

Folk Medicinal Uses of the Flora and Health Care Practices among the Indigenous Tribes of the District of Sambalpur, Western Odisha Region

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ABSTRACT

The District of Sambalpur is one of the ten districts of Western Region of Odisha. Nearly 52% of the area of the region is covered by forest and habituated by many tribal local populations. The district is the natural treasure of a large number of plants. Many of the plants have ethnobotanical use and traditionally used by the inhabitants as medicines. The present study has been designed to study and document the indigenous knowledge of the tribes who reside in different villages of the eastern part of the district on the utilization of medicinal plants. The study was undertaken having the objectives to assess the level of knowledge regarding ethnomedicinal preparation and ethnomedicinal belief systems. It further analyses the folk perception of health and illness assumed by the indigenous tribes. With the help of informal schedule, about 120 informants between the ages of 45 to 70 were interviewed on the folklore medicinal uses of the local flora. Many species of plants belonging to different families have been identified and enumerated with their ethnomedicinal applications. The plant parts used, mode of drug preparation and their doses are discussed in detail. The tribal communities of Western Odisha are more articulate with their indigenous health care system which reflects the deep noted cultural abode of tribal knowledge on their health care practices.

KEYWORDS: Indigenous health care, folk medicine, flora, ethnomedicinal belief,

I. INTRODUCTION

The forest area is inhabited chiefly by the tribals. They have their unique forest dependent lifestyle which is far away from modern

convenience of life. Their traditional concept on diseases and medicine is also distinct in nature. Among the tribal communities the system of cure is not only based on magico religious means but also on treatment by herbs and plants. They have developed their own system of health care. As they are closely associated with nature, they develop some rudimentary knowledge based of medical techniques including the diagnosis of the disease at individual level also. Both the techniques of magico-religious practices and traditional herbal medicine are utilised either together or separate. Right from the beginning, the traditional knowledge especially on the medicinal uses of plants have been documented and it has also provided many important drugs of present day (Fabricant and Fransworth, 2001: 69-75). Even today this area holds much more hidden treasure that traditional medicinal practitioners are still prevailing to a larger extent and as almost 80% of the human population in developing countries is dependent on plants resources for healthcare, almost 25% of prescribed drugs available in the market are plant based (Fransworth et al., 1985: 965-981). A great revival of interest has been noticed in the use of herbal medicines both in the developed as well as developing countries. Almost 50% of the medicines we use today are derived straight from plants and 25% of the prescription drugs have their genesis of tropical plants. The World Health Organisation (WHO) has estimated that nearly 80% of the people in the developing countries of the world rely mainly on traditional medicines and seek treatment from the traditional medicinal practitioners and 85% of the traditional medicines involve the use of plant extracts (WHO,

2002; Kumar and Dhan, 1998: 92-95; Sandhya et al., 2006: 101-114). It indicates the significant valuable relation between local tribal people with medicinal plants. In India nearly 43% of the total flowering plants are reported to be of medicinal importance (Pushpangadan, 1995) which provide many important drugs of modern day (Prance et al., 1994; Cox and Ballick, 1994: 82-87).

Uses of medicinal plants are very old. The preparations of medicine from natural herbs were first used by the Chinese. In India, the earliest references of use of plants as medicine appear in Rig-Veda which is said to be written between 3500-1600 B.C. Later the properties and therapeutic uses of medicinal plants were studied in detail and recorded empirically by the ancient physician in Ayurveda, the basic foundation of ancient medical science in India (Jena et al., 2012: 256-264). The tribals enjoy a critical and symbiotic relation with the forests. Existence of mankind is impossible without plant kingdom. The plants provide balanced ecosystems, nutrition as a major source, preventive aspect of medicines, traditional aspect of health and curative aspect of disease. Human beings are being influenced in many ways by plants and their products. Hence plants on earth are important for humanity. The study by Sahu et al. (2013: 12-20) highlights that the tribals of Boudh district possess innate ability to discern the character of plants and utilise the plant resources to meet their health care needs. Odisha is rich in floristic diversity and so also in ancient folk literature. All systems of medicine have its roots in one way or the other in folk medicine as well as household remedies. The tribal and the rural villagers are highly dependent on medicinal plants and its traditional therapeutic methods to meet their health care needs. This is because they are deprived of modern health care system. The accumulation of knowledge on plants use however coevolved with human civilisation through the experimental use of plants, generation after generation (Ibid.). In this context, reports from Sambalpur district of Western Odisha is negligible, even though the poor rural and tribal people of the district largely depend on a wide variety of plants for their healthcare which has its own values and cultural importance. Therefore, present investigation has been carried out in the interior belt of Sambalpur District of Odisha, India with the following objectives;

- i. to assess the level of knowledge regarding ethno-medicinal preparation and ethno-medical belief systems
- ii. to analyse the folk perception of health and illness

II. METHODOLOGY

Research Setting

Using the purposive sampling method, the Ghenupali Gram Panchayat of Jujomura Block was selected to carry out the study covering seven villages namely, Sansahir, Ghenupali, Pabpali, Jhankarpali, Khajuripali, Badsahir and Sanatanpali with multi-caste and multi-tribal communities. These villages are situated on the eastern part of Sambalpur district and all these are surrounded by a number of paddy fields and hills which enrich the natural beauty of this area. Ghenupali is situated at a distance of 36 Kms towards South from District Headquarters of Sambalpur, 9 Kms from Jujomura block, one of the tribal dominated blocks in the district where 55.6% of the population belong to tribal communities. The living condition of the tribal is below the expected level. The sample villages are situated in dense forest. Various species found in this area are; Teak (*Tectonagrandis*), Palas (*Butea frondosa*), Mahula (*Madhucaindica*) and many others. Since Jujomura is in forested area, several wild animals are found in this area. The tribals to a great extent depend on the local forest resources for their livelihood. The fourteen settlements (hamlets) selected come under the jurisdiction of Ghenupali Grampanchayat. It is predominantly inhabited by five tribal communities namely; Mirdha (Kuda), Gond, Kandha, Sahara and Khadia. Among them Mirdha (**Kuda**) is the numerically dominated tribe in the sample area. Hence, they have been taken as the sample population.

Methods of Data Collection

Primary as well as secondary data are used for the study. The primary data were collected with the help of unstructured interview, group discussion, and case study. Observation method was used to cross check the earlier generated data. Secondary materials were also collected from various journals, books, newspapers, report, census data and records from Government officials. The data required for this study were gathered combining both quantitative and qualitative research techniques. Quantitative data have been collected through household survey using interview schedule. Different sets of sample respondents have been used for collecting quantitative data on various aspects of health care system of the sample community. The drawing of various sub-set of samples is based on purposive sampling.

Qualitative data were collected through in-depth interviews, observation and focus group discussion. Through In-depth Interviews, information was gathered from community members, household heads (who were above 50

years of age because they were well-versed with the socio-cultural meanings associated with the day-to-day activities) diseased person, family members of the diseased persons, mother/grandmother of the children (in case of febrile children) by using schedule (which consisted of both open-ended and closed-ended questions) covering different diseases and illness experienced by the respondents, treatment seeking behaviour with regard to these illnesses, associated factors and the like. On certain occasions, group interviews were also conducted on some specific issues.

To elicit information on the use of various plants and animal derivatives, interview, participatory observation and short field visits were planned. Participation in various diagnosis therapies were also carried out. All these together provided a wider spectrum on their medicinal systems. Information about various medicinal plants used for curing diseases, its local name, the plants part used, the recipe of drugs, mode of administration, doses for different ages of people and associated knowledge were documented by interviewing the community medicine man (Vaid) as first-hand information on ethno-medicinal uses of plants. In order to document the seasonal medicinal plants and its utilization, surveys were conducted according to their time of availability. This could help to get maximum information on medicinal plant species. Their local names were collected from the Vaid. The plants were correctly identified with the help of some experts in this field from the department of Life Science, Sambalpur University; Dept. of Botany, Govt. Women's College, Sambalpur and the scientific names were traced out for convenience.

III. RESULTS

The Mirdhas use a large number of plants and mineral matters for the preparation of various medicines. As they reside in dense forests, they have familiarity with the flora of these forests. The knowledge on the medicinal properties of different plants enables the medicine man to select appropriate components to prepare medicines for the treatment of various diseases. The community medicine man also stores medicine. He also uses to cultivate some kinds of medicinal plants. They consider social, cultural, black magic, malnutrition and adverse climatic conditions as major causal factors for ill health. The causal factors are categorised into the following two heads after analysing the information collected from the respondents; the disease caused by physical or environmental imbalance under which cold, cough, fever, headache, backache, weakness, malaria, jaundice and gynaecological disorders etc. are found; secondly, the diseases caused by black magic, intrusion of witch, violation of taboo, unsatisfied dead ancestors, deity, etc.

The community medicine man is approached by the Mirdha for all kinds of ailment. The specialist starts treatment after categorising the diseases by using traditional methods of diagnosis. The diseases caused by physical or environmental imbalance is treated by the community medicine man (Vaid) using various herbal recipes. The Vaid has vast knowledge on various medicinal plants and so also the medicinal preparations from various plants. But he never employs magic to heal the patients as he has no special knowledge in shamanism. The Mirdhas have certain age-old methods of preparation and also the administration of medicines of different diseases. Here are some of the herbal medicines used by the Mirdhas for various common ailments (Table-I):

Table-I: List of Local Plants used as medicine by the Mirdha tribe of Sambalpur District, Western Odisha

Scientific Name	Local Name & Part Used	Disease	Mode of Administration
<i>Andrographis paniculata</i>	Bhui Leem Leaf/ whole plant	Malaria	Leaf or sometimes the whole plant is grinded with water and tablet is prepared adding sugar. Three tablets taken twice daily before taking meal.
<i>Azadirachta indica</i>	Leem (Neem) Bark	General Fever	Burnt bark is taken with milk orally after taking food twice daily for 1-2 days
<i>Bombax ceiba</i>	Semel Bark, Leaves	Fever	Decoction of bark is given to combat fever. Juice is also prepared from bark to reduce stomach-ache. Leave paste is used against eruption and pimples.
<i>Asparagus racemosus</i>	Satabari Root	Gastric ulcers	Root is soaked in water at fortnight and boiled in the early morning. Strain the mixture and taken orally. Also taken with tea at morning, once daily for five days
	Satabari Tuber	Asthma	Juice is prepared by grinding the tuber and half glass of juice is taken with water. Taken once daily for 1 month to 40 days before taking food only in the morning.
<i>Curcuma longa</i>	Junglee Haldi Flower	Jaundice	flower is grinded and half cup of juice is taken orally. Massage with paste of flower over body before taking bath. Twice daily in the morning and evening
<i>Ecliptaprostrata</i>	Bhringaraj Leaves	Jaundice and Fever	Leaves or the whole plant is ground adding black pepper. Paste is transformed into small pills and 2-3 pills are taken twice daily for three to four days.
<i>Diospyros melanoxylon</i>	Kendu Stem	Anaemia	Stem bark is boiled and extract is given with a glass of rice cooked water to pregnant women. It is very useful against Anaemia. It is taken once daily in morning with empty stomach for two months.
<i>Nelumbo nucifera</i>	Padam Phul Seed	Epilepsy	Half glass juice is taken with water orally once after every attack.
<i>Urariapicta</i>	Shankarjata Leaf	Dysentery	Fresh leaf is grinded and juice is taken with water. It is usually taken in an interval of every 3 hours until relief
<i>Achyranthese aspera</i>	Apamarga Root	Dysentery	Root is grinded with water and a pinch of salt is added and juice is taken orally in every 3hrs.
<i>Anisomeles malabarica</i>	Basanga Leaf	Dysentery	Leaf is grinded with some water and black salt is added and is taken orally in every hour.
<i>Senna auriculata</i>	Kuthel Leaves, Bark	Constipation	As the leaves have laxative properties it is used to treat constipation. Paste is prepared from the bark adding godmarich. It is used one time daily with empty stomach for 3 days.
<i>Leucas aspera</i>	Ganthi Gubi Leaves	Digestive Disorder, Hot-stool, Fever	Leaves are cooked with varieties of ingredients and bamboo shoot and given it to the patient with meal to relief from digestive disorder and it is also beneficial for hot stool following the same procedure. Leave juice is used against fever.
<i>Cyperus rotundus</i>	Gandhaa Kanda (Nutgrass) Root	Weakness, Stomachache	Dried root is grinded, and tablet is prepared with jaggery. It is taken twice daily after taking food until relief.
<i>Semicarpus anacardium</i>	Kioro (Veluan) Seed	Migraine	Oil from seeds can give blisters and also painful wound; but the hot oil gives relief from migraine. Taken as prescribed by the practitioner as per the severity.
<i>Aegle marmelos</i>	Bel Ripe fruit	Stomach Disorder, Sunstroke, Diabetes	Ripe fruit syrup cures sun stroke and stomach disorder. New leaves cure diabetes. The leaf ash cures the wounds.

IV. DISCUSSIONS

Forest is their chariest home through generation. The tribal communities could sustain for thousand of years with reasonable standard of health and adobe mainly because the forests provided them food, water, shelter, clothes, medicine and employment. Even in areas where forests do not exist, the tribals visit the distinct forests periodically and try to procure their traditional requirement. The Mirdhas and forest are ecologically and economically inseparable. They have co-existed since time immemorial and will continue to coexist in a mutually reinforcing relationship. Mirdhas are always sentimentally attached with the forest and considered it as nature's gift. They consider themselves as son of the nature and love to live in natural adobe. The climate and soil are favourable for raising ethno-botanical plantations and also rich for horticulture. They mainly raise paddy, pulses, leafy vegetables,

etc. The medicinal plants are also being collected from the forest in disease situation. Literatures reveal that the Dongaria Kandha use 19 plants for skin diseases and also a number of plant species are utilised to combat malaria.

The medicine man of the community possesses a good knowledgemedicine and usually practice it. It is also practised by the elderly persons and the experienced women of the village who use to attend deliveries. This traditional knowledge about the use of the naturally available herbs and their products has also been transmitted through oral communication within the society. It also has passed from generation to generation (Kaur, 1999). During the study the Vaid of the community was taken to the forest, sometimes the assistants of the Vaid were taken as guide as well as informant for identification and collection of medicinal plants. Attempts have been made to record very common but less known plants having medicinal

properties and their uses by the Mirdha community as well as other tribal communities of the area. Ordinarily people are not aware of the medicinal value of plants. The plants which we usually consider as of no value, also poses some medicinal properties. Moreover, it was quite interesting endeavour to know whether the plant was being utilised independently or in combination with some other plants. But in some cases, the practitioners were following certain taboos. Nobody is allowed to the spot while plucking the plant as it is believed that it could lose its efficacy if someone except the practitioner observes it. In addition to this the practitioner also maintains that his shadow must not fall on the plant, otherwise the medicine becomes ineffective. Some medicinal preparations were also made by the practitioner without taking anyone else's assistance.

There are 4,22,000 numbers of flowering plants in the whole world (Govaerts, 2001: 1085-1090) out of which more than 50,000 possess medicinal value and is used for medicinal preparation in many indigenous communities. In the dates back over 5000 years, India has an ancient history for the use of plants in the indigenous system of medicine. Over 8000 herbal remedies are recorded by Ayurveda. India officially recognises over 2500 plants as having medicinal value and over 6000 plants are estimated which are used as traditional folk and herbal medicines (Huxley, 1992). Dash and Dash (2003: 132-135) have observed that although a large number of plants are associated with food, economy and religion, the use of plant species as traditional medicines is dominant in the entire tribal society. The utilisation of plants for medicinal purposes has been documented long back in ancient Indian literature (Tulsidas, 1631; Charak, 1996). The study of Jena et al., 2012: 256-264 stated that every tribal group represents unique indigenous ethno-botanical system that includes the mode of taking and applying externally or internally. Mohapatra (1993: 90) while studying different tribes of Boudh district of Odisha (represented by 25 ethnic tribal communities) presents the use of folk medicinal plants against various ailments. Similarly, Jena et al. (2012: 256-264) explores the traditional health care system of Dongaria Kandha of Niyamgiri Hills of Odisha. Among them various kinds of medicinal plants are widely used by the traditional medicinal practitioners for curing various diseases in their day to day life. Guite and Acharya (2006: 1-10) state that the state of Odisha has one of the oldest and richest cultural traditions of using medicinal plants. Tribal people of our state still depend upon the common traditional ethno-medicine for their

primary health care. The medicinal herbs gain importance in the region where modern health care facilities are not available or not easily accessible. As among the tribal the acceptance of a particular health care system depends on its availability and accessibility.

V. SUMMING-UP

The forest rich area is inhabited predominantly by the tribals. The present study documents ethno-medicinal uses of many plant species by various families from forest area of Jujomura block of Sambalpur district in the State of Odisha. Those are used in the treatment of different ailments and diseases affecting tribals of the area. The use of available plant materials to ease illness and many of the diseases is one of the ways in which they utilize their natural resources effectively. Different parts of medicinal plants are being used in preparation of medicine, the leaves, barks, roots, stems, flowers, seeds, fruits, sap, latex and the like. Sometimes the whole plant is used particularly for children; some are used for the problems of women especially while some are commonly used for the entire community.

The rich and miscellaneous traditional medicinal knowledge of the Mirdha documented in this study produce testimony to the vastness and valuable traditional knowledge that they have been able to preserve to some extent. The practice of the traditional medicine has met with some constraint on account of non-availability of medicinal plants sometimes to so many reasons. Further the decline of this practice in many of the societies can be attributed to various factors. The study on practice of herbal medicine contributes not only to understand the medicinal system which is a social and cultural construct, but to understand the importance of various plants from the native's viewpoint.

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