

## Need For Conservation of Indigenous Medicinal Knowledge and the Herbs

Malaya K. Misra

*Ecology and Floristics Laboratory, Department of Botany, Berhampur University, Berhampur 760 007, Orissa, India*

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**ABSTRACT** Rural people preferred traditional, culture-rooted cures of indigenous healer, because of easy accessibility, low cost, cultural acceptability, elaborate patient-healer interaction, long term family association, friendly attitude of the healer and so on. In the present study the reasons stated are found true with the tribals of South Orissa.

It is very difficult to know when human beings started using medicines for treating diseases. Probably, by hit and trial they might have discovered certain plants around them as remedies for their diseases. Humans, over the ages, under force of circumstances, probably became the experimental tool for the discovery of drugs. In this process many lives might have been lost to screen out the plants with medicinal properties from those of harmful drugs or poisonous plants. Folk medicines/ethnomedicines are the first indigenous medicines for treating human ailments. Much of these medicines remained within a specific community in a developing country like India. Unfortunately, the indigenous medical knowledge remained in oral form and could not be documented, and this knowledge was passed from one generation to another. The objective of this paper is to discuss the pros and cons of indigenous medicines and conservation of medicinal herbs at length.

Ethnomedicine (or medicobotany) presently includes several specialised disciplines such as ethnobotany (Schultes, 1956, ethnopaediatrics (Altschul, 1970) and ethnogynaecology (Schultes, 1963; Tarafder, 1983 a,b, 1984). Traditional medicine is generally referred to as the codified systems such as Ayurveda, Unani, Sidha and Yoga. In WHO technical report (WHO, 1978) it is defined that traditional medicines as "... the sum total of all the knowledge and practices, whether explicable or not, used in diagnosis, prevention and elimination of physical, mental

or social imbalance and relying exclusively on practical experience and observation handed down from generation to generation, whether verbally or in writing. Traditional medicine might also be considered as solid amalgamation of dynamic medical know-how and ancestral experience." All these types of medicine such as folk or ethnomedicine, Ayurveda, Unani, Sidha and Yoga may be grouped under indigenous medicine.

It is a general feeling that indigenous medicines are not based on any pharmacological experiments or scientific testing. This is erroneous. Traditional medicines had undergone much scientific testing through the study and analysis of properties, therapy and experience on patients over long periods. Gaur and Gupta (1970), while reviewing the pharmacological evaluation of drugs in ancient India, have narrated several accounts and evidences of analyses and approaches resembling pharmacological investigations from ancient times. Shankar (1997) cited several instances of folk medicine practised in ancient India, for example; plastic surgery-practised by a community of potters was documented in the 18th century by the Britishers. Similarly, the Britishers had done a detailed documentation for small pox that was prevalent before the introduction of Jenner's vaccine and it was banned by the government in 1804. Folk orthopaedic tradition still continues in India. Its specialists treat not only the dislocation of joints but also simple to compound fractures. The traditional birth attendants manage 90 per cent of delivery cases in rural areas.

Let us consider some of the folk medicines which were confirmed scientifically. The medicinal properties of milk, which has been used in folk medicine, has now been established by scientists (The Indian Express (Sci. Express) 14 Oct. 1997). Honey and potato peels used for burn

wounds have also been proved scientifically, for they contain medicinal properties. The use of *methi* or fenugreek (*Trigonella foenum-graecum*) against diabetes is confirmed by scientific investigations. Stem bark powder of *Holarrhena antidysenterica* is useful in intestinal amoebiasis (Singh, 1986); root powder of *Withania somnifera* (Aswagandha) in anxiety neurosis (Singh and Malviya, 1978), whole plant paste of *Andrographis paniculata* in infective hepatitis (Chaturvedi et al., 1983), root powder of *Asparagus recemosus* (Satavari) (Singh 1985) and fruit of *Embllica officinale* (alma) in peptic ulcer (Varma et al., 1977).

In modern medicine, except the vaccine, at present there is no treatment (medicine) for jaundice (hepatitis). People particularly in south Orissa totally depend on the whole plant extract of *Phyllanthus fraternus* or *Indigofera tinctoria* or root extract of *Lawsonia innermis* for oral administration. The bitter gourd (Kerala) (*Momordica charantia*) has 'anti-diabetic' properties.

Plants in general greatly influenced all ancient cultures and civilisations of the world. The oldest and richest indigenous Indian culture is mostly reflected in its folklore. The diverse health traditions are mostly associated with or centered around medicinal plants or plant products. These health traditions are still continuing in rural India. The use of herbal medicines is observed amongst traditional birth attendants, bone setters, herbal healers, witch doctors, and wandering monks. Besides, Indian rural women still practice traditional herbal remedies. All these constitute the 'folk-medicine' stream of the Indian medical heritage (Shankar, 1997). According to the WHO (1978: 41) indigenous healers are a "group of persons recognised by the community in which they live as being competent to provide health by using vegetable, animal and mineral substances and other methods based on the social, cultural and religious backgrounds as well as the knowledge, attitudes and beliefs that are prevalent in the community regarding physical, mental and social well-being and the causation of disease and disability."

Rural people (particularly tribals) use ethnomedicines with a strong spiritual belief. They have strong faith in herbal healers. Mantras (holy litany) are also associated with herbal

medicines. The magico spiritual and religious beliefs may not have a scientific basis, but it has great impact on the psychology of the patient. Therefore, these beliefs cannot be simply ignored. Strong spiritual beliefs and magical aspects have their own significance in curing the diseases of tribals (Gelfand, 1970). In Ayurvedic medicines, this part has also been given emphasis. The compatibility or acceptability of a substance or a thing by the patient is what is considered by Ayurvedic scholars as one of the primary factors that determines what may be a drug in his case at any phase of disease. In modern medical science psychotherapy diseases (Pal, 1989). King (1962) has clearly mentioned the theory of illness and its cure with respect to traditional societies. According to him "beliefs and attitudes towards disease in any group will be held with tenacity and assurance that they are quite to explain and handle illness. People believe that the malific action of another human being or intervention by a supernatural power cause disease, which can be cured only by resort to appropriate magical formula or application to the supernatural power."

In rural areas (particularly, hilly-forested areas) modern medical facilities are not available. Some of the human settlements (which are in remote areas) do not have transport facilities. People carry the ailing persons on traditional stretchers to the nearest available health care agency. Today in India about 300 million people live below the poverty line (in Orissa about 45 per cent of the total population lie below poverty line). Tribals in the forested hilly areas collect rhizomes, mango seeds, some leafy vegetables from the forest and consume for their sustenance. With the prevailing economic condition it is impossible for them to undergo modern medical treatment which involves a lot of money. Moreover, only 20-30 per cent of the Indian population have access to the state managed health service. The rest are forced to undergo treatment in private nurseries which is very expensive. Thus, weak economic condition is one of the important causes which deprives the people from modern health care. This group of people, therefore are compelled to take the help of traditional healers for their treatment which is less expensive.

Lamba and Mehta (1995), while surveying the Mandla district of Madhya Pradesh, expressed the view that the majority of tribals and non-tribals preferred the traditional, culture-rooted cures of indigenous healer. They have stated a number of reasons for this, viz. easy accessibility, low cost, cultural acceptability, elaborate patient-healer interaction, long term family association, friendly attitude of the healer and so on. These reasons are also true with the tribals of South Orissa.

The traditional medicine has several advantages over the western medicine. These advantages were grouped under four categories such as availability, accessibility, acceptability and adaptability and Anyinam (1987) examined and reviewed these attributes in Africa.

It is likely that 75-80 per cent of the world's population depend chiefly on traditional medicines for primary health care (Marine-Bettolo, 1980). In many of the developing countries (including India), majority of the population depend on traditional drugs for the treatment of their diseases. In all types of traditional medicines, natural use of plants is practised. It is not surprising that plants are the major source of raw materials for preparation of drugs used in Ayurveda and other traditional systems of medicine throughout the world. In earlier days, as these plants were plentifully available; there was no need to conserve them.

In India, there is revival of interest in Ayurvedic medicine. Global interest on ayurvedic medicines has been elucidated by Pal (1989). He has elaborately discussed the interest shown by the western people on Ayurveda. Thus, there will be a heavy demand on medicinal plants in near future.

In India, Ayurvedic and homoeopathic systems have been slowly patronised through the government and non-government organisations. In India, as well as in other developing countries, Ayurvedic pharmaceutical industries have been developing to meet the increasing drug demand of the growing population. It will not be out of place to state that WHO have formulated certain policy guidelines in which the integration of traditional healers into primary health care was recommended. In this line, the state government of Ghana has recognised traditional

medicines since independence and there is an integration of western and indigenous health systems (Brown, 1996). No doubt, there is opposition from the western medical trained practitioners in this integration around the developing world.

The modern drugs are mainly based on laboratory chemicals discovered by scientists. Some of the synthetic chemicals used for drug are synthesised in the laboratory with the help of the clue obtained from medicinal plants. About 25 per cent of the modern drugs used are based on active compounds extracted from plants. Many of these active compounds, mostly secondary metabolites produced by plants, are very difficult to synthesise in laboratory by chemists. Secondary compounds are more complex and are commonly found in certain taxa (family, genus or species) (Balandrin et al., 1985), but heterogeneity of secondary metabolites found in wild species. The vast range of plant diversity that exists in the tropics is irreparable and a valuable source of secondary compound. Thus there is a potentiality of new compounds of medicinal value in the plants for screening programme. These varieties of plant chemicals available for screening can be enhanced by manipulation, for example by the induction of repressed pathway or through techniques of tissue culture (Quoted in Fellows and Scofield, 1996). Sometimes a healthy specimen may not produce an active chemical but its production can be induced by infection with a fungus.

It may be anticipated that the random screening of plants for active chemicals is as important as the screening of ethnobotanically targeted species (Fransworth, 1988; Principle, 1989).

Some of the human diseases are presently restricted to certain geographical areas, but as a whole disease distribution pattern in the world is not static. Some of the diseases have been brought under control while some gain prominence. On the other hand some new diseases are surfacing slowly. In this context, the chemicals found in the plants, presently not valuable as drugs, but in future this may be proved rewarding for the new diseases. For example, *Catharanthus roseus* traditionally used for the control of diabetes, was screened initially for its hypoglycaemic activity but was later shown to be active

in treatment of cancer (Kingston, 1992). The remedies traditionally used in the developing countries, may prove helpful for the diseases found in developed countries which are completely different. So also plants endemic to a locality may be useful to the diseases of other areas. Realising the potentiality of plants to serve as diverse source of new drugs the importance of biodiversity should be realised as a kind of insurance against future problems, and actions should be initiated world over.

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