An Ethanomedicinal Study of Plants in District Jhunjhunu of Rajasthan and Mahendergarh of Haryana

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Abstract

Jhunjhunu and Mahendergarh are the tribal district of Rajasthan and Haryana and plants are being used as medicine. Ethno botanical surveys had been carried out in Jhunjhunu and Mahendergarh district. The investigation deals about16 plant species *Asparagus racemosus, Barleria prionitis (*Bajradanti*) , Chenopodium album (*chilva*) , Citrullus colocynthis (*tumba*), Acyranthus aspera,* Ashoka, Guggul (commiphora) , Curry leaves*, Casuarina equisetifolia,* ker, tulsi, neem, phog*, moringa oliefera,*ghiloi, turmeric which is used by tribals of this area. Ethno medicinal information was gathering through interview. The objective of present study is too aware the rural people about the medicinal plants and their applications. Traditional medicine remained as the most affordable and easily accessible source of treatment in the primary health care. The plant as one of the most important sources still remains its original place in the treatment of various diseases including diabetes with no ill effects. In fact ethanomedicinal plants are easily available, cheaper, and possess no toxicity.

Keywords: Jhunjhunu, Mahendergarh, ethno medicinal plants, traditional healers

Introduction

Ethno botany term was given by Harshberger J.W. in 1896. It is the art of collection of useful plants by the society and describes its uses. Ethno botany deals with the uses of the plants for fiber, fuel, fodder, dyes, tannin, gum. Use of plants based drugs and chemicals for curing various ailments and personal adornment is as old as human cultivation(1). Knowledge can arise from scientific or traditional sources(2). Traditional knowledge has been described as a cumultive body of knowledge, practice and belief, evolving through adaptive processes and handed over through generations by cultural transmission(3). Traditional medicine is used throughout the world as it is heavily dependent on local available plant species and plant based products(4). India is good sources of medicinal plants. It has approximately 7500 medicinal plant species are found. Important information of medicinal plants is also given in Rig-Veda. It is one of the oldest book on medicinal plants. Medicinal Plants and its parts are good sources of medicine even today it is the backbone of pharmaceutical companies. Medicinal plants have been used in our country since time immemorial. Thousands of Indians are used herbal drugs regularly. They are used spices in their food for good health. Since last four decades considerable progress has been made in the field of ethno medicine. A review of literature on ethno medicine indicates that various workers have contributed from different parts of India including Haryana and Rajasthan. But still there are some interior areas which could be served intensively for the search of new traditional medicines (1). In the present work is designed with an objective of providing identification of medicinal plants and formulation of ethanomedicinal uses of plants present in Jhunjhunu and Mahendergarh district.

Material and Methods

Ethno botanical survey was conduct in different villages of Jhunjhunu and Mahendergarh district including beri, barsi, basai, god, satnali, dharsu, pacheri, alipur, sehad, jaysinghpura, etc. Extensive field trips were organized for collecting the plant species and data. The method adopted for collection of data was about medicinal uses of plants in the treatment of various diseases.

Data collection

A total of 100 informants were selected on the basis of information provided by the local administrator, agricultural and health extension workers and elder people. The selected healers were well known in the community due to their long practice in service provision related to traditional health care. The informants were native born or had been living in the study area for a long time. Prior to data collection, group meeting was held with the help of village's head in order to explain to the informants. (i) theme of present study (ii) assurance that their knowledge would be a great contribution in conserving the

indigenous knowledge of the area. Prior to survey, a semi structured questionnaire was designed and pretested with five informants to find out its suitability for the present study and later on modified according to response of informants. The revised questionnaire was used for gathering data from individual informant about medicinal plants of the study area. This was done to clarify the purpose and build confidence of the respondents to provide reliable information without pressure. The questionnaire contained no strict questions and informants were allowed to speak spontaneously. Our final purpose was to obtain the complete list of medicinal plants used or known each informant. All interviews were carried out in Hindi and English language of the study area. In addition, a total of four focus group discussions with 30 informants in each group were also designed to gain further information on medicinal plants at the community level and to prove the reliability of data collected through semi structured interviews. Questionnaires designed to the traditional healers about medicinal plants knowledge were mainly focused on local name of a particular medicinal plant, types of disease treated, mode and method of remedy preparation, parts of the plants used(roots, leaves, seeds, flowers, etc), use of fresh or dry plants parts, use of single or mixture of plants for remedy preparation(filtrate, paste on, smoke bath or others), mode of administration(oral, topical, nasal and others), dose requirement, and usable duration regarding each medicine(9). Plant samples were collected from the field and were dried and compressed in newspapers.

Results and Discussion:

Among the 100 informants, 40 were male and 60 were female. The largest proportion of the respondents was of the elderly, above 40 years old. More than half of the respondents were illiterate, whilst most of those with an education received merely primary education which reflects the unavailability of educational institution in the area. Majority of females were housewives while half of the males were farmers followed by 25% of shopkeepers. These very basic results also reflect the reality that indigenous knowledge is well established but seems to be decreasing in the younger generation. The indigenous knowledge showed a significant negative correlation with the age of the respondents (7). The present study provides information of ethanomedicinal uses of 15 plant species. Out of 15 plant species 10 species show activity against antidiabetic and antimicrobial namely *Asparagus racemosus, Barleria prionitis (*Bajradanti*) , Chenopodium album (*chilva*) , Citrullus colocynthis (tumba), Acyranthus aspera, Ashoka*, Guggul (commiphora) , Curry leaves*, Casuarina equisetifolia,* ker.

Different parts of medicinal plants are used as medicine by the traditional healers. Among the different plant parts, the leaves and fruit are the most frequently used for the treatment of diseses followed by

whole plant parts, roots, barks, tubers, seeds, and stems . Ethnomedicines were mostly taken through oral route. Decoction is the most common method used for remedy preparation. The additives like milk, butter, food are commonly believed to serve as a vehicle to transport the remedies. The most commonly treated disease in the study area was diabetes and gastrointestinal disorders. The healers used fresh plant parts for the preparation of ethnomedicines.

There is no standardized measure on the dose for most of the ethno medicines in the study area. The dose depends on the traditional healer that prepares the herbs for medical purpose or it may also depend on the disease severity. The dosage of certain plants in the region varied according to the type of illness. Most of the ethnomedicines are prepared using single plant in the region while some others are prepared by the mixing parts of more than one plant.

Many disease categories were identified from the investigated region. The highest F_{IC}(informant consensus factor) were gastrointestinal, respiratory, skin infections, diabetes, and kidney problem.

The present study provides information on 15 medicinal plants used in the study area by local traditional healers. The study revealed that the people of the region have been using plant resources for their various ailments. The local people know the useful plants and preparation of recipes through personal experience and ancestral prescription and long utility (8).

It was observed during research study that the knowledgeable women were more concentrated as compared to the men of this region in India. Generally, gender-based differences in medicinal plant knowledge can be derived from experience and degree of cultural contact with curative plants. The study indicates that the aged people of the region have traditional knowledge about more numbers of medicinal plants as compared to younger people which might be due to their least interest.

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