

Cultural Significance and Pharmacological Insights of Yunnan Ethnic Herbal Medicine: An Anthropological Perspective

Yuke Zhang^{1,a,*}

¹*Glenelg Country School, 12793 Folly Quarter Rd, Ellicott City, MD 21042, USA*
a. yukezhang06@gmail.com

**corresponding author*

Abstract: Yunnan's ethnic herbal medicines possess potent pharmacological effects, offering promising treatments for various ailments while embodying rich cultural heritage. This paper explores the intricate nexus between Yunnan's ethnic medicinal materials, cultural traditions, and human ecology. Through theoretical analysis and comprehensive literature review, it elucidates the transmission and dissemination of herbal knowledge among diverse ethnic groups, highlighting the preferences for specific herbal medicines rooted in climatic, geographical, and cultural influences. The study delves into the profound cultural meanings embedded within herbal medicine practices, revealing their role as symbols of cultural identity, emotional ties, and historical inheritance among ethnic communities. Additionally, an anthropological perspective unveils the complex interplay between culture, ecology, and herbal medicine practices, shedding light on environmental challenges and emphasizing the importance of sustainable living practices rooted in cultural values. While providing valuable insights, this study acknowledges the limitations of relying solely on theoretical analysis and literature review, advocating for interdisciplinary approaches integrating ethnographic fieldwork and biomedical research for a comprehensive understanding of herbal medicine use in Yunnan.

Keywords: Yunnan, ethnic herbal medicine, anthropology, cultural conservation, sustainable development

1. Introduction

Herbs in the medical field hold immense potential, offering promising treatments for various diseases through their unique pharmacological effects. In-depth exploration of Yunnan's ethnic herbal medicines reveals that many herbs contain active elements with properties such as anti-inflammatory, antibacterial, and antioxidant effects, making them attractive for future drug development [1]. For instance, some herbs possess significant anti-inflammatory properties effective against inflammatory problems, while others have antioxidant effects that slow aging [2]. Clinical research shows that traditional herbal medicines of specific ethnic groups in Yunnan effectively treat difficult-to-cure diseases, providing valuable insights for modern medical research [2]. Pharmacological studies indicate that these herbal medicines often contain active ingredients similar to, or even superior to, those in advanced drugs, presenting new therapeutic prospects [1].

Yunnan's traditional herbal medicine plays a crucial role in human health and is deeply intertwined with the region's ethnic culture. Many ethnic medicinal herbs in Yunnan Province have demonstrated multiple pharmacological effects, including antioxidant, anti-inflammatory, antibacterial, and anti-tumor properties [3]. For example, traditional medicinal materials like *Lilium lancifolium* and *Houttuynia cordata* are widely used for respiratory diseases, providing anti-inflammatory, antitussive, and expectorant benefits, significantly improving respiratory issues [4]. Additionally, Yunnan's herbal medicines, rich in alkaloids such as berberine and triterpenoids, have been proven effective in treating digestive system diseases, relieving gastrointestinal discomfort, and enhancing digestive tract function. Long-term observations show significant relief in gastrointestinal symptoms among patients using these herbs [5].

The use of herbal medicines is not only a health practice but also a vital aspect of Yunnan's ethnic cultural heritage. The knowledge of these medicinal plants has been passed down through generations, preserving the unique cultural identity and traditions of Yunnan's diverse ethnic groups. This deep-rooted cultural relationship ensures the continuity of traditional practices and reinforces community bonds. Therefore, the widespread application and verified effectiveness of Yunnan's folk herbal medicines provide solid support for safeguarding human health while also maintaining the cultural legacy of the region's ethnic communities.

This paper aims to delve into the rich history of Yunnan's ethnic medicinal materials within traditional Chinese medicine and their profound significance to the cultures of diverse ethnic groups in the Yunnan region. Through the utilization of theoretical analysis and comprehensive literature review, this study will elucidate the intricate connections between these medicinal materials and the cultural traditions of the region's various ethnic communities. Moreover, it will delve into the national cultural consciousness embedded within the usage of these medicinal materials, shedding light on their broader cultural implications. Furthermore, this paper will endeavor to unravel the deeper significance and cultural value of ecological culture in shaping the development of human society, employing an anthropological perspective to offer valuable insights into this multifaceted relationship.

2. The cultural relationship between Yunnan ethnic groups and herbal medicine

2.1. Transmission and Dissemination of Herbs Among Various Ethnic Groups in Yunnan

The herbal inheritance and transmission among various ethnic groups in Yunnan constitute a core part of the region's rich cultural history. Due to the geographical diversity of Yunnan, different ethnic groups have formed unique herbal utilization habits in their respective areas[1]. The latest research data reveals that ethnic groups such as the Yi and Hani primarily transmit traditional herbal knowledge through oral transmission, specific ceremonial activities, and practical applications in their daily lives [6]. After years of inheritance and development different ethnic groups demonstrate a certain degree of mutual integration and exchange in herbal traditions, with certain herbal-related knowledge being blended and mutually referenced among various ethnic groups, thus forming distinctive patterns of herbal cultural exchange, which helps to promote the renewal and further development of traditional herbal knowledge among various ethnic groups. According to data, oral traditional inheritance methods among the Yi and Hani ethnic groups account for over 70%, while ritual inheritance and practical transmission methods account for 30% and 20%, respectively [7].

2.2. Analysis of Ethnic Preferences for Specific Herbal Medicines

The Yunnan region, situated in the transitional zone between South Asia and Southeast Asia, possesses rich and diverse flora and fauna resources. Various ethnic groups, through years of practical experience, have developed their unique preferences for medicinal herbs. Taking the Dai ethnic group's herbal medicine as a research subject, they tend to prefer herbs with warm tonic effects such

as basil and saffron. The warm and humid climate in the Dehong region justifies this preference, as warm herbal plants help stabilize the body's yin-yang balance, holding invaluable significance in local health practices [8]. When selecting herbs, the Hani people often lean towards *Rhodiola* and *Cordyceps sinensis*, mainly due to their foggy and rainy climate. These herbs not only possess properties like heat-clearing, dampness-removing, and Yin-nourishing but also assist them in adapting to diseases caused by humidity. The preference of different ethnic groups for specific herbs is not only influenced by climatic and geographical factors but also deeply rooted in their respective traditional medical cultures. Such herbal choices not only reflect profound cultural understandings of health and disease but also demonstrate each ethnic group's concern for the health issues of themselves and their families [9].

2.3. The Relationship between Herbal Selection and Ethnic Culture

In the Yunnan region, multiple ethnic groups often face constraints from their historical backgrounds, locations, folk customs, and living habits when selecting certain plants as herbal materials. A survey revealed that the Dai people in Mengla County are more likely to choose herbs with bitter and cold characteristics to combat damp-heat diseases [10]. This preference is related to the region's humid climate and how it influences the Dai people's health concepts. On the other hand, the Naxi people place more emphasis on balancing the properties of medicines in their herbal formula selections, possibly linked to their belief in the concept of yin-yang balance. Different ethnic groups' understanding and perspectives on herbs will influence their preferences in selection. For example, the Hani people value the natural purity of herbs, thus opting for locally wild herbs as a treatment method [11]. This diversity not only results in different views and interpretations of various herbs but also highlights their unique perspectives on lifestyle habits, health conditions, and their unique understanding of the universe, thereby emphasizing the profound and lasting influence of herbs on ethnic cultures.

3. The Impact and Expression of Herbal Medicine on Notions of Life and Being Across Diverse Ethnic Cultures

In the diverse cultures of Yunnan, herbal medicine, as a traditional medicine and symbolic symbol, represents rich cultural meanings, especially the Bai and Yi ethnic groups' concepts and usage of herbal medicine are noteworthy [12]. In the Yi culture, herbal medicine is considered a bridge connecting people with nature and ancient ancestors. The collection and application process of herbs are imbued with sacred symbolism, serving as a means of communication and knowledge transmission with ancestors [13]. According to data obtained from field investigations, the Yi people have a high degree of stability and continuity in the preservation and dissemination of herbal medicines, and this traditional way of thinking remains profoundly important in modern society. Unlike other ethnic groups, the Hani people attach more importance to the symbolism of herbal medicine, considering it a tool for connecting emotions and cultural identity, and selecting and using specific herbs to demonstrate emotional ties and historical inheritance between different ethnic groups. The Hani people attach great importance to the origin of herbal medicine and the historical legends behind it, and through herbal medicine, they observe the cultural roots and inheritance of their traditions. These experiences help enhance the understanding of cultural significance among ethnic group members and their consciousness of continuity. This profound cultural significance is not only manifested in the use of herbal medicine but also more broadly reflects the emphasis and inheritance of life, health, and traditional values among different ethnic groups. The role played by herbal medicine in the cultural inheritance of the Yi and Hani ethnic groups is not just medicinal; they also represent emotional ties, traditional thinking, cultural identity, and various emotional connections

between different ethnic groups. Therefore, in-depth exploration of the methods and concepts of herbal medicine use among the Yi and Hani ethnic groups can not only better understand the thoughts and interpretations of life and existence among various ethnic cultures in Yunnan but also further study the inheritance and evolution of herbal medicine culture in modern society.

4. Anthropological Perspective

Human ecology, encompassing ecological anthropology and environmental anthropology (see Figure 1), constitutes a pivotal branch within the field of anthropology. This discipline delves into the intricate interplay between humans and their surroundings, encapsulating facets such as human survival, lifestyles, cultures, social structures, and more. Consequently, it maintains a close kinship with anthropology. Within the realm of Chinese anthropological inquiry, human ecology holds significant sway. Notably, it finds application in studies concerning rural social transformations, ecological and environmental issues, employing its methodologies and theories with widespread acclaim [14]. In China, human ecology research spans a broad spectrum, encompassing topics such as urban migration, food safety, economic restructuring, industrial evolution, cultural heritage preservation, healthcare, urbanization in ethnic enclaves, ecological conservation in minority regions, ethnic corridors, the Belt and Road Initiative, and China's ethnic communities [14]. Yunnan, renowned for its rich ethnic minority culture, stands as an epicenter for herbal medicine and cultural diversity. Consequently, research in human ecology within this region garners escalating attention.

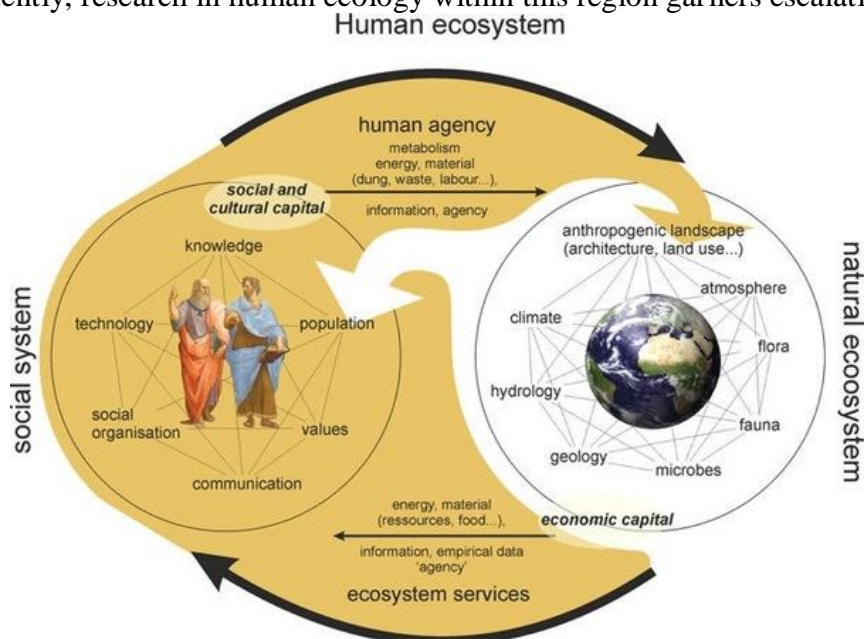


Figure 1: Structure of Human ecology

Anthropological theories and methodologies to interpret the complex interplay between culture, ecology, and herbal medicine practices in Yunnan's ethnic communities. Anthropologists conducted multiple field surveys in four counties of Yunnan between 1994 and 2002, spanning four years. Through interviews with local herbalists, healers, and elderly villagers, detailed records were made regarding the functions of plants and their usage. With the assistance of local herbalists, 116 plant voucher specimens were collected. Investigations revealed that the Yi ethnic group frequently utilized plants for three main purposes: treating wounds, gastrointestinal disorders, and common colds. Statistical analysis showed that the majority of plants were used for treating wounds [15]. This is attributed to the fact that the ancestors of the Yi people often lived in forests, relying on hunting and

gathering for sustenance, thus making them susceptible to injuries[16]The second-largest proportion of medicinal plants used for treating gastrointestinal diseases can be explained through epidemiological studies of *Helicobacter pylori* (Hp) prevalence within Yi communities. The susceptibility of the Yi people to Hp infection correlates strongly with their habits of consuming distilled liquor, smoking, and consuming pickled, fermented, and deep-fried foods [17]. Additionally, the characteristic of traditional Yi medicine involves their preference for herbal plants. Research suggests that this is associated with the Yi people's polytheistic beliefs, as they consider mountains and trees to be sacred and should not be harmed [18].

Bulang medicine, considered the oldest form of medicine in Yunnan, serves as a valuable supplement to the Chinese ethnic medicine system[19]. Anthropologists conducted field surveys in Menghai County, Xishuangbanna, from 2020 to 2023, covering 10 Bulang villages with a total of 175 participants[20]. Through interviews, it was found that 95% of the respondents believed that the decline in folk doctors was the main obstacle hindering the development of Bulang medicine. Bulang medicine acquires its medical knowledge from ancestors through Dai language manuscripts. However, with the passage of time, the number of people learning ancient languages has gradually decreased, leading to a decline in the number of folk doctors each year[21]. Socio-economic changes also impede the development of traditional medicine. Tea cultivation is one of the primary economic activities in Yunnan, with vast areas of land occupied by tea plantations, gradually encroaching upon the growing space of medicinal herbs Ecological anthropology goes beyond addressing particular environmental challenges; it also endeavors to explore sustainable modes of existence at a broader scale. Through ecological inquiries, human behaviors with either positive or negative impacts on the environment are identified, while anthropological scrutiny reveals the underlying worldviews that endorse such practices, often tilting towards the latter. Consequently, anthropology plays a crucial role in comprehending the prerequisites for sustainable living, encompassing not only environmental stewardship but also the identification of values, beliefs, kinship dynamics, political orientations, and ritual customs that foster behaviors conducive to sustainable development[22].

5. Conclusion

In conclusion, the exploration of Yunnan's ethnic medicinal materials within traditional Chinese medicine unveils a profound intersection between herbal medicine, cultural heritage, and human ecology. These medicinal herbs, with their potent pharmacological effects, not only offer promising treatments for various diseases but also serve as symbols of cultural identity and continuity for the diverse ethnic groups in Yunnan. Through the transmission and dissemination of herbal knowledge among different ethnic communities, a rich tapestry of herbal traditions has emerged, blending and evolving over time while maintaining a deep-rooted connection to the region's ecological landscape.

The preferences for specific herbal medicines among different ethnic groups reflect not only climatic and geographical influences but also the cultural values and beliefs ingrained within each community. The selection and usage of herbal medicines serve as expressions of cultural identity, emotional ties, and historical inheritance, fostering a sense of belonging and continuity among ethnic groups in Yunnan.

Moreover, the anthropological perspective provides valuable insights into the complex interplay between culture, ecology, and herbal medicine practices in Yunnan's ethnic communities. Human ecology research not only sheds light on the environmental challenges faced by these communities but also underscores the importance of sustainable living practices rooted in cultural values and beliefs.

Despite the comprehensive exploration of Yunnan's ethnic medicinal materials and their cultural significance, this study is not without limitations. The research mainly relies on theoretical analysis and literature review, which may overlook nuanced cultural practices and perspectives that can only

be fully understood through fieldwork and direct engagement with local communities. Future studies in this area could benefit from interdisciplinary approaches that integrate ethnographic fieldwork, ecological studies, and biomedical research to provide a more comprehensive understanding of the cultural, ecological, and biomedical dimensions of herbal medicine use in Yunnan.

References

- [1] Zhou, M. (2024). *The dilemma of young critics' growth in Western China: A case study of young critics in Yunnan*. *The BBS*, (01), 82-90.
- [2] Li, Y. (2024). *Study on Xu Xiake's ecological literature writing in Yunnan*. *Journal of Literature and Art*, 2024,(02), 17-22.
- [3] Wu, L., & Bai, Y. (2024). *Research on National Vision and Frontier governance -- Focusing on water conservancy in Yunnan in Qing Dynasty*. *Journal of Yuxi Normal University*, 2024,40(01), 108-115.
- [4] Li, Y., & Li, X. (2019). *Map and History: A Study on Newspaper Advertisement and early Industrialization in Yunnan -- Based on the analysis of Dian Sheng (1914-1926)*. *Journal of Chuxiong Normal University*, 2019,39(01), 133-141.
- [5] Fang, T. (2024). *Local governance of central Yunnan in Ming and Qing Dynasties*. *Regional Culture Studies*, 2024,(01), 28-37.
- [6] Gong, M. (2024). *Analysis of financialization behavior and financial performance of Yunnan Baiyao based on entropy weight method: Compared with Pien Tze Huang*. *Financial Management Research*, 2024,(01), 35-46.
- [7] Zhou, D. (2024). *Yunnan immigration and Confucianism development*. *Journal of Yunnan University for Nationalities (Philosophy and Social Sciences Edition)*, 2024, 9 (01), 67-74.
- [8] Zhou, C., Cai, N., Li, W., et al. (2024). *Different ratio of nitrogen and phosphorus basal on Yunnan pine seedling growth. The influence of molecular plant breeding*, 1-13.
- [9] Ma, S., Jin, Y., Zhang, S., et al. (2019). *Different effects of El Nino/Southern Oscillation events on Autumn meteorological drought in Yunnan*. *Journal of Arid Meteorology*, 2019,41(06), 860-872.
- [10] Zhang, W., Guo, R., Song, F., et al. (2024). *Donkey dung analysis of the characteristics of the microbial flora in Yunnan*. *Chinese Journal of Animal Husbandry*, 2024, 1-11.
- [11] Fang, G. (2024). *From Street to Auditorium: Thirty Years of Yunnan School Drama Movement (1920-1950)*. *National art research*, 2024 ((02), 76-86.
- [12] Zhao, X., & Hu, W. (2024). *Qing dynasty to the period of the Republic of China guangdong salt pin dian research. Ideological front*, 2024, (3), 1-15.
- [13] Sun, S. (2024). *Children in Yunnan in the new period literature ecological writing study*. *Journal of Institute of Kunming*, 2024, 46-48 (02), 125-132.
- [14] Liu, S. (2021). *Contemporary Chinese anthropology: reflections, developments and prospects*. *International Journal of Anthropology and Ethnology*, 2021, 5(1), 11.
- [15] Long, C., Li, S., Long, B., et al. (2009). *Medicinal plants used by the Yi ethnic group: a case study in central Yunnan*. *J Ethnobiology Ethnomedicine*, 2009, 5, 13.
- [16] Zhang, Y., Meng, X. L., Zhang, J., & Wang, M. W. (2005). *Ethnopharmacology and development of new medicine*. *World Science and Technology/Modernization of Traditional Chinese Medicine and Materia Medical*, 2005, 7(5), 54.
- [17] Liu, Y. Y., Zhou, Z. F., Nan, Q., Ma, L. Q., Wang, J., Jin, L., Hu, Y. Y., Zhang, J. Y., Li, X. Y., Duan, L. P., Wei, Y. M., Qi, G. R., & Gui, Y. J. (2003). *Epidemiological investigation on Helicobacter pylori (Hp) among two Yi communities of Yuxi Prefecture in Yunnan*. *Yunnan Medicine*, 2003, 24(6), 442.
- [18] Ang, Z. M. (2005). *Bimo-transfer and bear the reverence of human to nature*. *Man and Biosphere*, 2005, 1, 49.
- [19] Zhou, H., Zhang, J., Kirbis, B.S., et al. (2023). *Ethnobotanical study on medicinal plants used by Bulang people in Yunnan, China*. *J Ethnobiology Ethnomedicine*, 2023, 19, 38.
- [20] Pei, S. J. (2000). *Modernization of traditional medicine and inheritance of ethnic medicine*. *Chin J of Ethnic and Folk Med*, 2000, 01, 1-3.
- [21] Ghorbani, A., Langenberger, G., Feng, L., & Sauerborn, J. (2011). *Ethnobotanical study on the utilization of medicinal plants by Hani people in Naban River Basin National Nature Reserve, Yunnan, China*. *Journal of ethnopharmacology*, 2011, 134(3), 651-67.
- [22] Ren, G. Y. (2004). *Main theories and development of ecological anthropology*. *Heilongjiang national periodicals*, 2004, (05), 85-91.