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

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Damor is a specific tribe which is exclusively found in the Tehsil Simalwara of district Dungrpur (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 (70.82% of the total population) of district Dungarpur. Damor is sub tribe of the Bheel community which is exclusively located in tehsil

Simalwara of the district. Sarthuna is a one of the big village 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 Rajasthsan). 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.



Fig. : Map showing location of Tehsil simalwara

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 Vögl *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-

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

Enumerations

12	Kothi, kabitu	Feronia limonia	Rutaceae	Leaves	Fertility	
13	Arindo	Ricinus communis	Euphorbiaceae	Leaves	Cough and cold	
14	Sasai	Mucuna pruriens	Fabaceae	Seed	Sex power	
15	Jherbaajnivilo	Aristolochia indica	Aristolochiaceae	Root and leaves	Snake bite, fever	
16	Mojar	Casearia elliptica	Salicaceae	Leaves	Muscle pain	
17	Navli	Enicostemma axillare	Gentianaceae	Leaves	Malaria	
18	Valiyovilo	Rhynchosia minima	Fabaceae	Leaves	Mouth ulcer	
19	Viko	Maytenus emarginata	Celastraceae	Leaves	Toothache	
20	Ratadiyo	Senna sophera	Fabaceae	Leaves	Mums, ringworm	
21	Karuahat	Tridax procumbens	Asteraceae	Leaves	Arthritis, antiseptic	
22	Doohdhi	Euphorbia hirta	Euphorbiaceae	Latex	Ringworm	
23	Bahufalee	Corchorus depressus	Tiliaceae	Whole plant	Leucorrhoea	
24	Himro	Bombax ceiba	Bombacaceae	Bark	Leucorrhoea	
25	Adai	Adhatoda vasica	Acanthaceae	Leaves and flower	Cough, cold, pneumonia	

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=Nur-Nt/(Nur-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

S. No	Categories	Nur	Nt	ICF	
				value	
1	Cough cold	15	4	.78	
2	Diarrhea	9	2	.87	
3	Fever	16	3	.86	
4	Piles	5	2	.75	
5	Arthritis	4	2	.66	
6	Stone	4	1	1	
7	Muscular pain	5	2	.75	
8	Toothache	6	2	.80	
9	Skin infection	12	4	.72	
10	Jaundice	4	1	1	
11	Sexual disorder	16	4	.80	
12	Snake bite	3	1	1	
13	Mouth ulcer	7	1	1	

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

FC-Number of informants who reports particular plant species

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

S. No	Plant name	Used for	Use reports	RFC
1	Enicostemma axillare	Fever	14	.87
2	Bombax ceiba	Leucorrhoea	12	.75
3	Adhatoda vasica	Cough cold	9	.56
4	Corchorus depressus	Leucorrhoea	7	.43
5	Euphorbia hirta	Skin infection	6	.37

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 vascica 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 vascica* and *Corchorus depressus* were most widely used plants which indicate their potential therapeutic value which must be subjected to further phytochemical analysis.



A. Amorphophalus (tuber) B. Maytenus emarginata C. Dregea volubilis D. Feronia limonia E. Mucuna pruriens
F. Soymida fabrifuga G. Cardiospermum helicacabum H. Senna sophera

Conflict of interest

The authors declare that they have no conflict of interest regarding the present article

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