

**CONSERVATION
OF
MEDICINAL PLANTS**

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Chapter-XVII

ETHNOMEDICINE AND HEALTH MANAGEMENT PRACTICES AMONG THE HILL KORWA AND BIRHOR OF CHHATTISGARH: AN ANTHROPOLOGICAL APPRAISAL

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INTRODUCTION

India has some of the richest, oldest and diverse cultural traditions associated with use of medicinal plants since centuries, and this is still a living tradition in the Chhattisgarh state. The biodiversity of medicinal plants is associated with a very rich cultural diversity related to India's traditional systems of medicine. Traditional Medicine is a diverse stream, which is ecosystem and ethnic community specific. It is an oral tradition purely empirical in nature that exists in all-rural and tribal communities throughout the length and breadth of India.

Health is a function not only of medical care but a set of over all integrated development of society i.e. social, cultural, spiritual, economic, etc. It is attached by socio-economic status, family composition, customs, beliefs, life style and use of available medical facility, etc. In fact, health influence man's all activities and shapes his destiny. Ethnomedicine deals with disease classification and

concepts, ethnomedical therapy and preventive measures, ethnomedical specialists, cultural aspects of ethnomedicine, etiology and diagnosis of disease and modern verses traditional practices. The domain of ethnomedicine is thus an indigenous or traditional medical feature, that to which Hughes (1968) refers as not explicitly derives from the conceptual framework of modern medicine. World Health Organization (WHO 1978) defined Traditional medicine as "the sum of all the knowledge and practices, whether explicable or not, used in diagnosis, prevention and elimination of physical, inevitable, mental or social imbalance and relying exclusively on practical experiences and observation handed down from generation to generation, whether verbally or in writing". Reddy in 1986 redefined traditional medicine as "it is that of whole, which includes a holistic knowledge and practices, oral or written, functioned in diagnosis, prevention and curative aspect of illness & disease to promote total well-being, confine explicitly or implicitly to practical experiences and observations or know-how techniques with or without local/regional culture having overtone of religion or not". He asserted that disease does not exist, what does exist is not disease but practices. These imply that the traditional medical practices embedded in the cultural milieu of the society. Saha (1988) suggests that the health cultures of the tribal communities should be examined with reference to the ecological, social, economic and occupational contexts.

The state of Chhattisgarh being placed in Deccan biogeographical area, houses an important part of rich and unique biological diversity. What is a more conspicuous is that the state is significantly rich in endemism with respect to many plants having medicinal importance. The forests of the state fall under two major forest types, i.e., Tropical Moist Deciduous forest and the Tropical Dry Deciduous forest. The state of Chhattisgarh is endowed with about 22 varied forest sub-types existing in the state. Biogeographically, the state falls in Deccan bio-region. The nascent state Chhattisgarh is plant biodiversity hotspot and it is declared as Herbal State.

Chhattisgarh has one-third tribal population. The traditional medical knowledge system of tribal communities is vast and varied. Their ecospecific and ethnospecific knowledge is having

tremendous commercial potential. The transmission of this knowledge to the younger generation is not taking place as in the past. The tribal healer's wisdom is often sidelined and regarded as supernatural and irrational. The rational and efficacious part of this knowledge and skill need conservation and revitalization for posterity. There is a need to promote convergence of indigenous knowledge and skill need conservation and revitalization for posterity. There is a need to promote convergence of indigenous knowledge and skill for health care results with the help of people participation to leverage the share of Chhattisgarh in the herbal medicine market and wealth.

Therefore, there is an urgent need for initiating group specific health need research, in the field of Health and Ethnomedicine, which ultimately help in formulating effective need based health care strategies among the tribal groups. Such studies need special attention in the context of the Tribal Development because the health problems, health status and health care practices are different from tribe to tribe.

As there is a paucity of systematic scientific research in this direction therefore, to fill this gap the present study has been conducted on Birhor and Hill Korwa primitive tribes of Chhattisgarh.

Brief Historical Background

Traditional medical knowledge (TMK) is a body of knowledge associated with the long-term occupancy of a certain place regarding health management practices. It is experimental, informal, uncoded knowledge as opposed to the 'literate or expert' knowledge typically attributed to Western or Modern Science.

A short history of Medicine can be explain as:

I have an earache.

2000 B.C. - Here, eat this root.

1000 A.D. - That root is heathen, say this prayer.

1850 A.D. - That prayer is superstition, drink this potion.

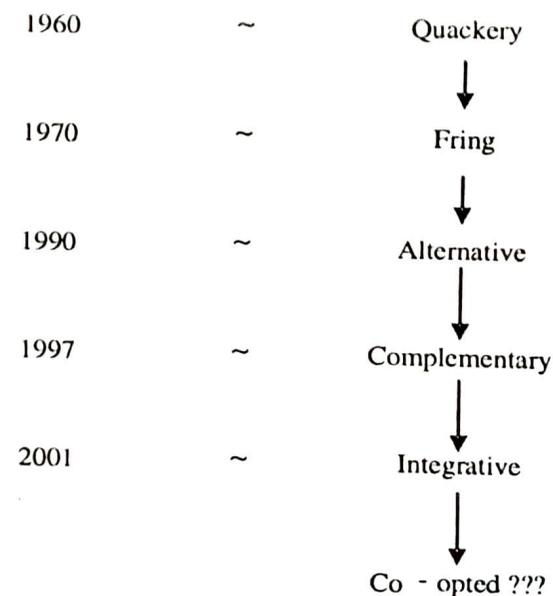
1940 A.D. - That potion is snake oil, swallow this pill.

1960 A.D. - That pill is ineffective, take this antibiotic.

2000 A.D. - That antibiotic is artificial. Here, eat this root.

(Source: FRLHT)

The progression of Medical Acceptance for Alternative Methods of Healing can be summarized as:



A BRIEF REVIEW OF WORK ALREADY DONE IN THE FIELD

The concern for social and cultural aspects of health and the etiology of disease is rooted in early medical history (Jaco, 1958). Variations in health were connected with variations in social circumstances and habit patterns during the 19th Century (Rosen, 1963; Dubois, 1965 and Veith, 1966). This led to an impressive development of social medicine under the leadership of Villerme in France and Virchow in Germany (Nandy & Mukherjee, 1990). They emphasized the need for scientific investigations of impact of social conditions on health and advocated social intervention to promote health and combat diseases. Prior to that time, descriptions of etiological beliefs and medical practices in simpler societies had

been important components of certain ethnography and substantial works on the worldwide distribution of etiological concepts.

Since then the situation has changed considerably, and there has been a marked increase in work by anthropologists in medicine and medically related areas as a "Medical Anthropology" branch. A spectrum of area includes ethnomedicine, ecology and epidemiology, medical aspects of social systems, community medicine, medical education, nursing, pediatrics, population planning and medicine and cultural change (Medical Anthropology, News Letter, 1969).

Ackerknecht (1942) summarized in a series of papers the medical anthropological viewpoints of traditional primitive medicine. Few anthropologists have conducted intensive studies on the medical beliefs and practices of a few communities from the beginning of this century as a part of their ethnographic descriptions (Evans-Pritchard, 1937; Gillin, 1948; Field, 1973; Spencer, 1941; Harley, 1941 & Others). Rivers (1924) have been even made scientific analysis of the relationships between culture and medicine. The works of Field (1937) on the religion & medicine of the 'Ga' people, Spencer (1941) on disease, religion & society in the 'Fiji Islands'; & Harley (1941) on the 'Mano' of Liberia, which includes an analysis of African medicine, in general are worth mentioning in this context. The fundamental beliefs causing illness in all primitive societies are found to be sorcery, breach of taboo, spirit intrusion or soul loss (Clements, 1932). Caudill (1955), Polgar (1962), Scotch (1963), Fabrega (1972), Lieban (1973), Nandy & Mukherjee (1990) and others have reviewed extensively the existing literature of medical anthropological research.

EMPIRICAL RELEVANCE

The studies on medical belief and practices and the conditions of health formed part of ethnographical and anthropological research in India too. Field studies on some aspects of health and medicine in tribes of Chotanagpur first appeared in the twenties of this century (Nandy & Mukherjee, 1990). The most noteworthy contribution is the monumental work of Bodding (1925). Surveys of diet and other aspect of health (Mitra, 1940; Majumdar, 1948, 1957 & others), notes on myths and rituals regarding disease

(Elwin, 1955, Balaratnam, 1946), problems of drinking water, witchcraft and health aspects of material culture (Iyer, 1949) were done by the anthropologists.

Anthropological studies were conducted on tribal health in relation to economy and culture, sanitary conditions and treatment among the Juang and other tribes (Mukherjee, 1974). A few studies also provide information on the interaction between indigenous and modern medicine. A number of anthropologists like Majumdar (1957), Marriott (1955), Carstair (1955), Khare (1963), Opler (1963), Hasan (1967), Carstair & Kapur (1976), Mukherjee (1974), Basu (1986) & Chaudhuri (1986) have conducted investigations in this field. Chaudhuri's endeavor to publish two seminar volumes addressed to socio-cultural and environmental aspects of tribal health are noteworthy contributions in the field of ethnomedicine.

It is thus quite evident from the above brief review that very little work has been done in India and practically no work has been done in Chhattisgarh region harbouring a very large number of indigenous flora, in addition to a variety of tribes which are even today very primitive and maintain their cultural heritage. As no such work seems to have been done in Birhor and Hill Korwa primitive tribes of Chattisgarh hence, the present research project was proposed.

AIMS AND OBJECTIVES

This piece of empirical investigation has been designed and executed with following objectives.

1. Consolidate the available data on traditional health care practices (curative and preventive) of two primitive tribal groups (PTG) of Chhattisgarh, namely Birhor and Hill Korwa.
2. Identify traditional tribal healers among these PTGs and documenting their medical knowledge accumulated since ages.
3. To examine the various cultural factors, which influence health and the disease, and to find out various factors

preventing the disease, reasons for disease and illness, treatment and supernatural beliefs related to these; etc.

4. A plan for the consolidation and conservation research and development of traditional health care practices by pooling the knowledge of the individual healers.
5. To assess the potential of ethnomedicine and evaluate them scientifically in terms of efficiency.
6. Arbitrate between bioassay researches and tribal healers in the researches on tribal medicine for safe guarding the tribal intellectual property rights.

Population under study

Government of India has identified seven primitive tribes in Madhya Pradesh (M.P.) on the basis of their primitive level of technology, low literacy rate and almost stagnant or diminishing population growth rate. Five among them inhabit in newly formed Chhattisgarh State, which formed by carving out southern part of M.P. on 1st November 2000.

Birhor

The term "Birhor" is made up of two mundari words 'BIR' and 'HOR' where "BIR" means jungle (forest) and "HOR" means man. So it means "jungle ka adami", a "man of forest".

Birhor is one of the five identified primitive tribes of C.G. Birhors are inhabited in Raigarh and Jashpur districts. They are vanishing, nomadic, hunters, rope maker, gather, isolators and a group of half fed and half naked people. Their economy is based on food gathering and making ropes. They speak Mundari language of Austro-Asiatic family. Ethnically the Birhor belongs to proto-Australoid group.

Hill Korwa

They are branch of Kolarian tribe and belonging Mundari language family. According to Anthropological description of family they belongs to Austro-Asiatic family. The tribe has two-sub-tribes known Pahari Korwa and Dihari Korwa.

Pahari Korwa or Hill Korwa is one of the five identified primitive tribes of Chhattisgarh. They are inhabited in Raigarh, Korba and Jashpur districts.

Their population is 33,380 (Census 2001) and literacy rate is 2.81%.

Methodology

The present study was based on extensive fieldwork in Birhor and Hill Korwa localities of Raigarh, Jashpur and Surguja districts of Chhattisgarh.

Extensive and intensive fieldwork was carried out during May 2004 to December 2005 in various villages of Laloonga and Dharamjaygarh Blocks of Raigarh district, Lakhanpur Block of Surguja district and Bagicha Block of Jashpur district of Chhattisgarh .

The samples were selected by purposive sampling method. For the present study three stage stratified sampling i.e. village, block and district have been taken as a unit. Information about traditional medicine man, who is the custodian of the traditional system of medicine for his community, their addresses etc. has been collected from the local people of the sampled Districts, Blocks and Villages. Traditional medical healers (Birhor-33, Hill Korwa-42), household members (Birhor-124 families consisting of 541 members (M 264 & F 277), Hill Korwa- 189 families consisting of 978 members (M 480, F 498), village elders, traditional Dai and Medical Doctors, as well as patients were interviewed to assess their traditional medical knowledge.

Various medicinal plants used by Birhor and Hill Korwa to cure various diseases have been identified, listed, documented and collected as far as possible in all seasons with the help of traditional medicine-man through ethno botanical survey of the area. Then it was identified by secondary sources like published literature, with the help of Botanists and Forest Department etc.

The plants being used by traditional medicine man for medical purpose, preparation of medicine and dosages of their administration, etc. has been also recorded.

To collect the primary data about ethnomedicinal practices and cultural factors associated with diseases, interview-cum-schedule and observation methods have been used. In addition to that, case study and genealogy methods have been also used for in-depth analysis of the cultural factors for diseases. Besides that, focused group interview and group discussions and in-depth interviews have been taken in sampled villages of the blocks to find the cultural beliefs of diseases and for the validation of the ethno-medical knowledge.

The available medicinal plants were also collected and documented with the help of various people in the village. Birhor and Hill Korwa have their own names for all the plants they recognize. These local names/ vernacular names were recorded carefully. The exact identification of these plants up to their taxonomic identity was done with the help of various taxonomy books and validated by the taxonomists.

A. RESEARCH TECHNIQUES

The primary data was collected using anthropological tools and techniques viz.:

- *Village mapping*
- *Household survey with the help of semi-structured interview-cum-schedule method*
- In-depth interview of traditional healers and key informants
- Genealogy of traditional healers
- Case study of patients
- Focused group interview and discussions with informants
- Participation in entire process
- Cross-checking for validation of ethno-medical knowledge

- Documentation of traditional knowledge
- Ethno botanical survey

B. PARAMETERS

For collecting information of tribes

- *Distribution of tribes*
- Socio-economic status
- Food habits
- Literacy rate
- Marriage practices
- Hygiene standard (personal/surrounding)
- Settlement (drainage, air circulation, sunlight, contact with domestic animals)

For collecting information on disease

- Perception and Concepts of disease and their causes
- Symptoms
- Local names
- Diagnosis
- Occurrence (season-wise)

For collecting information on Tribal Pharmacopoeia

- Name of plant
- Plant part used
- Associated material
- Disease name
- Availability
- Preservation technique, if any

- Preparation
- Components (organic/inorganic)
- Nature
- Dose
- Path of administration
- Medium
- Restrictions / precautions
- Associated rituals

For identification of herbs

- Nomenclature (Vernacular name/local, Hindi, Sanskrit, scientific name)
- Seasonal availability
- Collection and associated rituals
- Local production techniques
- Market availability and economic value

For collecting knowledge of traditional healers

- Personal information
- Source of knowledge
- Working part time or full time
- Other economic activity
- Curing particular disease or common diseases
- Status and role in the society

Photographs were also taken for documentation. Secondary data was collected from Census Report and other Reports of Government and other publications.

In-depth interviews were focused on traditional medical healers of Birhor and Hill Korwa tribes to assess the knowledge of various types of plants used by them as medicine. Besides traditional healers, family and village elders were also interviewed to assess their medical knowledge. The available medicinal plants were also collected and documented with the help of various people in the village. Birhor and Hill Korwa have their own names for all the plants they recognize. These local names were recorded carefully. The exact identification of these plants up to their taxonomic identity was done with the help of various taxonomy books and validated by the taxonomists.

Tribal cognition of a disease is something different. They have a unique health culture, which is not in tune with the modern concept. Indigenous system of medicine operates within their own cultural matrix and their rationality and pragmatism are defined not on modern scientific criterion but on the basis of norms and values prevalent within particular cultural system. Magic, supernatural beliefs and practices are often intermingled with the primitive concept of health, disease and treatment pattern. This unique health problems and health care practices among the primitive tribes present a formidable challenge for which appropriate solution have to be found out by planning and evolving need based and problem – solving relevant research studies.

The conceptual issues of the relation between TMK and Modern Medical sciences are at the core of debate surrounding the interpretation of the use of TMK in development practices thus poses many challenges.

Different cultures have developed fundamentally different ways of perceiving and viewing nature and concepts of health and treatment and this in turn has given rise to different traditions of knowledge. The chart depicts the differences in foundations, concepts and categories of Ayurveda and modern medicine. These differences should cause no surprise to anyone who is willing to accept the inevitable plurality of cultures.

culture. Likewise, another may reject the methods considered acceptable for curing illness in one culture.

These differences can be broadly generalized in terms of two explanatory traditions - Naturalistic and Personalistic.

NATURALISTIC EXPLANATIONS OF ILLNESS

This medical tradition had its beginnings in ancient Greece, especially with the ideas of Hippocrates in the 4th and 5th centuries B.C. However, it did not begin to take its modern form until the 16th century. The western world now mostly relies on a naturalistic.

It assumes that illness is due to impersonal mechanistic causes in nature that can be potentially understood and cured by the application of the scientific method of discovery. Typical causes of illness include:

- A. Organic breakdown or deterioration (heart failure, tooth decay etc.)
- B. Obstruction (arterial blockage, kidney stones etc.).
- C. Injury (broken bones etc.).
- D. Imbalance (abnormal WBC count, etc.).
- E. Malnutrition.
- F. Parasites (bacteria, viruses, worms etc.).

PERSONALISTIC EXPLANATION OF ILLNESS

Much of the non-western world traditional accepted a personalistic explanation for illness. For them illness is seen as being due to acts of wishes of other people or supernatural being and forces.

TYPICAL CAUSES INCLUDE

- A. Intrusion of foreign objects into the body by supernatural man.
- B. Sprit possession, loss or damage.
- C. Breaching
- D. Evil eye.

The Birhor and Hill Korwa accepted the personalistic explanation for illness and disease. They regarded wrath of the God, mischief of evil spirits and magic of human being are the main causes of health disorders. They attribute the origin and cause of illness to intervention of supernatural agents or beings. Hence, what is believed to have caused spiritually must be healed spiritually and therefore, a need arises to seek spiritual cure from Baiga/Sirha even if one has to risk his/her life in the process.

CONCEPT OF DISEASE

Biswas (1971) illustrated primitive concept of disease classification of Clement and Rivers, which may be represented as Dr. F.E. Clement's Classification (1932):

1. Supernatural Agency

- (a) Soul Loss
- (b) Sprit Intrusion
- (c) Sprit of Sickness
- (d) Breach of Taboo

2. Human Agency

- (a) Evil Eye
- (b) Evil Touch
- (c) Evil Mouth
- (d) Sorocery (in all its phases)

3. Natural Causes

- (a) Disease object
- (b) Intrusion (including modern theory)

It is a faith prevailing among Birhor and Hill Korwa that excepting a few diseases, all the rest are caused by supernatural agencies. When God and Goddess are not given due recognition and reverence they get angry and in their wrath cause disease and death among men. The only way to escaping from disease is to

perpetrate the great mother. Thus, they have their own diagnostic techniques. Treatment is based upon the removal of causative factors through appeasing Gods, exorcism counter magic, use of charms, jhar fook and of course some herbal preparation.

Every medical system have universal ethnocentric view for curing people and these claim that their medical system can actually cure people while other systems can not. This ethnocentric view leads people trained in their medical practices or reject off-hand the knowledge and methodology of others. However, all medical systems have both successes and failures in curing sick people.

Curing with any medical system may work because of their different factors. First, a cure may be successful because the medical procedures actually help the patient recover from illness. Such as ethno pharmacologists have discovered that some herbal medicines used in traditional indigenous medical systems curing around the world actually have properties that are beneficial in treating diseases. The second, reason that a cure may be successful is because patients often get well regardless of the steps taken by the folk user 'Dhurva', 'Sirha' and 'Guniya'. It has been estimated that as much as 90 per cent of illness afflicting is in fact self correcting. This is particularly true of common viral infections such as colds or the flu.

The third, reason that a cure may work is because of the place of effect. That is, patients may be cured because they believe in the efficiency of the treatment even though it really does nothing to help them. It has been suggested that when a patient strongly believes that a cure will succeed, there is a psychological effect that can reduce the amount of the stress and increase the effectiveness of curing. The kind of placebo that works is highly culture related.

CURING STEPS

Regardless of any medical systems, the process involves the same two steps - Diagnosis and Treatment. Curing begins by discovering the symptoms and making a judgment about the nature of the illness. Following this preliminary step, a specific treatment is determined and carried out. However, the amount of time that is spent in diagnosis and treatment is differed between the methods.

Folk curers traditionally spent many hours with each patient, show great concern in contrast to modern doctors. Traditional practitioners are likely to treat their patient in an environment that is familiar, comfortable, and non-threatening to the patient. It is the patients home with family and friends present to provide emotional support.

SUPERSTITIONS AND BELIEFS

Every culture irrespective of its simplicity and complexity has its own belief regarding health and disease. Birhor and Hill Korwa Tribes also have belief regarding health and disease. They attribute the origin and cause of illness to intervention of supernatural agents or beings. Hence, what is believed to have caused spiritually must be treated spiritually and therefore, a need arises to seek spiritual cure from "Baiga", 'Dhurva', 'Siraha' and 'Guniya' even if one has to risk his/her life in the process.

They regarded wrath of the God' mischief of evil spirits and magic of human being are the main causes of health disorders.

It is a faith prevailing among them that excepting a few diseases, all the rest are caused by supernatural agencies. When Goddess is not given due recognition and reverence they get angry and in their wrath cause disease and death among men. The only way to escaping from disease is to perpetrate the great mother. Thus they have their own diagnostic techniques. Treatment is based upon the removal of causative factors through appeasing Gods, exorcism counter magic, use of charms, jhar fook and of course some herbal preparation.

It is also believed that the evil spirits of various kinds causes diseases. They are normally believed to dwell in cremation ground, graveyards, desolate places, old trees of Ber and Imi. Thus the treatment of such diseases is done by tertiary some magical formula with mantra sacrificing a fowl with some liquor and requesting the spirit to leave the person. The Birhor and Hill Korwa people believe that sickness of disease are attributed to anger or displeasure of family/Clan/Village God of Goddesses, breach of taboos and non-fulfillment of vows, effect of evil eye and influence of sorcery and spirit.

TABOOS

The tribal people have certain beliefs and taboos about medicinal plants. Birhor and Hill Korwa generally believe that:

1. Plants with latex have medicinal value.
2. Roots are considered more effective medicine than the aerial parts of the plants.
3. Specific plants for the use of medicinal purpose in various diseases should be collected in specific time- such as in the morning, midday or in the afternoon.
4. The barks for medicinal uses should be taken from that side of the plant on which the rising sun shines.
5. It is tabooed to show the process of take off the plant or its part, it is highly secret matter.
6. They avoid harvesting medicinal plant in the evening.
7. There is a belief that taking of immature rhizome or tuber cause illness. Even before the date of some specific ceremony, certain fruits are not consumed.
8. Collection of all the fruits or nuts from a single plant is considered as sin. It is believed that it causes incurable disease.

CONSERVATION TECHNIQUE

Since ages as a socio-religious customs, imposing certain types of restrictions even today plays an important role in conservation of plants and its genetic resources.

At the time of collection of underground parts of plants like tuber, rhizome, fleshy root, bulb etc., the tribal people leave some reproductive part of the plant for regeneration of the species. Collections of all the fruits or nuts from a single plant are considered as sin. It is believed that it will cause incurable disease to the person. There is a belief that pricking of immature rhizome or tuber cause illness. Even before the date of some specific ceremony, certain fruits are not consumed.

They conserve those plants, which are used for worship of god (Amla, Neem etc.) and in marriage ceremony. They also try to conserve the Mahua plant (*Madhuca longifolia*) as its flowers, fruits and seeds serve as food during lean months as well as it has religious significance.

HEALTH PRACTITIONERS / HEALERS / MEDICINEMAN

The WHO defines the Baiga, Sirha & Gunia traditional healer as a person who is recognized by the community in which he (or she) lives as competent to provide health care by using vegetable, animal and mineral substances and certain other methods based on the social, cultural and religious background, as well as on 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.

Currently in India, the legal state of traditional health care is vague: tradition healers are typically, unrecognized & legally unprotected.

The members of Birhor and Hill Korwa community traditionally learnt the art and science of health care medicine and also magic.

There are four types of health practitioners among Birhor and Hill Korwa. They are :

- (1) Baiga
- (2) Ojha (Guniya)
- (3) Panda
- (4) Dcowar

- (1) **Baiga** – Baiga is the religious priest of the society. This position is hereditary and always occupied by male members. Baiga is empowered to worship the village deities, for drive out epidemics and natural calamities from the village.
- (2) **Ojha (Guniya)** – Ojha is the medicine man cum spiritist. He does Jhadfoonk and also gives medicines, as per the need and necessity of the patient.

to diagnose and treat illness ritually. The therapeutic procedures and method given above are broad categories of ethnomedical therapies prevalent in tribal health cultures. These procedures have been part of their health traditions since times immemorial and Baiga and Hill Korwa are no exception to it.

Among Birhor and Hill Korwa, all three types therapeutic methods and procedures were found but frequently they use magico-religious therapy.

These therapies need to be evaluated scientifically so as to uplift and promote them for making them available to tribes at low cost.

METHOD OF DIAGNOSIS

Following methods of diagnosis were found in Birhor and Hill Korwa:

1. Supa Ghosna

In this process magician sits down near the bedside of a sick person. He himself takes some rice in the supa (winnowing fan), stirs the rice and utters the name of local deities one by one, to know whether the illness is due to wrath of a particular deity or not. If there will no reply than a simple affirmative or negative confirmation is done by shaking the supa itself. During this period the ojha also utters the names of different evil spirits if he is unable to diagnose the particular cause of disease chanting the mantra on the names of god.

2. Bahari Khar

The bahari khar is simply two pieces of khar- a kind of broomstick. The minimum length of the stick should be twelve fingers in measurement. It is held in the hands and first pointed down to the ground to the accompaniment of a mantra. Then the question is asked, and the hand measures it, four fingers at a time. If its length increases to the breadth of thirteen fingers, the answer is affirmative and favorable; if it decreases to eleven, the answer is negative and dangerous. The khar is generally used for matters of less importance, to detect ancestor spirits coming in newborn

babies, to trace out the evil spirits that are believed to be responsible for illnesses and diseases.

3. Black mustard

The Ojha takes some black mustard seeds (9 or 12 mustard seeds are taken) and put them in fire on the name of someone. If there is a flame after throwing the seeds in fire the person is considered as good, if not the person is considered as bad. This process is repeated thrice, if all the times the result are the same, then it is regarded that the concern person is very bad or very good person.

4. Three leaves of Sal

Sometimes three leaves of Sal (*Shorea robusta*) are taken and certain magical words are uttered, and then the diviner allows the leaves to fall on the ground. If all the three leaves fall with the same side (dorsal or ventral), it is considered as bad; only one leaf with dorsal surface down is regarded as good.

This method of diagnosis was observed only in Hill korwa.

5. By pulse rate (nadi)

Maximum health practitioners diagnosed the disease by pulse rate, in sick person it become abnormal.

PREFERENCE OF TREATMENT

The villagers first consult the traditional healers for any ailments. If it is not cured by his treatment then only they go for other way. Sometimes traditional healers also suggest consulting allopathic doctors.

Traditional practitioners treat disease holistically. The patient's family and even community are often involved in treatment. Indeed, the traditional healers often play a much wider social role than merely providing health care. The traditional healers are not only a medicine man; they are also a religious consultant and adviser, a marriage counselor & a social worker. In this sense traditional and modern health care workers are not directly comparable hence, patients often do not perceive the services provided by the two traditions as substitute for one another.

Patients consult traditional healers for several reasons. First, patients feel more comfortable with traditional healers who reside in the community and who are familiar with the socio-cultural context, second, traditional health services are usually more ascendible than modern health care services as well as almost free of cost. Moreover, modern health care providers are often unsympathetic and unresponsive to the concerns and needs of patients so it is not suited with their culture. Shared cultural assumptions and values, as well as patients' expectations, are known to be important components in traditional method of treatment and these factors lend weight to acknowledging the role of traditional healers in this area.

COLLECTION OF MEDICINAL PLANT

Birhor and Hill Korwa traditional healers told that the use of plants were discovered by them and their forefathers through trial and error methods get expertise in it. They generally treat the patients with medicinal plants, which they generally collect from the forest. 'Baiga' collect the required medicinal plants whenever it is needed for treatment. Sometimes they purchased some of the medicinal plant parts from Raigarh and Jashpur, which are not available at their village. They maintain secrecy in collection of medicinal plants and usually perform certain rituals and chant mantras.

PREPARATION TECHNIQUES

They prepared medicines differently for different ailments. After bringing the medicinal plants, they clean it and then make various combinations of leaves, flowers, fruits, roots, tubers, barks, and seeds. With variety of combinations many type of pastes, Juice, tablets decoction, oil etc. are prepared.

The medicines thus prepared are used for massage, oral intake, external use etc.

PATIENTS

There are only out door patients. Patients are mostly those who live in and around the villages but some patients from other villages are also come for their treatment. On an average one to two patients come daily to Baiga. Sometimes no patient comes for treatment.

DISEASES AND ILLNESS TREATED

Diseases of diverse origin are claimed cured from the treatment of Birhor and Hill Korwa traditional healers. Most of the people, who came for the treatment, suffer from Fever, Malaria, Diarrhea, Dysentery, Tuberculosis, Asthma, and Cough and Cold. Weakness and scabies are also found common among them.

As reported by the 541 Birhor and 974 Hill korwa respondent, common health problems encountered by the Birhor and Hill korwa respectively were cough and cold (21% and 23%), Fever (7% and 8%), body pain (11% and 10%), skin diseases (13% in both) and dental carries (8% and 7%).

FEEES AND CHARGE

The entire service rendered by "Baiga" is free of cost. No money in any form is accepted but normally people bring the food grains (rice) and coconut along with Agarbatti. They do not make money out of their medicinal skills and knowledge. It is believed that if 'Baiga' takes money, his supernatural power will be end.

MEDICINAL PLANT PROFILE

The traditional healer among the Birhor and Hill Korwa of Chhattisgarh administer the roots, rhizomes, barks, leaves, flowers, fruits, latex and seeds of medicinal plants that grow in the forest regions of their territories. The medicinal components of these plants have been recognized and validated through a trial-and-error process, and then incorporated into an ethno-healing system based on the traditional wisdom of the tribes accumulated over generations. The knowledge and use of these herbs are transferred by peers from one generation to another. The herbalist insists on utmost secrecy about the plants, their habitat, and knowledge about their life cycle; otherwise, they believe, the medicinal value of the herbs will fade away. The traditional herbalist of these communities strictly observes the astrological rules in collection of herbs from forests. The influence of the stars is given serious consideration for collection of specific herbal plant varieties. The astrological indicators specifying the times appropriate for the collection of specific plants have been interwoven in ethno-healing system of these tribes.

It has been observed that surrounding of various villages, from where the data have been collected, is rich in medicinal plant diversity and has the potentiality to support tribal life. The investigation convinced that the Birhor and Hill Korwa used total 213 plant species as herbal medicine to cure various types of diseases. The knowledge on medicinal plants is higher in elder people than in younger. Birhor utilize 125 plant species belonging to 47 families, to cure 56 diseases and Hill Korwa utilized 88 plant species belonging to 40 families to cure 44 diseases. 52 plant species used for treatment, and 30 diseases were found common in Birhor and Hill Korwa. Plants, which have potentiality in raising the economic status of Birhor and Hill Korwa tribes, have been identified during survey. They prefer herbal medicine for administering most ailments.

Root, leaves, seed and bark are the common plant part used by Baiga of both the community for the treatment of diseases.

Char is the main minor forest produce in Dharamjaygarh block that are also used for medical purposes. Birhor reported that their 59 per cent income generated from collection and sale of char, 12 per cent by Arjun and Safed Gunj each and so on.

Karanj is the main minor produce, which is also used in medicine. Hill Korwa reported that their 62 per cent income generated by collection and selling of Char. 30 per cent income generated from Dhawai minor forest produce. It suggests that there is extensive scope that exists for increasing the income levels of tribes from collection and sale of medicinal plant. Treatment choice of Birhor and Hill Korwa explore in terms of socio-cultural and religious factors. The choice of care in illness often requires more than a single decision. If an illness persists or is not satisfactorily treated, the patient may have to choose or third source or is not satisfactorily treated; the patient may have to choose a second or third source of medical care. The sequence work out in which care sources are utilized is: Home remedies - traditional healer - medical doctor among Birhor and Hill Korwa.

During field observation, it is found that now due to acculturation with the modern civilization, some Birhor and Hill

Korwa people behave differently in different condition. Many of them seem to be sure neither of their own tradition nor of modern medical system. Slowly and gradually, modern culture is making roads into their deep-rooted belief. Dongriguda village is situated on the roadside and that is also one of the reasons for cultural contact with outsider people. Now they are willingly go to the private and government doctors for treatment, but still believe that if the disease have been caused by an evil-spirit or any supernatural agency, no medical treatment will be effective unless the influence of the veil-spirit is removed by the 'Sirha'.

SUMMARY AND CONCLUSIONS

The tribal medicinal recipes have become treasure hunting grounds for, anthropologists, ethnobotanists, ethnopharmacologists, professionals of other medical systems, multinational drug firms, etc. interest in traditional health care has expended in recent years. India and other Asian countries recently have begun to integrate indigenous medicine with modern health care. There is a world wide Revival of interest in natural products as preventive and therapeutic agents. Unless the traditional knowledge of tribes are documented which is passed on to subsequent generations orally only, it is suspected that this will be lost to mankind as these tribal people are getting more and more exposed to modern ways of life due to consistent efforts of the Government to bring them into mainstream of life. The study is crucial since this valuable knowledge is fast vanishing due to the onslaught of modern medical system and fast rate of modernization.

Information on India's rich heritage of indigenous health care is drawn primarily from ethnographic studies of traditional healers in particular communities. Traditional health care in India especially in Bastar, Surguja and Raigarh, includes a wide variety of practices carried out by traditional practitioners, birth attendants, bonesetters faith healers and diviners. Tremendous ethnic diversity contributes to further variability in healing practices.

With the advent of fast expanding knowledge of biotechnology this traditional knowledge of ethnomedicine will be very useful for human health and diseases. This is going to change rapidly entire field of medicine and pharmacy in the next few decades.

The time is just ripe to integrate our own indigenous health care practices with modern medical practices through people's participation. There is no other way to treat our millions of people but to develop our own indigenous medical technology. World Health Organization (WHO) has also recognized that it will be impossible, perhaps even undesirable, to replace these herbal medicines with western techniques, at least during this century. Therefore, it is important for the modern system to begin with the base existing in the tribal society and build on it, rather than replace it.

Surguja and Jashpur and Raigarh districts of Chhattisgarh have extremely vast reserves of medicinal plants. These found input to a number of medicinal products used for treatment in common ailments. More than 200 species have been identified during survey. The utility of these herbs will become a boon to the Indian system of medicine in future. The process of their exploration may take time.

It has been observed that surrounding of the area is rich in medicinal plant diversity and has the potentiality by supporting tribal life. During the survey Malaria, Dysentery, Diarrhoea, Tuberculosis, cough, Scabies, Anaemia, Asthma etc. are commonly found.

The present study convinced the fact that the Birhor and Hill Korwa used 213 plants as herbal medicine. The total number of plant species of ethnomedical importance, which are used by Birhor are 125. They utilize various plant parts of for the treatment of 56 diseases the total number of plant species of ethnomedical importance, which are used by Hill Korwa are 88. They utilize various plant parts of for the treatment of 44 diseases.

It is observed that some plants have potentiality in raising the economic standards of Birhor and Hill Korwa tribe these are Harra, Behera, Amla, Imli etc. The knowledge on medicinal plant is higher in elder people than younger. Illiterates are as knowledgeable as the respondents who are literate or middle school pass. Hill Korwa Baigas have more knowledge about ethno-medicinal practices than Hill Korwa Baiga.

The availability of PHC services to them is poor. They do not utilize facilities whatever available at Sub-center due to lack of faith, economic constraints as well as non availability of service. They are superstitious up to some extent regarding antenatal and post-natal care to child the desirability of involving in the hospitals/clinics in non government sector in these activities is obvious. It is necessary to motivate staffs of the hospitals to work devotedly.

In conclusion, traditional medical practices are changing in response to developments in other parts of the social and economic system. For example, acculturation, modernization of the economy has affected the way in which many traditional practitioners operate. Some traditional healers have begun to adopt some practices of modern health care such as dressing of wounds with cloths suggesting to avail modern clinical facilities, when patient is serious, prescribing some tablets of modern medicine or suggesting to go the doctor etc. These developments reflect slow changes in the context of traditional health care. Traditional practitioners are also becoming gradually and very slowly professionalized.

Now, Government increasingly is aware of its contributions of traditional practitioners. Government should take efforts to involve traditional practitioners in health care systems & protect their IPR. Some initiatives in Bastar have been taken to train the traditional *Dai* to perform safe deliveries.

SUGGESTIONS

Training camp needs to be organized to ensure proper collection and preservation technique of medicinal plants and herbal medicines.

Traditional birth attendants (TBA) or *dai* currently perform majority of deliveries in Birhor and Hill Korwa community. Moreover, TBA's will continue to perform most deliveries for some time. Therefore, training or TBA's to provide prenatal and postnatal maternal and child care, to perform safe deliveries, and to refer obstetric emergencies is perhaps the area of greatest potential payoff in linking traditional and modern health care. Thus training TBA's is the potential areas of cooperation between Traditional and Modern health care worker to which State Government should give

attention. However, training programme should be modest and very clear and simple.

Since traditional healers are generally closely linked to their social position in their community, already command prestige and credibility in their communities, they are a logical choice for recruitment as community health worker. State Government should take initiative in this direction.

Industrial processing unit for processing of the medicinal plants should be established near the source or raw material. Provision should be made for proper storage and marketing of products with tribals as co-partners.

The healers need to be given adequate information to resist knowledge intellectual property rights. Their services as efficacious healers need to be made available to non-tribes too.

There is a worldwide revival of interest in natural products as preventive and therapeutic agents. Indeed, the information of drugs using biotechnology tools, would provide will undoubtedly translate to new and novel products. Therefore, further research using biotechnology tool is essential.

There is strong need to take effective steps to protect the Intellectual Property Rights of the traditional medicinal practitioners.

State Government should take steps to protect their traditional medical knowledge / Intellectual Property Rights. It is also important to undertake bioassay researches leading to process – patenting in collaboration with reputed Regional Research Laboratories or similar other National Research Institutes.

Undergraduate and post-graduate students in the anthropology, social work, rural development, botany, agriculture, tribal studies, folklore and folklife, and other relevant disciplines have a role to play in sensitizing the community about Traditional Resource Rights (TRR) and in documenting Community Biodiversity Registry (CBR). if it is done with appropriate community participation.

The scope, opportunities and resources offered by the ethnomedical system have not been appropriately explored. The cultivation of aromatic and medicinal herbs has rich scope for providing economic freedom to poor farmers. Lack of linkage with technical institutes and marketing agencies, poor awareness of marketing potentialities, lack of technical know-how, and the absence of risk-taking behaviors among farmers have restricted them knocking at the door of pioneering experimentation. Such innovative farming has encapsulated the roots and ingredients of conservation of biodiversity and sustainable development at the micro-level.

The farming of medicinal plants would not only boost entrepreneurial and business skills of tribal peasants in a demonstrable fashion but it also would promote income generating activities among unemployed youth and help to alleviate rural poverty in tribal territories of the state.

Students are required to receive an appropriate orientation as a part of the course curriculum regarding development of tools and systems for educating the community on how to keep records of various herbal species in their locality, how they should create and maintain an inventory of local biodiversity resources with a strong sense of ownership, and how to educate them regarding their rights and responsibilities. This will empower the local communities to conserve biological wealth in conformity with provisions of International Convention of Biological Diversity.

ISSUES AND CHALLENGES

The sustainable development and economic transformation in the nascent state of Chhattisgarh, where one-third of the population are tribals, lies in the promotion of pastoral enterprise; the exploitation of the area's rich cultural heritage through spiritual, health and eco-tourism interventions; promotion of tribal arts and crafts; intensification of medicinal plant farming; and the protection of biodiversities and the appropriate exploitation of mineral and natural resources through indigenous entrepreneurship and resource-management initiatives. The forces of globalization have encouraged many multinational companies to initiate mining operations and to set up new industries in the tribal territories of

Chhattisgarh in the past two years. This has led to over-exploitation of biodiversity resources that have damaged the basic health of the ecosystem. The existing natural ecosystem has enough potential resources to meet the demands and needs of local communities as well as, but is unable to cater to the current and future needs of a market economy influenced by the big players in the international market. These corporations have not only influenced the government to exploit the biodiversity resources for their own benefits, but also have pushed their own products at the cost of biological wealth.

The forces of globalization have stimulated the plundering of the valuable medicinal wealth of Chhattisgarh. The poachers and middlemen engaged by pharmaceutical companies exploit the medicinal resources by unsystematically engaged by pharmaceutical companies exploit the medicinal resources by unsystematically engaging the villagers to help collect the raw material. Often the untrained villagers collect herbal extracts even before the species are matured. These middlemen and traders smuggle out the rare herbal species to Bombay-based herbal exporters for export through foreign companies. It is even reported that the patent of some of the herbal species is owned by foreign companies, although due to stringent rules, many herbal products do not always get a proper place in the market of some Western countries. These products are marketed under the tag of "Nutritional Supplements". In the absence of initiatives to monitor piracy activities, coupled with poor efforts to identify and document local innovation and an appropriate policy support, the Intellectual Property Right (IPR) of tribal herbalists is not well protected. Very little scope is available to accommodate grass root initiatives and innovation in the present development spectrum. Grass root innovators are denied any support to scale up their products and services through commercial and non-commercial channels. The aspiration of local communities in sharing and disseminating their indigenous knowledge in their own language is not appropriately fulfilled, nor are the local communities appropriately sensitized about the issues of intellectual property rights on natural medicine and local innovations. Additionally, herbalists are reluctant to share knowledge information on their traditional practices and innovations.

The indigenous knowledge system, local innovations and practices of tribal herbalists hold the key to sustainable development and the transformation of Chhattisgarh into an herbal State of India. This rich storehouse is still unexplored and undocumented. The innovators lack knowledge on the exchange value of their knowledge and practices, for which lack they are brutally exploited in different fronts. The ethno healing practices, innovations, and relevant traditional tribal lifestyles among the people of Chhattisgarh contain valuable productive indigenous resources that have not been appropriately explored. The tribal people of this State lack the ability to develop and apply the entrepreneurial and business skills required for the economic exploitation of the physical and human resources available within indigenous territories of the State. Lack of appropriate local enthusiasm to explore available opportunities towards the integration of community assets within regional, political, social, and economic structures have restricted local development initiatives in transforming local enterprises into a desired economic development scenario.

FUTURE PLAN OF ACTION

It is important to undertake bioassay researches leading to process – patenting therefore, after completion of this phase we would like to analyze selected medicinal plants for active chemical constituents and molecular characterization, if funds are available.

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