ETHNO MEDICINAL STUDIES WITH SPECIAL REFERANCE TO DAMOR TRIBE IN SARTHUNA VILLAGE OF DISTRICT DUNGARPUR IN SOUTH RAJASTHAN INDIA

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ABSTRACT

Damor is a specific tribe which is exclusively found in the Tehsil Simalwara of district Dungpur (Southern Rajasthan). About 30 villages are dominated by the Damor tribe with overall population of 40 thousand. They claim themselves as a descended of Rajput (a ruler community of India). Agriculture and animal husbandry is the major part of their economy. The ethnic tribe is still unaffected by urbanization. Traditional herbal therapies are an integral part of their lifestyle because of their close proximity with nature. The present study is focused on particular village Sarthuna which is considered as a one of the big village of Tehsil Simalwara, dominated by Damor tribe. An ethno medicinal survey of village Sarthuna was conducted in between month of October to December 2019. A total of 25 plants from 18 families were documented. Family Euphorbiaceae and Fabaceae were identified with the most use value. Leaves were the part of most of the formulations. Dragea volubilis, Maytenus emarginata, Feronia limonia, Telosma pallida and Aristolochia indica were identified as novel ethnomedicinal plants which were less reported previously from southern Rajasthan. Statistical interpretation of obtained data was done by calculating RFC and ICF value.

Keywords: Damor, Sarthuna, Ethno medicine

INTRODUCTION

Ethno botany is a branch of science which deals with the scientific study of traditional medicinal plants used by indigenous or aboriginal people. It is an emerging branch of science as many of the modern drug has been derived from plants. Traditional knowledge about medicinal plant is a precious treasure of ethnic society which is transmitting through generations by orally. The southern region of Rajasthan is blessed with dense forest with hilly terrain which fulfills many requirements of local inhabitant. Major tribes like Bheel, Meena, Damor and Garasiya are restricted to Southern part of Rajasthan including Udaipur, Banswara, Dungarpur and Pratapgarh district hence there is a potential scope of ethnomedicinal studies. Ethno medicinal study in this area have been done by Katewa et al. (2008), Meena and Yadav (2010), Jain, A. et al (2005), Upadhyay, B. et al (2010), Meena, K. L. (2014), Rana et al. (2014), Kumar et al. (2016), Deora et al. (2018), Gupta et al. (2013), but none of the worker did organized and extensive ethno medicinal study of block Simalwara with special reference to Damor tribe. The Bheel is a major tribe which is largely dominated by Damor tribe. Present paper reveals the traditional knowledge of herbal medicines which is prevalent and still utilized in village Sarthuna. Traditional medicinal system is a part of their lifestyle as characterise by the other indigenous people.

MATERIALS AND METHODS

STUDY AREA

Sarthuna village is located in between 23.4651° North, 73.6595° East (district Dungarpur Rajasthan). A total of 542 families live in the village with total population of 2409 (census of India 2011). 85.80% population belongs to Damor tribe with 52.48% of literacy rate. Their local language is Wagdi. The area is characterized by dry tropical climate which is dominated by Teak forest (Tectona grandis L.F.). Their economy is based on agriculture and animal husbandry. Wheat maize and gram are the major crops being cultivated as seasonal crops. Local ponds and wells are the main sources of irrigation. Unique culture, custom and ornamentation differentiate it from the other tribe (Bheel) of district dungarpur.
METHODOLOGY

Ethno botany: a method manual by Martin (2014) and methods and approach in ethno botany: concept, practices and prospects (2017) by Jain and Jain two important publications which provide extensive knowledge about material and methods used for ethno botanical studies. Rao et al. (1987), Silva et al. (2014), Phillips (1996) and Vogl et al. (2004) gave detailed account on tools and techniques used for data collection, evaluation and quantitative analysis for various ethno botanical studies. Major steps of present study were as follows-

1. Identification of old knowledgeable persons of the village.
2. Collecting information about them e.g. Age, profession, education level, source of their knowledge.
3. Interview of each person with field survey.
4. Data collection: Gathering all information about plant like local name, plant part used and used for, mode of administration and formulation, information about locality and flowering season of various plants.
5. Specimen collection and identification with standard floras
6. Data evaluation and interpretation.

Data collection

A total of 16 old age person (12 males and 4 females) having ethno medicinal knowledge were identified and interviewed with the help of local interpreters. Questionnaire was prepared for data collection including informant's details like name, education level, occupation, age, source of information and detail about medicinal plants like number of medicinal plant known, local name of plant, plant part used, used for, mode of administration and formulations. All the interviews were taken in their local language. Written consent was taken from each informant prior to their participation in the proposed study. Most of the informants were above 60 years old with low education level. A total of 25 medicinal plants from 18 families were recorded which are listed here-

<table>
<thead>
<tr>
<th>S no.</th>
<th>Local name</th>
<th>Botanical name</th>
<th>family</th>
<th>Plant part used</th>
<th>Used for</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kadvidodi</td>
<td>Dregea volubilis</td>
<td>Apocynaceae</td>
<td>Leaves</td>
<td>Dry cough, urine infection</td>
</tr>
<tr>
<td>2</td>
<td>Ruein</td>
<td>Soymida febrifuga</td>
<td>Meliaceae</td>
<td>Stem bark</td>
<td>Mums diarrhoea, fever</td>
</tr>
<tr>
<td>3</td>
<td>Jhenji</td>
<td>Bauhinia racemosa</td>
<td>Fabaceae</td>
<td>Flower</td>
<td>Cough, cold, piles</td>
</tr>
<tr>
<td>4</td>
<td>Puptee</td>
<td>Physalis lagascae</td>
<td>Solanaceae</td>
<td>Leaves</td>
<td>Jaundice, joint pain</td>
</tr>
<tr>
<td>5</td>
<td>Jangalisuran</td>
<td>Amorphophallus campanulatus</td>
<td>Araceae</td>
<td>Tuber</td>
<td>Dysentery, piles</td>
</tr>
<tr>
<td>6</td>
<td>Umro</td>
<td>Ficus racemosa</td>
<td>Moraceae</td>
<td>Latex</td>
<td>Kidney stone</td>
</tr>
<tr>
<td>7</td>
<td>Kari samboi</td>
<td>Cardiospermum halicacabum</td>
<td>Sapindaceae</td>
<td>Leaves</td>
<td>Arthritis</td>
</tr>
<tr>
<td>8</td>
<td>Timroo</td>
<td>Diospyros melanoxylon</td>
<td>Ebenaceae</td>
<td>Unripe fruit</td>
<td>Skin healing</td>
</tr>
<tr>
<td>9</td>
<td>Thuvar</td>
<td>Euphorbia neriifolia</td>
<td>Euphorbiaceae</td>
<td>Latex</td>
<td>Muscle pain</td>
</tr>
<tr>
<td>10</td>
<td>Ratanjaad</td>
<td>Jatropha curcas</td>
<td>Euphorbiaceae</td>
<td>Branches</td>
<td>Toothache</td>
</tr>
<tr>
<td>11</td>
<td>Morasvilo</td>
<td>Telosma pallida</td>
<td>Apocynaceae</td>
<td>Latex</td>
<td>Vitiligo</td>
</tr>
</tbody>
</table>
Data analysis

Albuquerque et al. (2006), Phillips et al. (1996), Hoft et al. (1999), Hoffman et al. (2007), Reyes-Garcia et al. (2007) and several other worker have reported numerous appropriate and extensive statistics indices and measures for evaluating ethno botanical data. For the interpretation of data we applied following two indices-1. Informant consensus factor (ICF) 2. Relative frequency of citation (RFC)

Informant consensus factor (ICF) (Trotter and Logan, 1986)-

ICF shows the level of evenness among ethno medicinal information, documented from different informants. It is calculated by given formula-

\[ ICF = \frac{N_r - N_t}{(N_r - 1)} \]

Nur- number of use reports for a particular plant use categories (from informants)

Nt-number of taxa used for that plant use category for all informants

Relative frequency of citation (RFC) -This indicates the medicinal value of each species in the study area (Rahman et al., 2016) It is calculated by given formula-

\[ RFC = \frac{FC}{N} \]

FC-Number of informants who reports particular plant species

N- Total number of informants in the study area (16)

RESULT AND DISCUSSION

In present study Fabaceae and Euphorbiaceae were identified as most widely used families for various ailments. ICF value ranges from 0 to 1. High ICF value indicates a fewer taxa reported by many informants for particular ailment category whereas low ICF value indicates lower consent of informants over use of certain plants for treating given category of ailment. Stone jaundice, snake bite and mouth ulcer shows 1 ICF value while diarrhea fever toothache and sexual disorder shows higher ICF value which indicates poor hygiene and sanitation among the people. In the study area plants like Dragea volubilis, Maytenus emarginata, Feronia limonia, Telosma pallida and Aristolochia indica were identified as novel ethnomedicinal plants which were less reported previously from southern Rajasthan. High fidelity level indicates the potential of particular plant species used for particular ailment. Plant with higher RFC value must be evaluated for their active phyto constituent. In the present study we obtained Enicostemma axillare, Bombex ceiba, Adhatoda vasica and Corchorus depressus with high RFC value.

CONCLUSION

Present study reveals the ethno medicinal plants and traditional knowledge of Damor tribe. Traditional knowledge of this tribe yet not been widely explored by any worker. Present survey reported 25 ethno medicinal plants used traditionally in this area. Some of the plants are widely known for their use in particular ailments which indicate the presence of promising phytochemical. Most of the knowledge of traditional medicinal plants is restricted to old age people which are eroding day by day because the younger generation has not much concern about this knowledge. Enicostemma axillare, Bombex ceiba, Adhatoda vasica and Corchorus depressus were most widely used plants which indicate their potential therapeutic value which must be subjected to further phytochemical analysis.
Ethno medicinal studies with special reference to damor tribe in Sarthuna village of district Dungarpur in south Rajasthan India

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