illegal distribution practices pose serious risks to the integrity of public health (Mehmaryani, 2012). One of the major challenges in this context is the inadequate management of the supply and distribution process of herbal medicines (Mehmaryani, 2012). Issues stemming from unauthorized and unscientific production and distribution have led to significant obstacles for people seeking access to necessary medications (Neyinani, 2020). A study found that the Law on the Protection of the Rights of Producers and Distributors stipulates that: "Producers, importers, distributors, product sellers, and providers of medical services including technical experts and all individuals directly or indirectly involved in supplying medical goods or services, whether in full or in part are subject to this law." This clause clearly extends to all individuals involved in the provision of therapeutic goods and services, using the term "provider" in a broad sense to include those active at various stages of the supply chain and healthcare delivery system (Neyinani, 2020).

The Herbal Medicine Distribution System

Historically, herbal medicine production in Iran was primarily traditional, conducted without formal legal or scientific frameworks. Such products often lacked quality control and were produced and distributed through unregulated channels, mainly traditional herbal shops, raising concerns regarding their safety and efficacy. Over time, with increased focus on structuring the health system, production and distribution of herbal medicines have become more formalized and are now conducted under the supervision of the Food and Drug Administration, following specific regulations. Distribution is conducted through licensed companies and pharmacies, with oversight delegated to medical universities. This structural evolution has played a pivotal role in enhancing quality, safety, and equitable access to herbal medicines, thereby facilitating scientific utilization of Iran's rich medicinal plant resources. Achieving this requires adherence to clear principles and essential measures aimed at better organizing the production and distribution processes (Tavana, 2016).

Utilizing experts with both scientific knowledge and practical skills in medicinal plants, production processes, and marketing is fundamental to ensuring the quality and regular supply of herbal medicines. A well-designed, comprehensive program for systematic production and distribution, with emphasis on consumer health and maintaining quality standards, is imperative (Mehmaryani, 2012). According to reports or

studies from the 1955 Medical and Pharmaceutical Regulations, companies producing natural medicines are required to obtain licenses from the Ministry of Health and appoint qualified technical supervisors (KashfiBonab and Ranj, 2020). Furthermore, a study prohibits unauthorized outlets from selling health products (KashfiBonab and Ranj, 2020). Nevertheless, enforcement of these laws specifically in the herbal medicine sector remains incomplete, highlighting the need for a more systematic regulatory framework and ongoing supervision. In some countries, a small number of key manufacturers handle herbal medicine production, with distribution outsourced contractually to others; by contrast, Iran's large number of independent producers may adversely impact quality control and oversight (KashfiBonab and Ranj, 2020). Currently, Iranian manufacturers are required to obtain official licenses from the Ministry of Health and receive authorization from the Legal Commission before beginning their operations. Moreover, under Bylaw No. 22/5/D (2002), over-the-counter sales of herbal medicines without prescription are prohibited, and strict adherence to these rules is necessary to prevent misuse and protect public health (KashfiBonab and Ranj, 2020).

Legal Challenges in Sales and Pricing

According to research of the Pharmacy Establishment and Operation Bylaw (1997), pharmacies are institutions licensed by the Ministry of Health (Food and Drug Administration) and operate under the professional supervision of a licensed pharmacist. Pharmacies are authorized to provide diagnostic and therapeutic services related to medications and health products, including herbal medicines, nutritional supplements, traditional natural products, infant formulas, special patient foods, sports supplements, cosmetic and hygiene products, and other items approved by the Food and Drug Administration (Ziaeibeygdeli and Heydari, 2012).

The National Pharmaceutical Document issued by the Food and Drug Administration (2016) states that medicines can only be dispensed at authorized pharmacies upon presentation of a valid prescription from licensed physicians or other legally recognized medical professionals. A list of over-the-counter (OTC) drugs, which may be dispensed without a prescription, is also maintained and published by the Food and Drug Administration; these products must be sold under the supervision of a pharmacist (Heydari, 2016). However, these regulations have yet to be fully implemented in relation to herbal medicines, and the relevant legal and operational frameworks remain insufficiently defined (Heydari, 2016).

One of the most critical stages in the herbal medicine supply chain is the final link ensuring patients' access to safe and effective products. Pharmacists' oversight at this stage is crucial for proper dispensing. Global health organizations have identified the limited professional involvement of pharmacists in the field of natural and herbal medicines as a major barrier to patients' safe access to effective treatments (Heydari, 2016).

In Iran, despite the growing importance of herbal medicines and the expansion of related industries, the pharmacist's role in patient care particularly concerning herbal products is marginal. In contrast, pharmacists in developed countries play an active role not only in production but also in clinical consultation and education related to herbal medicines. During crises such as the COVID-19 pandemic, Iranian pharmacists in 24-hour pharmacies have provided frontline education, preventive guidance, and disease management support (Hosseini, 2012).

Yet, official health policies in Iran overlook the pharmacist's essential function as a member of the healthcare team regarding herbal medicines. WHO advisory reports on "Preparing the Future Pharmacist" emphasize pharmacists' critical responsibilities in patient care, effective communication, education, lifelong learning, leadership, and management (KashfiBonab and Ranj, 2020). However, these roles are largely neglected in the domain of herbal medicines.

The lack of legal infrastructure and insufficient attention from responsible organizations toward pharmacists' role in herbal medicine provision not only compromises patients' right to health but also distances Iran from countries like the United Kingdom, where pharmacists actively participate in diagnosis, consultation, and herbal treatment, and manufacturers rely heavily on their expertise to assure product quality (Heydari Shirazi, 2016). Pharmacists' involvement improves treatment quality, reduces costs, and prevents improper use of natural medicines (Heydari Shirazi, 2016).

The right to access medical and pharmaceutical services and medicines is a fundamental human right. Given the growing significance of herbal medicines in daily life, alongside the interests of researchers and knowledge-based institutions, it is imperative that public health needs and developmental goals especially in developing countries are prioritized. These nations must formulate effective strategies for domestic production of herbal medicines and ensure equitable access for their citizens (Tavana, 2016). Achieving this requires national resolve, leveraging indigenous capacities, and establishing a well-organized, efficient system for production and distribution (Tavana, 2016).

In Iran, despite its considerable scientific and natural potential in medicinal plants, the absence of cohesive policy and insufficient coordination among responsible bodies have severely

hampered production and distribution efforts. Producers, lacking clear support and defined stewardship, often fail to complete the supply chain, resulting in large stocks of finished products remaining in warehouses while societal demand remains unmet (Zamani and Danqan, 2006). One of the core challenges is the absence of a transparent, comprehensive legal framework for herbal medicines (Hosseini, 2012), which leads to production risks and weak distribution oversight. Without reform, increased importation and weakening of the domestic herbal medicine industry are likely. Access to health and pharmaceutical services is a fundamental human right and the foundation for societal development. Considering the critical role of herbal medicines in meeting therapeutic and developmental needs, especially in developing nations, adopting appropriate policies for local production and ensuring fair access is indispensable (Tavana, 2016).

However, multiple factors including lack of strategic planning and efficient management have led to numerous challenges for herbal medicine producers in Iran. Frequently, they must import raw materials, which is costly, difficult to control, and can compromise product quality. These issues partly stem from the lack of a structured, effective legal system governing herbal medicines (Hosseini, 2012).

Limitations of the Study

Despite its interdisciplinary and comparative approach, this study has several limitations. First, the lack of up-to-date and comprehensive resources specifically addressing herbal medicine regulations in Iran posed challenges to a thorough analysis of the domestic legal framework. Second, the absence of reliable data from official institutions and inconsistencies in enforcement practices have limited the ability to fully assess the effectiveness of current laws. Moreover, due to cultural, economic, and institutional differences across countries, caution is warranted when generalizing the findings of this study internationally. Finally, as this is a narrative review without empirical or field data, future research employing qualitative or quantitative methods could further enrich and validate these findings.

Conclusion

Despite Iran's rich natural resources and deep-rooted traditional knowledge, the legal framework governing herbal medicines remains fraught with significant gaps and shortcomings that hinder their optimal, safe, and equitable utilization. A review of domestic and international documents reveals that the right to health as a fundamental human right demands a legal guarantee of access to high-quality, effective, and safe herbal medicines. Achieving this requires comprehensive, transparent, and harmonized legal structures. At the international level, various treaties and conventions offer valuable guidance for national policymaking; however, the absence of binding mechanisms and alignment with domestic laws, especially in developing countries, poses a serious challenge to sustainable exploitation and conservation of herbal medicinal resources. Therefore, it is recommended that, drawing upon international experience while respecting local contexts, specialized and comprehensive legislation be developed and implemented. Such a legal system should simultaneously safeguard public health, consumer and producer rights, and natural resources. This framework would not only uphold the right to health in its broader dimensions but also contribute significantly to sustainable development, biodiversity preservation, and the enhanced integration of both traditional and modern medicine within the national healthcare system. Ultimately, this approach represents a crucial step towards health justice and the protection of the interests of both present and future generations. The primary innovation of this study lies in its simultaneous focus on the intersections of health law and herbal medicines through a comparative and interdisciplinary approach. Unlike most previous research that has addressed solely the pharmaceutical or traditional aspects of these plants, this paper is the first to analyze the status of herbal medicines within the framework of the right to health as a fundamental human right. Furthermore, by examining existing legal gaps in Iran's health system and comparing them with international documents and practices, the study proposes a framework for developing an independent legal system tailored to the country's local context.

Declarations

Conflict of interest

The authors have no competing interests to declare that are relevant to the content of this article.

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Author contributions

AR: Conceptualization, the original draft writing, investigation, writing including reviewing and editing and investigation and formal analysis; MA: Supervision, and project administration; AR and MR Conceptualization, the original draft writing, writing including reviewing and editing.

Ethics approval

This study was performed in line with the principles of the Declaration of Helsinki.

Consent to participate

Informed consent was obtained from all individual participants included in the study.

References

Argharnia M. Challenges and obstacles in the enforcement of health regulations in international law. Hoghugh-e Beinolmelal. 2016;10(37):35–57. Persian.

Avadisians H, Farahani R, Nikou MR, Karimi Y, Tamourian N, Gharimaghamoghaddam MR, et al. Psychology Dictionary. 1st ed. Tehran: Roshd Publications; 2011. Persian.

Backman G, Hunt P, Khosla R, Jaramillo-Strouss C, Fikre BM, Rumble C, et al. Health systems and the right to health: an assessment of 194 countries. The Lancet. 2008 Dec 13;372(9655):2047–85. doi: 10.1016/S0140-6736(08)61781-X.

Bragdon S, Garforth K, Haapala JE. Safeguarding biodiversity: the convention on biological diversity (CBD). In: The Future Control of Food. London: Routledge; 2012; 82–114. Available from: https://www.taylorfrancis.com/chapters/edit/10.4324/9781849773027-7/safeguarding-biodiversity-convention-biological-diversity-cbd-susan-bragdon-kathryn-garforth-john-haapala

Buso P, Manfredini S, Reza Ahmadi-Ashtiani H, Sciabica S, Buzzi R, Vertuani S, et al. Iranian medicinal plants: from ethnomedicine to actual studies. Medicina. 2020 Feb 26;56(3):97. doi: 10.3390/medicina56030097.

Dar RA, Shahnawaz M, Ahanger MA, Majid IU. Exploring the diverse bioactive compounds from medicinal plants: a review. Journal of Phytopharmacology. 2023; 12(3):189–95. Available from: https://www.phytopharmajournal.com/assets/pdf_files/Vol12_Issue3_07.pdf

Heydari M. Legal system regarding the control of narcotic and medicinal substances. Tehran: Ministry of Culture and Health Promotion; 2016. Persian.

Heydari Shirazi R. Evaluation of the performance of pharmaceutical manufacturing companies. Tehran; 2016. Persian.

Hosseini M. The right to access medicinal substances and the right to health in the mirror of international law. Hoghugh-e Beinolmelal. 2012;6(23):97–124. Persian.

Izzo FC, Lodi GC, Vázquez de Ágredos Pascual ML. New insights into the composition of historical remedies and pharmaceutical formulations: the identification of natural resins and balsams by gas chromatographic-mass spectrometric investigations. Archaeological and Anthropological Sciences. 2021; 13:1–7. doi: 10.1007/s12520-020-01236-6

Jain SK. Ethnobotany and research on medicinal plants in India. In: Ciba Foundation Symposium 185 - Ethnobotany and the Search for New Drugs. Chichester (UK): John Wiley & Sons, Ltd; 2007 Sep 28; 153–168.

KashfiBonab H, Ranj M. Agricultural and medicinal plants in Iran and their value in financial markets. Journal of Commercial Studies. 2020;(67). Persian.

Leary VA. The right to health in international human rights law. Health and Human Rights. 1994 Oct 1;24–56.

Mehmaryani M. Traditional knowledge, medicinal plants and proposed solutions for integration. Presented at: National Conference on Natural Products and Medicinal Plants; 2012; Tehran, Iran. Persian.

Mirzaeian R, Sadoughi F, Tahmasebian S, Mojahedi M. The role of herbal medicines in health care quality and the related challenges. Journal of HerbMed Pharmacology. 2021 ;10(2):156–65. doi: 10.34172/jhp.2021.17.

Moerman DE. Native American medicinal plants: an ethnobotanical dictionary. Portland (OR): Timber Press; 2009 May 13.

Mpinga EK, Kandolo T, Verloo H, Zacharie Bukonda NK, Kandala NB, Chastonay P. Traditional/alternative medicines and the right to health: key elements for a convention on global health. Health and Human Rights. 2013;15:44.

Nabasi N. Human rights and fundamental freedoms. Tehran: Dadgostar Publications; 2011. Persian.

Negahban A, Maleki M, Abbassian A. Policies and laws related to the integration of traditional and complementary medicine into the Iranian health system based on the WHO definition: a document analysis. Journal of Education and Health Promotion. 2019; 8(1):221. doi: 10.4103/jehp.jehp_321_19.

Neyinani N. Presentation of a model for strategic alignment in pharmaceutical production: research in management, development, and innovation. 2020;10:Unpaginated. Persian.

Omidhegi R. Methods of production and processing of medicinal plants. 2nd ed. Tehran: Tarahan Publishing; 2000. Persian.

Petrovska BB. Historical review of medicinal plants' usage. Pharmacognosy Reviews. 2012; 6(11):1-5. Doi: 10.4103/0973-7847.95849.

Raeesian M. Centralized production in the pharmaceutical system of the country. Tehran: Ministry of Health and Medical Treatment; 1984. Persian.

Rupani R, Chavez A. Medicinal plants with traditional use: Ethnobotany in the Indian subcontinent. Clinics in Dermatology. 2018 1;36(3):306–9. doi: 10.1016/j.clindermatol.2018.03.005.

Saraf S. Legal regulations of complementary and alternative medicines in different countries. Pharmacognosy Reviews. 2012; 6(12):154. doi: 10.4103/0973-7847.99950.

Sen T, Samanta SK. Medicinal plants, human health and biodiversity: a broad review. In: Biotechnological Applications of Biodiversity. 2015:59–110. doi: 10.1007/10_2014_273.

Tavana M. Two-stage data smoothing methods for scale measurement. Tehran: Roshd Publications; 2016. Persian.

Toebes B. The right to health. Economic. Social and Cultural Rights. 2001;169:170–5.

Vargas-Pelaez CM, Rover MR, Leite SN, Buenaventura FR, Farias MR. Right to health, essential medicines, and lawsuits for access to medicines–a scoping study. Social Science & Medicine. 2014;121:48–55. doi: 10.1016/j.socscimed.2014.08.042.

Vaziri M. A study on the pharmaceutical system of Iran. Tehran: Razi Institute for Science; 1991. Persian.

Yamin AE. The right to health under international law and its relevance to the United States. American Journal of Public Health. 2005; 95(7):1156–61.

Zaboli P, Hashemi-Meshkini A, Varmaghani M, Gholami H, Vazirian I, Zekri HS, et al. Pharmaceutical laws and regulations in Iran: an overview. Journal of Research in Pharmacy Practice. 2016; 5(3):155–161. doi: 10.4103/2279‐042X.185709.

Zamani D, Danqan N. Simulation of treatment and the right to health in the context of international human rights law. Hoghugh-e Omumi. 2006;8(19):25–41. doi: 10.1080/17449200701862145.

Ziaeibeygdeli H, Heydari M. International law and international rights in Iran: institutions, laws, and legal research. Tehran: Samardan Publications; 2012. Persian.