

## Effectiveness Between Traditional and Modern Medicine: A Review

Sushila pachwania, Assistant Professor, Department of Chemistry, Keshav Mahavidhyla, Atru (Rajasthan)

### Introduction

#### Traditional Medicine

Another challenge of research in traditional medicinal practice is the lack of consistency and clarity in the terminology used by the authors to describe various beliefs and practices. Often the term traditional medicine is loosely applied to a variety of diverse activities that are not uniformly acknowledged among indigenous practitioners and their clients. It is useful exercise to discuss the variety of definitions that traditional medicine is, or is not accorded the latter being the case in most academic and non academic journals.

The World Health Organization estimates that the majority of the population of most non-industrial countries still relies on traditional forms of medicine for everyday health care. In many countries up to 80-90% of the populations are in this category. Medicinal plants and, to a lesser but important extent, animal products, form the material medica of these traditions.

#### Traditional Health System

Traditional health systems are based in world views or cosmologies that take into account mental, social, spiritual, physical and ecological dimensions of health and well being. Central importance on the concept of balance within the individual and between the individual, society and nature Imbalance arises with the breaking of the inter connectedness of life- and results in discomfort and disease.

Traditional health systems have organized frameworks for classifying plants, animals, landscapes and climatic conditions in relation to their effects on health and disease. These taxonomies have much in common with one another and represent a culturally relevant empirical framework for assessing medicinal plant biodiversity. Such taxonomies may diverge significantly with western classificatory frameworks and assumptions. This is of importance when determining prior art as it pertains to intellectual property law. Food and medicine are often viewed interchangeably. Food is medicine. Diet is the basis of health. Revitalization movements are drawing on traditional medical knowledge to develop integrated modern and traditional health care projects.

These movements and other groups have drawn attention to the shrinking availability of medicinal plants to supply the burgeoning need for herbal medicines in non-western societies and in the industrial countries. Conservation and horticulture programmes are emerging as vital components of the revitalization of local health traditions.

#### Plants Requirement

There is a need for coordinated effort by all engaged in medical plant use to generate new policies, mechanisms and resource flows to preserve the biodiversity used in caring for the health of the majority of the world's population. Of all the literature reviewed, only a handful sources offered general descriptions of characteristics of traditional medicine and rarely defined the term. When reviewing literature, it is important to consider two points:

1. Term "traditional" is a British colonial concept, disliked by many Indigenous Groups.
2. Academics and institutional scholars introduced the term Indigenous People for North America. Most indigenous people would have relied on a complex set of medical practice and beliefs referred as "Medicine". Only the Europeans, with a mandate to separate the prioritize beliefs that were not tier own, utilized the term "Traditional"

#### Review Literature

A few academic articles attempted to "operationilize" the term "Traditional" in their empirical studies and sited a number of definitions. The authors tended to divide their discussion of medical practices into two time period, pre - and - post contact. The term "Traditional



Medicine" has been therefore conceptualized in several ways. The report of Royal Commission on Aboriginal People (RACP, 1996) defines traditional healing;

Traditional healing has been defined as "practices designed to promote mental, physical and spiritual well beings that are based on beliefs which go back to time before the spread of western, scientific, bio-medicine. When aboriginal people talk about their traditional healing they include a wide range of activities, from physical cure using herbal medicine and other remedies, to the promotion psychological and spiritual wellbeing using ceremony, counseling and the accumulated wisdom of elders. (RACP, 1996, Vol.3,348)

Within the literature reviewed, different aspects of traditional medicine were discussed. A common term used by anthropologists is "Shaman" or "Shamanic Healing". According to William Lyon's Encyclopedia of Native American Healing

This is first scholarly work to survey the mystery powers of Native American Shaman with respect to healing. Its long overdue, in shifting through this evidence one sees that Shamanism has very definite cross-cultural patterns. That is, it is an organized system with definite rules of operation, because our understanding of Shamanic healing is rudimentary at best.. .....

Lyon situates shamanic healing as "irrational" but effective, and he is concerned with rituals where as other text are focused on Botany. Sometimes the discussion focuses on ritual practices on other time the pharmacology and botanical knowledge. Traditional medicine (TRM) has been defined as the sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health, as well as in the prevention, diagnosis, improvement, or treatment of physical and mental illness. According to a 1983 World Health Organization (WHO) estimate, a majority of the population in developing countries depend on traditional and herbal medicines as their primary source of health care.<sup>2</sup> Over the past decade, there has been an increased global interest in traditional systems of medicine and herbal medicinal products not only in response to the health care needs of developing countries, where access to modern medicine is rare or nonexistent, but also in affluent nations, where the use of herbal medicines and acupuncture is now readily accepted by large segments of the population. In developed countries, nonconventional medical modalities, also designated as complementary and alternative medicine (CAM), are often used concomitantly with conventional medicine in medical treatments, including cancer therapy. The popularity of CAM in the USA is reflected in a survey, which showed its use increased from 34% in 1990 to 42% of adults in 1997.<sup>3</sup> The same survey showed that the American consumers spent \$27 billion on alternative treatments, and an estimated \$5.1 billion on herbal medicines in 1997.<sup>3</sup> In the same year, the global market for herbal products was estimated to be approximately \$20 billion.<sup>4,5</sup> With the increased and widespread use of multiple medical modalities in recent years, coupled with the need to provide health care to all the people in both the developing and developed countries, there arose a new modality known as integrated or integrative medicine. Integrated medicine has been defined as practicing medicine in a way that selectively incorporates elements of CAM into comprehensive treatment plans alongside orthodox methods of diagnosis and treatment. It can also mean the incorporation of TRM into the general health service systems, in which both orthodox and traditional systems of medical practices are recognized. In developed countries such as the United States of America, integrative medicine is meant to be the former. The rational integration of herbal medicine into modern medical practices, including cancer therapy, should be accomplished on a scientific basis, taking into account the interrelated issues of quality, safety, and efficacy.

**Quality:** A current impediment to the integration of herbal medicines into modern medical practices is the quality of these products, which can affect their efficacy and/or safety. Herbal product quality ranges from very high to very low. A recent study on selected commercial ginseng products prepared from *Panax ginseng* CA Meyer and *P. quinquefolius* L. (Araliaceae)



and eleuthero, *Eleutherococcus senticosus* Maxim (Araliaceae), marketed as botanical supplements in North America in the 1995-1998 period, showed that the ginsenoside contents of 232 *Panax ginseng* and 81 *Panax quinquefolius* products ranged from 0.00 to 13.54% and 0.009% to 8.00%, respectively, and that approximately 26% of these products did not meet label claims. The eleutherosides B and E content of eleuthero root powder and other formulated extract products also showed large variation. Studies on the quality of St. John's wort (*Hypericum perforatum* L. [Hypericaceae]) products showed hypericin content ranging from 22% to 140% of label claim, when analyzed using an official spectrophotometric procedure,<sup>10</sup> and from 47% to 165% employing an HPLC method. Similarly, silymarin from milk thistle (*Silybum marianum* [L.] Gaertn. [Asteraceae]) was detected at 58% to 116% of the label claim. Aside from the variation in the chemical content of herbal medicine, there can also be pharmaceutical quality differences in these products. In an in vitro dissolution and bioequivalent study of 9 silymarin products, 3 yielded 100%, 50%, and 0% of silymarin after 1 hour under official dissolution conditions. A bioequivalency study of 3 of these products showed that the bioavailability of the product was 2- fold greater than the other 2 preparations. Botanicals and botanical product quality and quality variations are due to a number of factors, ranging from intrinsic and extrinsic influences to regulatory practices.

**Intrinsic and Extrinsic Factors:** It is well established that intrinsic and extrinsic factors including species differences, organ specificity, diurnal and seasonal variation, environment, field collection and cultivation methods, contamination, substitution, adulteration, and processing and manufacturing practices greatly affect botanical quality. Intrinsically, botanicals are derived from dynamic living organisms, each of which is capable of being slightly different in its physical and chemical characters due to genetic influence. This phenomenon has been well documented. A case in point concerns the accumulation of hypericin in *Hypericum perforatum* (St. John's wort [SJW]), which showed that narrow leafed populations have greater concentrations than the broader leafed variety although the direct therapeutic significance of this particular variation is unclear, as hypericin, although pharmacologically active, is not considered a significant pharmacologic agent in the antidepressive use of SJW; the primary reason many commercial extracts are standardized to hypericin content is that the hypericin acts as a "marker compound" for the purposes of quality control. In general, both qualitative and quantitative variations of phytochemicals are greater in wild than in domesticated populations of the same species. Recent studies on the content of artemisinin, an antimalarial agent in *Artemisia annua* L. (Asteraceae); on michellamine B, a compound with in vitro anti-HIV activity, in *Ancistrocladus korupensis* DW Thomas & RE Gereau (Ancistrocladaceae); and on the essential oil composition of *Ocimum basilicum* L. (Lamiaceae) showed greater content variations in the wild than in cultivated populations. Also, the secondary chemical constituents of medicinal plants differ from species to species as demonstrated by the presence of structurally different alkylamides in the roots of *Echinacea angustifolia* D.C., and *E. purpurea* (L.) Moench. (Asteraceae), and by their total absence in *E. pallida* (Nutt.) Nutt. Thus, to insure chemical uniformity, it is necessary that the starting plant material for the manufacture of botanicals be accurately identified and authenticated by their scientific names (Latin binomial). The use of common names is inadequate as they often refer to more than 1 species. In regard to plant organ specificity, the site of biosynthesis and the site of accumulation and storage are normally different. Chemical biosynthesis usually takes place in the leaves, and phytochemicals are then transported through the stems to the roots for storage, with the chemical profiles in these organs being different from each other. Accumulation and storage can also take place in the leaves, but to a much lower extent, and very infrequently in the stems. An example of site-specific accumulation, as well as species specificity, is that of the compounds considered responsible for the immunostimulant effect of *Echinacea* species. These compounds encompass 5 groups of chemicals: caffeic acid derivatives, alkylamides, polyacetylenes (ketodialkenes and ketodialkynes), glycoproteins and





polysaccharides. As indicated above, alkylamides are found in the roots of *Echinacea angustifolia* and *E. purpurea*, but they are structurally different and are totally absent in *E. pallida* roots. Polyacetylenes, on the other hand, are present abundantly in the roots of *E. pallida*, but absent in *E. angustifolia* and *E. purpurea* roots. Although the glycoproteins and polysaccharides are present in the fresh juices and aerial parts of all 3 species, they occur only in minute quantities in the roots. Diurnal and seasonal variations are other intrinsic factors affecting chemical accumulation in both wild and cultivated plants. Depending on the plant, the accumulation of chemical constituents can occur at any time during the various stages of their growth. In a majority of cases, maximum chemical accumulation occurs at the time of flowering, followed by a decline beginning at the fruiting stage. The time of harvest or field collection can thus influence the quality of the final herbal product. There are many extrinsic factors affecting qualities of medicinal plants. It has been well established that factors such as soil, light, water, temperature, and nutrients can, and do, affect phytochemical accumulation in plants, as exemplified by alkaloid concentrations of 1.3% and 0.3%, respectively, in *Atropa belladonna* L. (Solanaceae) grown in the Caucasus and those cultivated in Sweden; essential oil content in shade-grown (1.09%) and normal light-grown (1.43%) *Mentha x piperita* L. (Lamiaceae) plants; and by the silymarin content being highest in the fruits of plants grown under 60% water/field capacity (1.39%) and nitrogen level of 100 kg (1.46%) and 150 kg (1.42%) per feddan. The methods employed in the field collection from the wild, as well as in commercial cultivation, harvest, post-harvest processing, shipping and storage can also influence the physical appearance and chemical quality of the botanical source materials. Contamination by microbial and chemical agents (pesticides, herbicides, heavy metals), as well as by insect, animal, animal parts, and animal excreta during any of the stages of source plant material production can lead to lower quality and/or unsafe materials. Botanicals collected in the wild often include nontargeted species either by accidental substitution or by intentional adulteration. However, adulteration and/or substitution of cultivated botanicals have also been documented. Substitution of *Periploca sepium* Bunge (Asclepiadaceae) for *eleuthero* (*Eleutherococcus senticosus*) has been widely documented and is regarded as responsible for the “hairy baby” case involving maternal/neonatal androgenization. More recently, plantain (*Plantago ovata* Forskal. [Plantaginaceae]) was found to be contaminated by *Digitalis lanata* Ehr. (Solaneae) at the supplier end.<sup>26</sup> Other examples of adulteration/substitution of botanicals include *Echinacea angustifolia* roots being contaminated with *E. atropurpurea* Nutt., *E. pallida*, *E. paradoxa* Britt., *E. simulata* RL McGregor, *Lespedeza capitata* Michx. (Fabaceae) and *Parthenium integrifolium* L. (Asteraceae); and ginseng being adulterated with *Mirabilis jalapa* L. (Nyctaginaceae), *Phytolacca acinosa* Roxb. (Phytolaccaceae), *Platycodon grandiflorum* A.DC. (Campanulaceae), and *Talinum paniculatum* Gaertn. (Portulacaceae). Adulteration of herbal medicine with synthetic drugs represents another problem in product quality. Foremost among these herbal mixtures are multicomponent Chinese or Ayurvedic herbal remedies. Chemical analysis of some arthritis remedies have led to the finding that synthetic anti-inflammatory drugs such as phenylbutazone, indomethacin and/or corticoid steroids have been added. In a recent study of chemical adulteration of traditional medicine in Taiwan, 23.7 % (618 of 2609) of samples collected by 8 major hospitals were found to contain 1 or more synthetic therapeutic agents, including caffeine, acetaminophen, indomethacin, hydrochlorothiazide, prednisolone, ethoxybenzamide, phenylbutazone, betamethasone, theophylline, dexamethasone, diazepam, buccetin, chlorpheniramine maleate, prednisone, oxyphenbutazone, diclofenac sodium, ibuprofen, cortisone, ketoprofen, phenobarbital, hydrocortisone acetate, niflumic acid, triamcinolone, diethylpropion, mefenamic acid, piroxicam, and salicylamide. The most frequent adulterants were caffeine, acetaminophen, indomethacin, hydrochlorothiazide, prednisolone, and chlorzoxazone in 213, 167, 152, 127, 91, and 87 cases, respectively. Heavy metal contamination can occur at the cultivation, post-harvest treatment, or product manufacturing stages. Lead and thallium contamination has been



reported in multicomponent herbal mixtures. Besides the unintentional in-process adulteration, it is well established that Ayurvedic and traditional Chinese medicine sometimes employ complex mixtures of plant, animal, and mineral substances, including heavy metals. It is not uncommon to find appreciable quantities of heavy metals such as lead, mercury, cadmium, arsenic, and gold in certain formulations. Cases of lead, thallium, mercury, arsenic, gold, and cadmium poisoning from the consumption of such products have been documented.

**Regulatory Influence:** Botanical product quality can also be influenced by regulatory status, which varies from country to country.<sup>30</sup> In the European community, herbal medicines are regulated as medicine and subject to mandated standards, whereas in the United States, very few botanical products are available as prescription or over-the-counter (OTC) drugs. The majority of botanicals are marketed in the United States as dietary supplements under the provisions of the Dietary Supplement Health and Education Act (DSHEA) of 1994. By law, strict good manufacturing practices (GMPs) are required in the production of prescription and OTC drugs; regulatory provisions under DSHEA provide little assurance of identity, quality or purity for botanical dietary supplements, which are manufactured according to requirements for conventional food products (DSHEA stipulates that supplements are food and not drugs). Thus, botanical dietary supplement products have not yet been subjected to mandated quality assurance (QA)/quality control (QC) standards as in the case of prescription and OTC drugs.<sup>31</sup> New GMPs are under development by the FDA that will help ensure a higher standard of GMP for supplements than for food. Elsewhere in the world, national policies exist in most of Asia and Southeast Asia. In some countries, these products are totally unregulated. Consequently, product quality may differ from country to country, and within the same country, from product brand to product brand, and even from lot to lot within the same brand.

**QA and QC:** For effective integration of herbal medicine into modern therapeutic practices, the quality of botanicals must be assured by control measures taken from the point of medicinal plant procurement, whether by field collection from the wild or by cultivation, under good agricultural practice (GAP) conditions, because the quality of the finished botanical products is obviously directly related to the quality of the raw materials. Whether field collected or produced by cultivation, authentication of plant species by a taxonomic botanist is paramount to insure that the correct source material is acquired. It is essential that the plant materials are identified by their binomial Latin names, and a description of the macroscopic, microscopic, and organoleptic (sensory) characters be provided along with herbarium specimens, drawings or photographs. In the field collection of medicinal plants, care must be exercised to avoid the acquisition of nontargeted species, and to free the targeted source material of undesirable plant parts, soil, rock, insects, animals, animal excreta, and other contaminants. Post-collection treatments should mirror those accorded cultivated plant materials. Due to their genetic and chemical content variations, the site and date should be recorded for each collection. The production of raw materials by cultivation should normally lead to more uniform botanical products due to greater genetic uniformity. The production of quality raw materials can only be assured by employing GAPs such as those carried out in the commercial cultivation of Ginkgo biloba L. (Ginkgoaceae) and of Echinacea species. The harvested source materials must be processed to produce the finished products under GMPs. The World Health Organization has published general guidelines for the GMP production of botanical products. GMP procedures employed for the manufacture of botanical products involve, at the raw material production end, botanical taxonomic identification to assure species identification; at the processing and manufacturing stage, macroscopic, microscopic, organoleptic analysis and analytical procedures similar to those employed for the manufacture of conventional drugs to assure quality and purity by appropriate protocols. Post-marketing quality assurance surveillance by regulatory agencies will ensure the marketing of quality products for use in integrative medicine.



**Safety** Herbal medicines are generally safe when properly used at normal therapeutic doses. Adverse effects consist primarily of mild and infrequent gastrointestinal or dermatological reactions.<sup>40</sup> A study monitoring the adverse effects of thousands of users of ginkgo, St. John's wort, and kava showed that less than 3% of patients encountered mild side effects. Digitalis species, *Rauvolfia serpentina* (L.) Benth. ex Kurz., (Apocynaceae) *Atropa belladonna*, and *Strychnos nux vomica* L. (Strychnaceae), among others, are toxic plants that are useful therapeutic agents that can be employed safely when administered in proper doses. On the other hand, there are medicinal plants that persistently evoke moderate to severe reactions, and should not be employed in any medical therapy. Plants including species of *Senecio*, *Crotalaria*, and *Symphytum*, which contain pyrrolizidine alkaloids having an unsaturated 1,2-double bond in the pyrrolizidine ring, should be avoided due to the hepatotoxic effect of these compounds. On the other hand, *Echinacea* species that contain non-hepatotoxic saturated pyrrolizidine alkaloids are safe for consumption. *Aristolochia* species are another example of plants containing toxic chemical constituents that should not be used medically. Aristolochic acid I, found in all species of *Aristolochia* that have been investigated to date, has been identified as a potent carcinogen and nephrotoxin. Renal failures, nephritis, and urinary tract neoplasm have been associated with use of Chinese and Kampo herbal medicine preparations that contain *Aristolochia* species. In recent years, it has become increasingly apparent that even therapeutically safe herbs can manifest toxic effects as a result of herb-drug interaction, when administered concomitantly with synthetic pharmaceutical agents. For example, St. John's wort (*Hypericum perforatum*), an effective botanical used in the management of mild to moderate depression, has been found to increase the effects of MAO inhibitors or serotonin reuptake inhibitors; reduce the blood levels, hence the pharmacological effects, of anticonvulsants (carbamazepine, phenobarbitone), anticoagulants (warfarin, phenprocoumon), oral contraceptives, theophylline, digoxin, cyclosporin, HIV reverse transcriptase inhibitors (nevirapine, efavirenz), and protease inhibitors (indinavir); increase photosensitivity when given with other photosensitizing drugs; and prolong narcotic-induced sleeping time. Such interactions must be considered when evaluating herbal preparations for integration into modern medical practices. Although by no means comprehensive, a series of recent reference books on popular medicinal plants have begun to address this issue. In addition to the toxic effects/interactions of intrinsic chemical constituents, adulteration of herbal medicine with synthetic drugs or contamination with heavy metals and microbes affect the safety of these products in therapy. Avoidance of these products in integrative medicine is recommended. Where safety information is lacking on any medicinal plants being contemplated for integrative medicine use, relevant research must be performed prior to its employment. The WHO has established guidelines for such studies. Adverse events, including drug-herb interaction must also be monitored to promote a safe integration of efficacious herbal medicine into conventional medical practices.

**Efficacy:** It has been estimated that currently more than 1500 herbal products are available in the US market alone<sup>60</sup> with little or no scientific documentation of either their safety or efficacy. For a valid scientific-based integration, pharmacological and clinical studies, especially, must be conducted on those plants lacking such data. Current clinical studies on herbal medicine have been carried out under a variety of conditions, including single case, open, blind, double blind, randomized, and cross-over studies. Ideally, all clinical studies should be conducted by the double-blind, randomized, cross-over method. However, this may not be feasible for a variety of reasons. Nevertheless, the most suitable method for a given herbal medicine should be used to assess its efficacy to validate its usefulness as an integrated therapeutic agent. In recent years, the effectiveness of a number of herbal medicines have been clinically validated, including garlic bulb [*Allium sativum* L. (Liliaceae)], andro-graphis [*Andrographis paniculata* (Burm. f) Nees (Acanthaceae)], senna leaf and fruit [*Cassia senna* L. (Fabaceae)], Gotu kola or Centellae herb [*Centella asiatica* (L.) Urban (Apiaceae)], black



cohosh root [*Cimicifuga racemosa* (L.) Nutt. (Ranunculaceae)], turmeric or curcuma rhizome [*Curcuma longa* L. (Zingiberaceae)], Echinacea root (*Echinacea augusti-folia* and *E. pallida*), Echinacea herb (*E. pupurea*), ginkgo leaf (*Ginkgo biloba*), St. John's wort (*Hypericum perforatum*), ginseng root (*Panax ginseng*), kava kava [*Piper methysticum* Forst. (Piperaceae)], plantago seed and husk (*Plantago* species), rauwolfia root (*Rauvolfia serpentina*), frangula bark [*Rhamnus frangula* L. (Rhamnaceae)], cascara (*Rhamnus purshiana* D.C.), rhubarb root [*Rheum officinale* Baill./*R. palmatum* L. (Polygonaceae)], saw palmetto [*Serenoa repens* (Bartr.) Small (Arecaceae)], milk thistle (*Silybum marianum*), valerian [*Valeriana officinalis* L. (Valerianaceae)], and ginger [*Zingiber officinale* Roscoe (Zingiberaceae)], among others. Such clinical validations represent a most important step in the scientific integration of herbal preparations into modern therapy. Unfortunately, these represent but a minuscule proportion of the number of evidence based studies needed for the clinician to use in integrative medicine. In order to answer the questions of "does it work?", "how does it work?", "is it safe?", "will it interact with conventional pharmacologicals?" in vivo pharmacological and clinical studies must be accorded to as many botanical products as possible. Such studies have been the subjects of much discussion, and the WHO has published a number of guidelines for pharmacological and clinical evaluation of herbal and traditional medicine. In clinical studies, be they open, single blind, double blind, randomized, or crossover, the clinician must be aware that standards of quality for botanical products do not exist in many countries, including the United States. Therefore, the products being evaluated must be accurately defined and the sources identified. Otherwise, the data being published will be invalid and/or misleading

#### **SPECIALIZED FIELDS OF PRACTICE WITHIN TRADITIONAL MEDICINE**

- 1) **Spiritualistic:** - A Practice that focuses on the spirit health of an individual and intervenes on his/her behalf. Diagnosis often includes lifestyle changes of individual or family and offering to various benevolent spirits. Also, this person often serves as a counselor, mentor or teacher to individuals or families. Their primary focus is on spirit well being of people. Their knowledge of culture is extensive and highly respected by the community, and they often carry titles of honor such as "faith keeper, holy person or priest".
- 2) **Herbalist:-** A practice that emphasizes botanical and pharmacological knowledge of the indigenous plant and fauna. Often these individuals work closely with other indigenous doctors and assist in providing remedies for individual for whom they diagnose. Their practice can be highly specialized in one field, such as remedies for snake bite or as diverse as illness themselves.
- 3) **Diagnosis Specialist:** - A practice that often involve communication with spirits, the supernatural and physical entities that assist in diagnosis. Diagnostician are often the "seer" of communication through ceremony who identify the ailments, remedies or ceremonies that are required to restore good spiritual, emotional and physical health and well beings. Often they work as referrals to other specialists.
- 4) **Medicine Man I Woman:-** A practice that may often possess all the above gifts and more. Their work is usually engaged in ritual, ceremonial activity and prayer. In some societies they are identified as "medicine man I woman" because they possess sacred bundles, sacred pipes, sacred masks and the right to rituals, songs and medicine that have been inherited from their parents, grand parents or that they earned through apprenticeship with a respected medicine man or woman. Depending on their nation, they are also the conductor of the community ceremonies. It is normative for these individuals to sacrifice their daily lives to rituals, prayers and healing.
- 5) **Healer:** - A gifted individual who may heal in a variety of ways, including all of the above and or a "gift" of touch, or energy work- meaning that rituals are not always needed. Healers can be ritualistic, but also may have an ability to use a variety of therapies to heal people spiritually, emotionally or physically.

- 6) **Midwife:** - Often these practitioners are women with specialized knowledge of prenatal care, birth assistance and aftercare. The midwife may employ the use of massage, diet medicine and rituals and counseling. Traditional midwifery exists worldwide and involves a variety of skills, often biophysical and ritual activities as well.

### MODELS OF ETHNOMEDICAL HEALING SYSTEM

The term ethnomedicine "refers to the comprehensive study of indigenous or traditional medical system. Typical ethnomedical topic includes causes of sickness, medical practitioners and their roles and specific treatment utilized. The explosion of ethnomedical literature has been stimulated by an increased awareness of the consequences of forced displacement and / or acculturation of indigenous people, the recognition of indigenous health concept as means of maintaining ethnic identities, and the search for new medical treatments and technologies. In addition finds ethnographic studies on "appropriate means of representing pluralism and of drawing upon those aspects of health and suffering to resist the positivism, the reduction, and the naturalism that biomedicine and, respectively the wider society privilege, in his exhaustive study of cross cultural practice, concluded that effective treatment inevitably contains one or more of four fundamental principles:-

- a. A shared world view that makes the diagnosis or naming process possible.
- b. Certain personal qualities of practitioners that appear to facilitate the patient's recovery.
- b. Positive patient expectations that assisted recovery.
- c. A scene of mystery that empowers the patients.

If a traditional medicinal system yields treatment outcomes that its society deems effective, it is worthy of considerations by biomedical investigators especially those who are aware of the facts less than 20 percent of world populations are serviced by western biomedicine. However what is considered to be "effective" varies from society to society. Western biomedicine places its emphasis upon "curing" (removing the symptoms of ailments and restoring a patient's health), while on the other hand traditional medicine focuses upon "healing" (attaining wholeness of body, mind, emotions and I or spirit). Some patients might be capable of being "cured" because their sickness is terminal. Yet, some patient's could be "healed" mentally, emotionally and I or spiritually as a result of practitioner's encouragement to review their life, find meaning in it, and become reconciled to death. Patients, who have been "cured", on the other hand, may be taught procedure that will prevent a relapse or recurrence of their symptoms. This emphasizes upon prevention as a standard aspect of traditional medicine.

### POPULATION USING TM /CAM WORLDWIDE

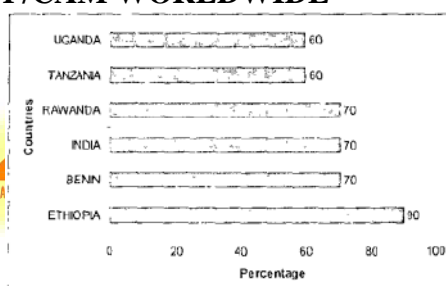


Figure 1: people use traditional medicine for primary care.

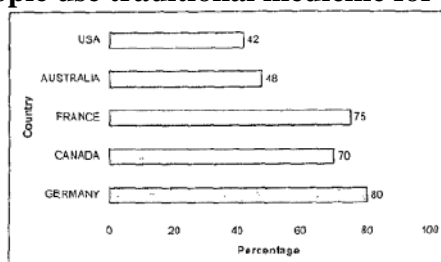


Figure 2 Developed-country population who have used CAM once



A differentiation can also be made between "disease" and "illness". From either biomedical or the ethnomedical point of view, one can conceptualize "disease" as a medicinal difficulty of the body resulting from injury or infections, or from an organism's imbalance with its environment. "Illness" however is a broader term implying dysfunctional behavior, mood disorders or inappropriate thoughts and feelings. These behaviors, mood, thoughts and feelings can accompany an injury, infections or imbalance or can exist without them. goes so far as to claim that allopathic biomedicine treats disease but not illness, "physicians are trained to practice a technological medicine in which disease is their sole concern and in which technology is only a weapon".

Comparison between biomedicine and ethnomedicine can be made utilizing hypothetical structure such as 12 faceted model proposed by Miriam Seiglar and Humphery. In the social and behavioral science, a "model" is an explicit or implicit explanatory structure that underlies a set of organized group behaviors. Their use in science attempts to improve understanding of the process they represent. Models have been constructed to describe human conflicts, competitions and cooperation. Models have been proposed to explain mental illness, personality dynamics and family interactions. modified the Seiglar I Osmond model, making it applicable to both physical and mental disorders although non western traditions usually do not differentiate between the two. The utility of Seiglar I Osmond can be demonstrated by comparing shamanic medical model an eclectic folk healing model and the western biomedical model o 12 dimensions:-

- a. **Diagnosis:** - Diagnosis is made on the basis of the history of the ailment, the symptoms and retrospectively by the response to treatment. Diagnosis may involve natural, psychological and I or spiritual procedure.
- b. **Etiology:** - Etiology or cause of the sickness depends on the type of the problem that is being treated. One type of indisposition is untreatable because the body's self healing capacities deal with it (e.g. constipation, indigestion, venomous bites) or because treatment is futile (e.g. mental retardation, infant deformities). Other type of ailments is amenable to treatment; the ailment may be a "wandering sickness" (caused by impurities that "wander" through the body) or a "staying sickness" (caused by improper behavior towards such power objects as buzzed feather or road runner bird). Etiology can also be natural, psychological or spiritual. The role of bacteria and viruses is taken granted as possible causal factor.
- c. **Patients Behavior:** -The patient's behavior provides important clues for diagnosis and treatment. Wandering sickness entails such sickness as fever, hives, piles or sores. Staying sickness can be identified by compulsive or erratic actions as well as lethargy or self destructive activities. The former ailment can be passed from one person to another, in contrast to latter.
- d. **Prognosis:** - Prognosis or anticipated outcome is hopeful if the treatment is appropriate, prompt, and powerful.
- e. **Death and Suicide:-** If the treatment does not work, or the patient's conditions can not be successfully treated, premature death may result or the indisposition may continue. Suicide can result from staying sickness.
- f. **Function of the Institutions:** -Treatment is attempted in an environmental setting prepared by shaman. The function of the institution, whether it is the home of the shaman, the home of the patient, any divine place, is to reflect the divine order and in doing so, to facilitate the patients recovery.
- g. **Personnel: -Rights and Duties of Patients:-** The patient's rights and duties are work closely with the shaman following his I her direction carefully.
- h. **Right and Duties of Family:** -The family's right and duties are of great importance because familial allegiance and obligations are overriding cultural values.



- i. **Right and Duties of Society:** - The society's right and duties are to support a patient's recovery because the entire community is concerned and affected when a member is ill.
- j. **Goal of the Model:** - The ultimate goal of each ethnomedicine is to assist the recovery of the patients, restoring his/her balance within a social framework that presents the tradition of the family and the culture.

In April 1995, the office of the Alternative Medicine of the United States National Institute of Health held a conference on research methodology. The charge of this conference was to evaluate research needs in the field of Complementary and Alternative Medicine (CAM). The panel defined CAM (Complementary and Alternative Medicine) as follows:-

"Complementary and Alternative Medicine (CAM) is a broad domain of healing resources that encompasses all the health systems, modalities and practices and their accompanying theories and beliefs, other than those instincts to politically dominant health system of a particular society or culture in a given historical period. CAM includes all such practices and ideas self defined their users and presenting or treating illness, or promoting health as well being".

The second charge of the panel was to establish a list of parameters for obtaining through descriptions of Complementary and Alternative Medicine system. The first was constructed into 14 categories first conceptualized by Hufford (1995).

- ✓ **Lexicon:-** What are the specialized terms in the system?
- ✓ **Taxonomy:-** What classes of health and sickness does the system recognize and addresses?
- ✓ **Epistemology:-** How was the body of knowledge derived?
- ✓ **Theories:-** What are the key mechanisms understood to be?
- ✓ **Goals of Interventions:-** What are the primary goals of the system?
- ✓ **Outcome Measures:-** What constitute successful interventions?
- ✓ **Social Organizations:-** Who use and who practice the system?
- ✓ **Specific Activities:-** What do the practitioners do? What they use?
- ✓ **Responsibilities:-** What are the responsibilities of practitioners, patients, families and community members?
- ✓ **Scope:-** How extensive are the systems application?
- ✓ **Analysis of Benefits and Barriers:-** What are the risk and the cost of the system?
- ✓ **Views of Suffering and Deaths:-** How does the system view suffering and deaths?

**Comparison and Interactions with other Dominant systems:-** What does this system provide that the dominant system does not provide? How does the system interact with the other dominant system?

## TRADITIONAL MEDICINE AND MODERN MEDICINE

Traditional and modern systems of medicine were developed by different philosophies in different cultural backgrounds. They look at health, diseases and causes of diseases in different ways. These differences bring different approaches to health and diseases. However, both systems deal with the same subject – human being. The old and modern arts of healing should exist together.

### Integration of traditional medicine with modern medicine

The integration of traditional medicine with modern medicine may have three different meanings. First, it may mean incorporation of traditional medicine into the general health service system. The government recognizes the practice of traditional medicine and the use of traditional medicine is incorporated into the mainstream of health service system. In the Region, traditional medicine has been an integral part of formal health service system in several countries, albeit in different forms.

Second, it may mean integration of the practice of traditional medicine with that of modern medicine. In fact, many medical doctors who have adequate knowledge of traditional medicine have tried to incorporate remedies used by traditional medicine into their daily work. In some



places, traditional and modern medicine are practised side by side. Studies have also shown that many patients use both traditional and modern medicine.

Third, it may mean the integration of traditional and modern medicine as two branches of medical science. Although traditional and modern medicines have developed in different cultural contexts and are at different stages of scientific development, they have many similarities. Efforts have been made to synthesize the two branches, in order to form a new branch of medical science, incorporating elements of both. However, at this stage this would appear to be a difficult task.

### **The need for harmonization of traditional and modern medicine**

Increased cross-cultural communication has resulted in the exposure of many indigenous forms of traditional medicine to new, more modern, medical environments. Various responses may and have occurred to the presence of differing approaches to health care. These range from complete rejection of TM by modern medical practitioners and of modern medicine by TM practitioners, to a parallel existence with little communication over patient care, or to ultimately forced understanding, subsuming and integration of one model by the other. None of these approaches is ideal precisely because none confers adequate respect on the practices of the other. This results in a weak utilization and exploration of the benefits presented by each model.

Harmonization of traditional and modern medicine emphasizes the importance of respectful co-existence. Within the model of harmonization, there is the requirement to develop and hold a good understanding of the other approaches to health care. Modern medicine practitioners and researchers are required to achieve adequate education and awareness of the practice, principles and context of traditional medicine. Similarly, TM practitioners need to be significantly more aware of the nature of practice and strengths of modern medical approaches. The purpose of this broader education base is not simply to yield a better understanding of differing practices, but primarily to promote the best care for patients by intelligently selecting the most facilitating route to health and wellness.

Surveys and other sources of evidence indicate that traditional medical practices are frequently utilized in the management of chronic diseases.<sup>7</sup> It is particularly for this category of illness that TM has developed a reputation. It is also in this area of treatment that modern medicine is considered the weaker. An approach to harmonizing activities between modern and traditional medicine will promote a clearer understanding of the strengths and weaknesses of each, and encourage the provision of the best therapeutic option for patients. The alternative to this is poor health care practice and bad medicine, most especially as the quantifiable scientific evidence of effective TM practices mounts.

Collecting evidence based on research is, therefore, regarded an essential step, although, of course, much more is involved in harmonization.

### **CONCLUSION**

The ancient civilisation of India created a plethora of medicinal procedures for treatment of ailments. Several of the procedures had no scientific underpinning but some of them are so successful and beneficial that they could preserve their utility for over three millennia in India right up to the present moment. The whole Indian traditional therapeutic ways of treatment was a blend of two sets of approaches one being cosmic, mystic, magico - religious and the other positive, rational and based on empiricism. Both the ways might well keep control over the populace over the years down to the current day on account of having true positive value-oriented consequence that could be felt and imbibed by the suffering masses. In ancient times plants have constituted the primary significant substance of this age - old conventional variety of medications. Throughout hundreds of years herbal substances were found largely via empirical observations and similarly huge numbers of herbal medications have come to be made. The ancient medical practitioner scum-scholars used to document their discoveries in enormous texts. The well-known Atharvaveda is a work of this nature. It is regarded to be the





oldest ancient treatise on medicine. Another great work is the Ayurveda which is closely related with the Atharvaveda. That these writings thought of ayus, long life, and arogya, illness lessness, is itself a good trait of medical growth in India. These most ancient texts of medicine are the only sources of medical knowledge in India ever since their start for more than two thousand years. Walker (1983:104) asserts that in practise the Ayurveda encompasses the study of the cause, symptoms, diagnosis and cure of illness. However this old medical wisdom contained in the Ayurveda did not have any global distribution nor could it be partaken of by all and sundry of the society.

The classical old civilization of imparting learning of the various disciplines to the select few of the society in the house-constitution of the Guru, the instructor, himself. The term "Gurukul" refers to the educational model in which students live as boarders at the residence of their teacher (or "Guru") and receive teaching there (Mitra, 1967: 18-19) Those individuals who were successful in their studies of both the Atharvaveda and the Ayurveda were then promoted to the position of medicine-men ~~who specialized in~~ their respective fields within the community. A handful of such medical professionals at any given point in time in India's hazy historical past were a drop in the ocean compared to the huge population at any given moment in time in India. They were scarcely capable of satisfying the medical requirements of the great majority of people living on the Indian subcontinent. Folk medicine practitioners in India were able to meet the country's massive demand for medical professionals. There was no question that a large number of herbal medicine practitioners came out to attend to the requirements of the afflicted people. And it's quite unlikely that there was ever a shortage of them throughout any point in history. To become a practitioner of folk medicine did not need a great deal of mental effort. Even in this day and age, there are still many uneducated people who choose to practise traditional medicine. It would not be difficult for the majority of regular people to begin the practise, given that they possessed the necessary skills and had the intention of helping their fellow beings who were in pain.

In point of fact, in accordance with the age-old Indian tradition of attaching primacy to moral and ethical values and norms, the practise of folk medicine is taken up more from a humanitarian perspective than from a professional pursuit of earning a living for oneself. This is because the Indian culture has always attached primacy to moral and ethical values and norms. The exceedingly slow rate at which the Ayurveda classical system of medicine has spread from its centre of origin to every nook and cranny of such a large country as India is an immensely relevant characteristic of the Ayurvedic classical system of medicine. It is a well-known fact that the classical civilisation of India had its beginnings in the Indus Basin some three thousand years before the common era. One may say, without the shadow of a doubt, that the Atharvaveda and the Ayurveda could have originated in the same place. This is a strong possibility. So, more than a thousand years must have passed before the Ayurvedic system of treatment could be made available in hundreds of the country's most distant areas. Before the Ayurveda system or any other system could reach them, it is obvious that the majority of rural populations already had their own folk system of medicine in place. It should come as no surprise to learn that it would be impossible for any civilization to persist without the development of some form of the human body. As a consequence, each unique group must have developed its own method of medical treatment over time. And what would that system be like if it didn't make use of a wide variety of plant species? In other words, man must have been forced to seek for an antidote in order to defend the human body against the incurable diseases that were plaguing it.

It stands to reason that the components of antidotes must have originated from the plant kingdom in some way, shape, or form. They are all accessible and may be acquired with a moderate amount of work or financial investment. The majority of man's bodily ills have been successfully treated by man-made medicines. They have come to be utilised in the majority of village communities wherever an abundant number of different plant species can be found.

Folk medicine is extensively used and recommended for the purpose of alleviating man's bodily ills and sufferings since it requires very little in the way of specialised medical training or knowledge to prepare. As indicated in the foregoing pages, a good deal of trial and error might precede the ultimate acceptance of a herbal medicine as a dependable antidote against a particular malady. The knowledge that individuals have regarding the therapeutic or restorative properties of a particular herbal specimen can be thought of as a form of laboratory testing. The current inquiry, titled "Traditional medicinal system tribe done with the following aims and objectives," attempts to learn more about traditional medical practises:

1. To investigate the factors that lead people to use traditional treatments.
2. To get an understanding of the types of diseases and conditions for which individuals seek help from traditional therapies.
3. To compile a record of a conventional body of medical knowledge.
4. To chronicle the various facilities, infrastructure, and the influence of the Modern Medical System Communities that are available in the region under study that are supplied by the state and private authorities.
5. to recognise and collect samples of the plants and animal materials that are used by the community for therapeutic reasons. 5. to conduct research on the community's usage of medicinal plants and animal materials.
6. To examine the chemistry as well as the toxicity of the active components of the herbs that are being researched.
7. To be familiar with prevalent diseases and the treatment of such diseases using traditional herbal medicine.

#### **SUGGESTIONS FOR FURTHER RESEARCH:**

It is possible that the use of distinct abilities that are not associated with the kind of healer, such as the use of blowing treatment by a herbalist, will turn out to be extremely enlightening on the operation of the traditional medical system among traditional cultures. Herbalists are extremely skilled healers who keep a significant amount of historical medicinal knowledge alive. It is recommended that research that is both more in-depth and more standardised be carried out so that a more thorough analysis of their profession may be carried out.

Experts in incantation and various forms of magic were frequently spotted throughout the field survey. It is imperative that more study be carried out in order to ascertain their place inside the conventional medical system. A map depicting various health concerns Healers are able to shed light on the many sorts of ailments that plague their communities by treating the circumstances that bring them to their attention. An informational map of the health conditions that are prevalent within the community may be generated as the result of a comparative study between the conditions of the human body that are treated by healers and the conditions of the human body that are treated in local hospitals and district clinics. This might be put to use in enhancing the level of healthcare provided by the community. Localization of plants with therapeutic properties. There is a need for further research to be carried out on the geographic location and source of medicinal plants in rural areas. Studies on whether proximity to different resources of materia medica (for example, forests versus rice fields, the use of large versus small plants for medicine) may provide some insight into how traditional healers make decisions about using local natural resources, particularly when changes in resource availability take place.

#### **RECOMMENDATIONS: -**

1. Initiating some exploratory investigations to find diverse plant species that have some medicinal bearings is something that should be done, and the local medicine man should be an active partner in these studies.
2. Conduct an in-depth investigation of the indigenous practises of extraction and application, contrasting such practises with well-established norms, with the goal of enhancing the indigenous approaches to science and technology.



3. The existence of many species in their native environment is in jeopardy as a direct result of the rapid depletion of the forest cover in many locations and the expansion of industrial activity in other places. As a result, it is essential to create scientific techniques of producing the plant with the cooperation of the indigenous communities.
4. The destruction of different types of herbs as a result of industrial and other types of project operations have to be legally regulated in some way.
5. Certain training programmes for the scientific ways of cultivating medicinal plants, extracting their active ingredients, and selling those ingredients should be launched.

## BIBLIOGRAPHY

1. Abdulla Naseef SA, Ajesh TP, Kumuthakalavalli R (2012) Study on folklore medicinal practices of Paniya tribes for Gynaecological ailments. Int j pharm bio sci 3(4): 493 – 501.
2. Adhikari R, Kraus W (1994) Bioactive constituents of Eupatorium adenophorum Spreng.(Banmara). J Nepal Chem Soc 13:34-46.
3. Ahmad I, Beg AZ (2001) Antimicrobial and phytochemical studies on 45 Indian medicinal plants against multi-drug resistant human pathogens. J Ethnopharmacol 74:113 – 123.
4. Ajesh TP (2014) Ethnogynaecological studies of the tribes in Idukki district Kerala India PhD Thesis Gandhigram Deemed University Tamil Nadu.
5. Ajesh TP, Krishnaraj MV, Prabu M, Kumuthakalavalli R (2012) Herbal Abortifacients Used by Mannan Tribes of Kerala India. International Journal of PharmTech Research Coden (USA) IJPRIF 4(3): 1015-1017.
6. Ajesh TP, Abdulla Naseef SA, Kumuthakalavalli R (2012) Ethnobotanical documentation of wild edible fruits used by Muthuvan tribes of Idukki Kerala India. Int J Pharm Bio Sci 3(3): 479 –487.
7. Ajesh TP, Abdulla Naseef SA, Kumuthakalavalli R (2012) Preliminary study on the utilization of wild vegetables by Muthuvan tribes of Idukki district of Kerala India. IJABPT 3(2): 193-199.
8. Ajesh TP, Kumuthakalavalli R (2012) Ethnic herbal practices for gynaecological disorders from urali tribes of Idukki district of Kerala India. Int J of Pharm & Life Sci 3(12): 2213-2219.
9. Ajesh TP, Kumuthakalavalli R (2013) Botanical Ethnography of Muthuvans from the Idukki district of Kerala. IJPAES 3(2): 67-75.
10. Altschul Siri Von Reis (1973) Drugs and Food from little known plants, Harvard Univ. Press Massachusetts.
11. Angala Mathew, Babuji Mathew, Ajesh TP (2016) Ethnomedical survey of medicinal plants having antipyretic effect used by Paliya tribes in Idukki district of Kerala. J Traditional and Folk Practices 02,03,04(1): 178 – 184.
12. Anil J John, Varughese George, Nediyparambu S Pradeep, Mathur G Sethuraman (2008) Composition and Antibacterial Activity of the Leaf and Fruit Oils of Pittosporum neelgherrense Wight et Arn. Journal of Essential Oil and Research 20(4): 380-382.
13. Anil K, Kavita G, Jyotsna D, Pankaj S (2011) Analgesic activity of methanolic extract of Flemingia strobilifera (R.Br) Int J Res Pharm Chem 1(4): 815-827.
14. Anjana S, Verma R, Ramteke M (2009) Antibacterial Activity of Some Medicinal Plants Used by Tribals Against Uti Causing Pathogens. W App Sci J 7(3): 332- 339.
15. Anvar K and Jazir Haneef (2015) Ethnobotanical plants used for postnatal care by Traditional practitioners from Kozhikode District Kerala India. IJRPC 5(4): 570-581 Sience 4(5):2212-2235.