

# Integration of Ethnomedicine in Basic Medicine: A Literature Review and Its Potential for Medical Practice

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## ABSTRACT

**Background:** The integration of ethnomedicine into primary medicine has become an increasingly relevant topic in recent decades. Ethnomedicine, which refers to traditional healing practices passed down through generations and used by various cultures worldwide, offers significant potential to complement modern medical practices. **Objective:** This literature review aims to explore the potential created by the integration of ethnomedicine into primary medicine. **Methods:** This review utilizes a literature review method across multiple databases such as PubMed, Google Scholar, and SCISPACE. **Results:** Ethnomedicine, with its holistic approach, can enhance healthcare delivery and provide insights into alternative health practices. The integration of ethnomedicine with primary medical sciences offers significant potential to create a more comprehensive functional medicine, focusing on the root causes of diseases and emphasizing prevention and the maintenance of optimal health. **Conclusion:** The integration of ethnomedicine with primary medicine can create healthcare solutions that enhance the overall well-being of patients.

**Keywords:** Ethnomedicine; functional medicine; integration.

## INTRODUCTION

Health is a vital aspect of human life that involves physical, mental, and social well-being. In scientific terms, health is defined as a state in which all these aspects are in optimal condition. However, in many traditional societies, particularly among indigenous communities, the concept of health and disease is often influenced by beliefs in supernatural or magical powers, differing from the modern scientific approach. Ethnomedicine, a branch of anthropology, studies these traditional healing practices that utilize local knowledge of medicinal plants and animals to treat various ailments [1]. Ethnomedicine plays a crucial role in various cultures worldwide, especially among indigenous populations. These practices have evolved over centuries and are often based on a holistic understanding of health that encompasses physical, mental, and spiritual aspects.

Ethnomedical knowledge is not only important for the health of indigenous communities but has also significantly contributed to the development of modern medicine. Many modern drugs have been discovered based on research into medicinal plants and animals used in traditional medicine [2]. Therefore, the integration of ethnomedicine with primary medical sciences can create a more holistic and effective approach to healthcare.

The integration of ethnomedicine with primary medical sciences offers significant potential to create a more comprehensive functional medicine.

This approach can help address some weaknesses of the modern medical system by adding a holistic perspective that considers all aspects of a patient's life. Thus, this literature review aims to explore the potential integration of ethnomedicine into primary medical sciences and the benefits that a holistic approach can bring to medical practice.

## METHODS

This review uses the literature review method across various databases such as PubMed, Google Scholar, and SCISPACE, with keywords "ethnomedicine," "functional medicine," and "integration." Studies that meet the inclusion and exclusion criteria were selected, and data were extracted and thematically analyzed to explore the potential integration of ethnomedicine into primary medical sciences.

## RESULTS

### Definition of Ethnomedicine

Ethnomedicine is a branch of anthropology that studies the concepts of health and disease in various societies, including their beliefs and actions regarding well-being and healing. Every society has its own style of medicine, referred to as a medical culture, which includes beliefs about the body, causes of illness, norms about seeking medical help, and types of treatments used. [1] These practices involve the use of material and non-material substances by Indigenous healers to prevent and treat diseases, which are crucial for the health of Indigenous communities,

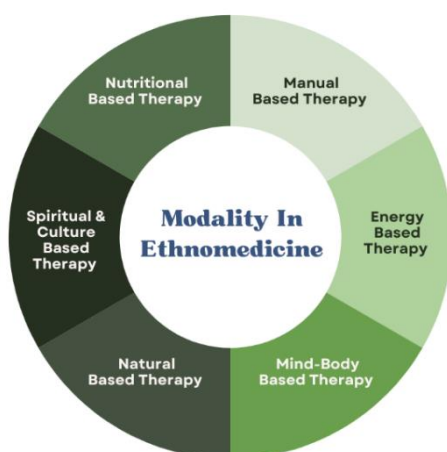
despite concerns about their sustainability and relevance [3]. Ethnomedicine also plays a significant role in the development of modern medicine by combining traditional healing methods with scientific research [2]. These traditional healing practices are passed down from generation to generation, preserving cultural heritage and ancestral health knowledge [4].

The primary aim of ethnomedicine is to examine the theories and knowledge related to health that are inherited and learned within a culture, as well as to conduct medical translation for cross-cultural understanding and improved healthcare delivery. The application of ethnomedicine knowledge can enhance healthcare delivery for the studied groups and provide insights into alternative health practices in the community. Therefore, ethnomedicine plays a crucial role in bridging cross-cultural medical understanding and integrating traditional healing heritage with modern science to create more holistic health solutions [1].

### Modality in Ethnomedicine

The causes of disease can be categorized into three main sectors: agent, host, and environment. An agent refers to the pathogens or factors that directly cause disease, such as viruses, bacteria, or parasites. The host is the individual or organism that harbors the pathogen and suffers from the disease, influenced by factors such as habits, health conditions, nutritional status, and immune system. The environment includes all external factors that affect both the host and the agent, such as environmental, social, cultural, and economic conditions that can influence the spread and development of disease.

Ethnomedicine is closely related to the host and environment sectors. Ethnomedical practices not only include the use of natural medicines but also involve a holistic approach that considers nutrition, energy, mind, body, nature, spirituality, and culture. This approach, known as Modality in Ethnomedicine developed by I Gusti Ngurah Putra Eka Santosa, encompasses various therapies involving balanced diets, relaxation techniques such as meditation and yoga, utilizing nature, as well as spiritual and religious rituals.



**FIGURE 1:** Modality in Ethnomedicine by I Gusti Ngurah Putra Eka Santosa.

### Nutritional-Based Therapy

Nutritional-based therapy is a treatment approach that uses diet and nutrition to prevent and treat diseases. This therapy emphasizes the importance of a balanced and nutrient-rich diet to maintain optimal health and manage conditions such as diabetes, hypertension, heart disease, and obesity. It is closely related to herbal medicine, aromatherapy, and health supplements. Many traditional nutritional therapies utilize medicinal plants containing active substances with therapeutic effects, such as anti-inflammatory and antioxidant properties. For example, ginger (*Zingiber officinale*) is known to be effective in reducing the frequency and severity of nausea and vomiting in pregnant women. Research shows that the average reduction in nausea and vomiting frequency ranges from 11% to 135%. This effectiveness makes ginger a highly beneficial natural solution for enhancing comfort and well-being during pregnancy [5].

### Manual-Based Therapy

Manual-based Therapy is an evidence-based treatment approach that involves the use of physical techniques such as massage, manipulation, and exercise for therapeutic purposes. Physical therapists apply manual pressure to symptomatic areas of the body, such as the spine, soft tissues, and joints, to improve physical function, reduce pain, and enhance mobility. The quantification of manual pressure is considered important in this therapy, although it has not been extensively studied in clinical settings. This technique is often used in physiotherapy, chiropractic, massage, and osteopathy to address musculoskeletal issues and improve patients' quality of life [6,7].

### Energy-Based Therapy

Energy-based Therapy is a treatment method that uses energy to address diseases and improve health. This therapy is based on the belief that the body has an energy flow vital for health and well-being. Imbalances or blockages in this energy flow can lead to disease and health disorders. Energy therapy aims to restore the body's energy balance. One example of Energy-Based Therapy is Reiki. Reiki is an energy healing or biofield therapy where a trained therapist places their hands above or near the client's body, transferring energy to activate the client's body's ability to heal itself and restore balance. Reiki was developed in Japan in the late 19th century by Mikao Usui from Kyoto [8]. Additionally, techniques such as acupuncture, magnetic field therapy, and bioelectrical therapy are used to restore energy flow in the body. Research shows that energy healing techniques can provide physiological and psychological benefits, especially for patients with chronic diseases [9].

### Mind-Body Based Therapy

Mind-Body Based Therapy integrates the connection between the mind and body to improve health and treat diseases. This type of therapy includes practices such as meditation, yoga, tai chi, and other relaxation techniques. The approach focuses on reducing stress, enhancing mental well-being, and

achieving emotional balance. Sidhakarya State Conditioning by I Gusti Ngurah Putra Eka Santosa is an example of Mind-Body Based Therapy rooted in Balinese cultural tradition, particularly the Sidhakarya dance. This dance serves not only as a performing art but also as a holistic approach encompassing physical, mental, and spiritual aspects. The Sidhakarya dance involves five main aspects: wiraga (physical exercise), wirasa (thought exercise), wirama (breath exercise), wicara (speech exercise), and wibawa (energy exercise). When practiced in balance, these can result in "taksu" or the aura of authority emitted by the dancer [10].

Sidhakarya State Conditioning emphasizes the importance of balance and harmony between these aspects to achieve optimal health and well-being. This approach also involves the unification of energy at a psychic level, helping individuals achieve self-unity and full focus. By blending traditional dance philosophy and self-conditioning principles, Sidhakarya State Conditioning provides a comprehensive approach to self-empowerment and mental development [10].

**Natural-Based Therapy**

Natural-Based Therapy is a treatment approach that uses natural substances such as medicinal plants, minerals, and other natural resources to treat diseases and improve health. This therapy is based on the belief that natural substances have powerful healing properties and can be used to support overall health. The melukat ritual in Bali is an example of Natural-Based Therapy. Melukat uses holy water from natural sources to cleanse the soul and body of negative energy, aligning with the principles of Natural-Based Therapy. This ritual is considered to cleanse the soul and body, becoming part of the modern lifestyle and an alternative healing practice in medicine.

Additionally, forest bathing, known as "shinrin-yoku," was introduced in Japan in 1982 to reduce stress and enhance health [11]. This practice involves spending time in forest environments to improve well-being, and health, and prevent diseases [12].

**Spiritual & Culture Based Therapy**

Spiritual & Culture Based Therapy is a treatment approach that combines spiritual and cultural elements to enhance individual health and well-being. This therapy is based on the belief that spirituality and culture play crucial roles in a person's emotional and physical balance. This approach often involves practices that connect individuals with their beliefs, traditions, and cultural values, providing strong emotional and psychological support. Examples of Spiritual & Culture Based Therapy include rituals, traditional ceremonies, spiritual healing, spiritual music therapy, meditation, and guided relaxation based on cultural traditions.

**Basic Medical Sciences**

Basic Medical Sciences are the essential foundation for medical education and practice. This discipline provides a deep understanding of the structure and function of the human body, disease mechanisms, and the body's response to various medical therapies. Understanding these aspects is crucial for developing clinical skills and medical research. The structure of Basic Medical Sciences is divided into several main fields: Biomedical Sciences, Medical Humanities, Clinical Medical Sciences, and Public Health Sciences. Each of these fields plays a crucial role in shaping the knowledge and skills required for a medical professional.

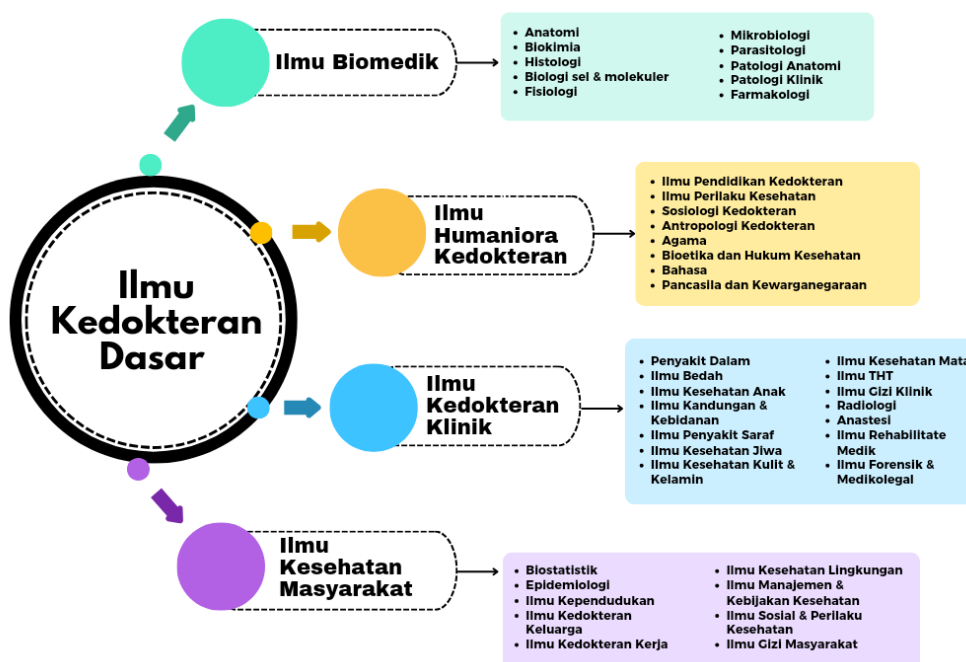
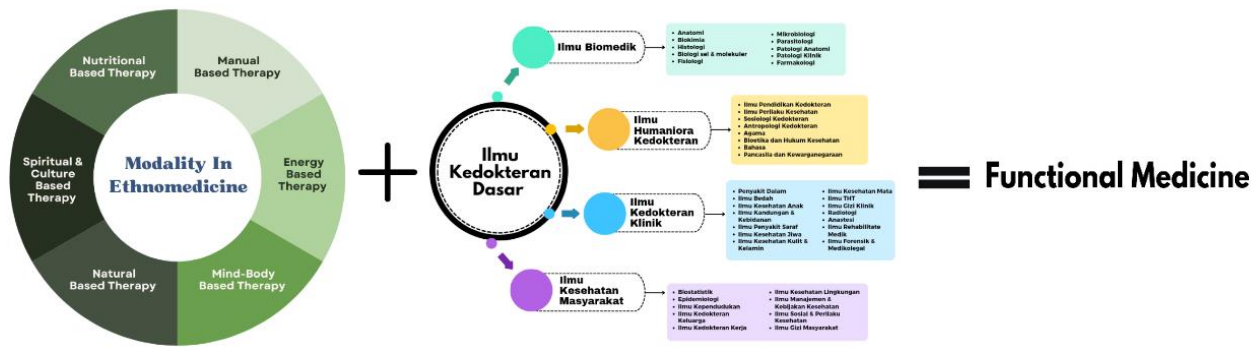


FIGURE 2: Basic Medical Sciences by I Gusti Ngurah Putra Eka Santosa.

The integration of ethnomedicine with basic medical sciences can result in richer and more holistic studies, such as ethnophysiology, ethnopharmacology, and ethnopsychiatry. For example, studies on cultural views regarding the structure and function of the body (ethnophysiology) can help understand how societies perceive health and disease. Ethnopharmacology can reveal the use of traditional medicines and their effects based on scientific principles. Ethnopsychiatry connects cultural views on mental health with modern psychiatric practices, creating a bridge between cultural and medical understanding.

**DISCUSSION**

The integration of ethnomedicine (Modality in Ethnomedicine) with basic medical sciences has great potential to create functional medicine. Functional medicine is a medical approach that focuses on the root causes of diseases rather than merely treating symptoms. It emphasizes the importance of understanding the interactions between genetics, environment, and lifestyle that holistically affect a person's health [13]. Ethnomedicine, with its focus on holistic health and traditional knowledge, offers significant contributions to achieving the goals of functional medicine.



**FIGURE 3:** Integration of Ethnomedicine with Basic Medical Sciences.

By combining traditional and scientific knowledge, more comprehensive and sustainable health solutions can be achieved, which not only honor cultural heritage but are also supported by scientific evidence. The functional medicine resulting from this integration focuses on prevention and the maintenance of optimal health, in line with the holistic and individual-centric principles of ethnomedicine. This integration enables the development of more effective, sustainable, and patient-centered healthcare, achieving balance and optimal health for patients. Integrating ethnomedicine with basic medical sciences brings significant benefits in creating a more holistic, personal, and effective health approach. Ethnomedicine, with its emphasis on physical, mental, and spiritual balance, provides a variety of natural therapies. This approach not only helps identify and address the root causes of chronic diseases often overlooked by conventional medicine but also offers more natural and minimally side-effect alternatives. By combining this traditional knowledge with scientific findings and modern genetics, functional medicine can develop more sustainable prevention and treatment strategies tailored to individual needs, thereby enhancing overall patient well-being and honoring valuable cultural health heritage.

**CONCLUSION**

The integration of ethnomedicine with basic medical sciences demonstrates that this combination can create functional medicine, which focuses on the root causes of diseases with a holistic approach. This integration not only respects cultural heritage but is also supported by scientific evidence, thereby developing more effective and

sustainable prevention and treatment strategies. The functional medicine resulting from this integration is oriented toward prevention and the maintenance of optimal health, with a patient-centered approach that considers physical, mental, and spiritual balance. This provides more comprehensive, personal, and minimally side-effect health solutions, enhancing overall patient well-being.

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