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Research Article

DOCUMENTATION AND ETHNOBOTANICAL SURVEY OF MEDICINAL PLANTS IN AZIZ NAGAR, HYDERABAD DISTRICT, TELANGANA, INDIA.

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Abstract:

The ethnobotanical survey was conducted to collect information about medicinal plants used traditionally for the treatment of various diseases. Various medicinal plants were collected from the Moolika vanam which is under the maintenance of Department of Medicinal Plants board that is located in Aziz Nagar, Hyderabad district, Telangana state. Traditional uses of 20 plant species spread over 12 families are described under this study. The medicinal plants are arranged by Scientific name, Common name, Family name, Plant parts used and Therapeutic uses. The plants documented in this survey belong to the families such Acanthaceae, Annonaceae, Burseraceae, Combretaceae, Fabaceae, Longaniaceae, Lamiaceae, Malvaceae, Poaceae, Solanaceae, Lythraceae, Scrophulariaceae. Present Ethnobotanical survey revealed that the medicinal plants still play a vital role in the primary health care of the people. The traditional Medicinal Plants knowledge is very much necessary for the today's generation as to correctly identify and use the plant knowledge correctly for mankind.

Key word: Ethnobotanical, Poaceae, Scrophulariaceae, traditional Medicinal.

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INTRODUCTION:

The use of plants and its secondary metabolic products as medicines could be traced as far back as the beginning of human civilization. The earliest mention of medicinal use of plants in Hindu culture was found long years ago in “Rig veda”, which was written between 4500-1600 B.C. and was supposed to be the oldest repository of human knowledge.[1] Most people in the world still use medicinal plants to treat and prevent disease. [2] Traditional uses of medicinal plants in healthcare practices are providing clues to new areas of research; hence their importance is now well recognized. [3] A medicinal plant is any plant, which in one or more of its organs contains active ingredients which can be used for therapeutic purposes or contain foundation compounds that can be used for the synthesis of useful [4]

The medicinal plants are part of the history of all the continents across the centuries, the knowledge concerning the plants is organized, documented, and has been transmitted from generation to generation. Today the use of medicinal plants for the treatment of many diseases is associated to folk medicine from different parts of the world. [5] In recent era the ethnobotanical knowledge have expanded inspiration worldwide to make the herbal medicine for the treatment of different ailments as well the discovery of natural drug discovery [6] as the Traditional knowledge on herbal medicine has remained a mainstream source of maintaining

wellbeing for generations in many [7] Traditional medicine still remains the main choice for a large majority of people for treating various diseases and ailments. Management in various forms of diseases like diabetes, cardiovascular disorders, hepatoprotective, antibacterial, antifungal and wound healing etc. are made. In India, traditional medicines find its use on par with Western medicine [8]. Since, the interest in traditional medicine has been increasing, ethno botanical studies have gained prominence to explore the traditional knowledge particularly in developing country [9].

MATERIALS AND METHODS:**Study Area:**

An ethnobotanical survey was conducted in the study area at the Moolika vanam which is present in Aziznagar surveyed between the latitude 17°20'58.4"N 78°21'04.2"E which is maintained by the Telangana State Medicinal Plants Board. Health and Medical and Family Welfare Department, Government of Telangana.

Aziznagar is a village in the Moinabad Mandal, Ranga Reddy District, Telangana State India. It is approximately 6.8 km from the Mandal Main Town Moinabad¹⁰. This village is considered as an urban village as it is very close to the city and is a highly developing area which has several universities/colleges Shadan college of Pharmacy, VRK Medical college.

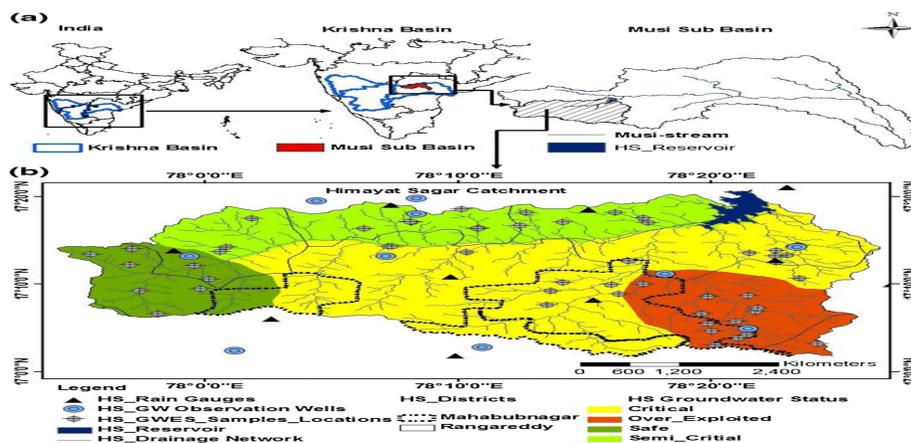


Figure : 1 Map of Aziznagar, Moolika vanam, Hyderabad.

Ethnobotanical Survey:

An ethnobotanical survey was conducted from November 2021 to December 2021, and before starting the collection of ethnobotanical data, a brief explanation to the informants on the objectives of the

study and the importance of the information they would provide was provided in order to obtain their consent to participate in the study. A total of 20 different Plants were explored for this purpose. The data were collected through semi structured interviews

using different languages which is used locally. These interviews were designed to record information about the plants used traditionally to treat various ailments and with their local names, the used parts of the plant, the methods of preparation, the administration of drugs, and the demographic characteristics of the study participants.

Data Collection and identification of Plants Specimens:

This study was conducted from October, 2021 to November 2021 Ethno-botanical data were obtained using a semi-structured questionnaire method. The target groups for this study were herbalists, traditional medical practitioners, traditional midwives, housewives, farmers and other people of old age who have practiced and used medicinal plants. Prior to the questionnaire administration, conversation sessions

with the potential respondents were organized and facilitated by the traditional rulers in each Local Government Area. During the conversation, the potential respondents were informed how rapidly the knowledge and plants used for traditional medicine are diminishing and were thus told that the purpose of the study was to protect this wealth from being lost. The questionnaire was divided into two parts, namely parts A and B. In part A, the socio-demographic information of the re-pondents was recorded, and information on plants that are used for traditional health care was recorded in part B. Fifty (50) re-pondents were selected from each LGA. The interviews were conducted in local language, and each respondent was interviewed alone to ensure confidentiality. Only those plants that were cited to cure the same ailment by at least three respondents are reported. Ethical approval was obtained before embarking on the study.



Fig:2 Shadan college of Pharmacy, students



Fig:3 Shadan students went to Moolika vannam, Aziz nagar approached to Telangana state medicinal Plants board Done Medicinal Plants Survey.



Fig: 4 Picture showing Faculty and Students Performing Ethnobotanical survey accompanied by Deputy forest officer, Mr.Mohd Raffiuddin, Moolika vannam, Telangana state Medicinal Plants board, Aziz nagar, Hyderabad.

Data collection Traditional Medical Practitioners (TMP's) were the main informants in the survey. They were identified with the help of the traditional ruler and some of the elders of the Moolika vannam. After seeking their consent, the traditional medical practitioners were interviewed using semi-structure questionnaires and open-ended conversations. Trips were made to the sites where TMP's normally go to harvest plants and during such trips, there were discussions with the TMP's in addition to the interviews using the semi-structure questionnaires. The interviews and discussions were carried out in the local language. Data on the local names of the Plants,

the Plant parts used, diseases treated by the plants, mode of usage and administration were collected in the field. Plants recorded in the results were mentioned by at least two TMP's as treating the same disease in order to confirm its use. Plants was achieved by the aid of herbarium specimens and literature on the medicinal plants. The online plant diversity resources further confirmed the identity of the surveyed plants. Voucher specimens were collected, pressed and deposited in the herbarium of Shadan College of Pharmacy, Department of Pharmacognosy, Peerancheeru, Hyderabad.



Fig: 5 (Left to right) : In-charge of B.Pharmacy- Mr.Syed Hafeez Ahmed Associate Professor, Dr.G.N.Pramodini Professor, Department of Pharmacognosy, Director & Professor Dr.Shaik Mohd Khasim, Vice- Principle & Professor Dr.R.Sridher Babu along with Final year students of Shadan College of Pharmacy, Peerancheeru, Hyderabad who were involved in Practice School Election of medicinal Plants, Ethnobotanical survey.



Fig6(a)



Fig6(b)



Fig6(c)



Fig6(d)



Fig6(e)



Fig6(f)



Fig6(g)



Fig6(h)

Fig : 6(a,b,c,d,e,f,g,h) Shadan College of Pharmacy ,B.Pharmacy Final year students Participated in the Ethnobotanical survey a study under Election of medicinal Plants a Part of Practice School.

Table 1. Ethnomedicinal Perspectives of Plants available in Moolika Vannam, Aziz Nagar district, Hyderabad.

Scientific name of the Plant	Common name	Family	Parts of Plant used	Ethnomedicinal uses	Voucher Specimen number
1. <i>WITHANIA SOMNIFERA</i>	Ashwagandha	Solanaceae	Leaves, flower, root	Asthama, diabetes, cancer, hypertension, stress.	SCOP-11-MP-001
2. <i>JUSTICIA ADHATHODA</i>	Vasaka	Acanthaceae	Roots, leaves, flowers	Bronchitis, tuberculosis	SCOP-11-MP-002
3. <i>BACOPA MONNIERI</i>	Brahmi	Scrophulariaceae	Whole Plant	Brain tonic,	SCOP-11-MP-003
4. <i>CYMBOPOGON</i>	Lemon grass	Poaceae	Leaves	Treats digestive tract spasm, stomach ache, hypertension, convulsion, vomiting, cough.	SCOP-11-MP-004
5. <i>HIBISCUS ROSA</i>	Gurhal	Malvaceae	Leaves, flowers	Menstrual cramps, good for hair, inflammation and headache.	SCOP-11-MP-005
6. <i>LAWSONIA INERMIS</i>	Henna	Lythaceae	Dried leaves, flowers and fruits	Antibacterial, antifungal, antiviral, antifungal, antidiabetic, Cosmetic antiinflammatory hair use	SCOP-11-MP-006
7. <i>TERMINALIA CHUBULA</i>	Harda	Combretaceae	Unripe fruits	Skin care, Digestive aid, liver stimulant	SCOP-11-MP-007
8. <i>OCIMUM SANCTUM</i>	Mint tulsi	Lamiaceae	Leaves	UTI disorders, bronchitis, malaria, asthma	SCOP-11-MP-008
9. <i>LINUM USITATISSIMUM</i>	Flax seed	Fabaceae	Leaves, bark, seeds, flowers	Diuretic, laxative, bronchitis, antipyretic, dimmness in vision	SCOP-11-MP-009
10. <i>STRYCHNOS NUXVOMICA</i>	Poison nut	Longaniaceae	Bark, leaves, seeds	Cholera, paralysis, anemia, Bronchitis, constipation.	SCOP-11-MP-010
11. <i>IMPERATA CYLINDRICA</i>	Darbha	Poaceae	Whole Plant	UTI infections, skincare, thirst, anticancer, nose bleeding.	SCOP-11-MP-011
12. <i>COMMIPHORA WIGHTII</i>	Guggul	Burseraceae	Resinous gum	Arthritis, rheumatism, obesity, skin diseases, high cholesterol	SCOP-11-MP-012
13. <i>ANNONA MURICATA</i>	Soap sop	Annonaceae	Leaves, fruits, stem, seed	Anticancer, inflammation of nose & throat, Leishmaniasis, bacterial infections	SCOP-11-MP-013
14. <i>CYMBOPOGON NARDUS</i>	Citronella grass	Poaceae	Leaves, stem	Insect repellent, antifungal, promote wound healing	SCOP-11-MP-014
15. <i>OCIMUM GRATISSIMUM</i>	Clove basil	Lamiaceae	Whole Plant	Earache, leprosy, ulcers, fever, intestinal worms	SCOP-11-MP-015
16. <i>CISSUSQUADRANGULARIS</i>	Hadjod	Vitaceae	Whole Plant	Bone fracture, injured ligaments, tendons, ulcers	SCOP-11-MP-016

17. <i>OCIMUM BASILICUM</i>	Sweet basil	Lamiaceae	Seeds and leaves	Used in refresh drinks, seminal weakness, weight loss, coolant, stress relief.	SCOP-11-MP-017
18. <i>CYMBOPOGON MARTINII</i>	Palma rosa	Poaceae	Whole Plant	Insect repellent, antifungal used in soap and cosmetic products	SCOP-11-MP-018
19. <i>TINOSPORA CORDIFOLIA</i>	Giloy	Menispermaceae	Leaves, stem	Diabetes, jaundice, stomach ulcers, cancers, Fever, immunity booster.	SCOP-11-MP-019
20. <i>COLEUS AMBOINICUS-AROMATIC AJAVAYIN</i>	Ajavain	Lamiaceae	Leaves	Allergy, cold, cough, indigestion, urinary diseases	SCOP-11-MP-020

RESULTS:

A total of 20 medicinal plant species from 16 genera and 12 families used for treating about nearly 29 health problems were identified in survey. The most represented plant family in the above list of medicinal plants is the Pomaceae with 12.2% of the Medicinal Plants species followed by Lamiaceae, Scrophulariaceae with 5.4% each. Herbs made to 47% of the total number of Medicinal Plants followed by whole plants (15%), shrubs (15%) and climbers 8%, The leaves were most commonly used plant parts followed by the Aerial parts of herbs 8% followed by the woody parts and bark 6%, The roots 4%, The flowers 5% and fruits 4%, whole Plant 3% and latex 4% are also used medicinally. The medicinal Plants are arranged by Scientific name, Common name, Family name, Plant parts used and Therapeutic uses. The plants documented in this survey belong to the families such Acanthaceae, Annonaceae, Burseraceae, Combretaceae, Fabaceae, Longaniaceae, Lamiaceae, Malvaceae, Poaceae, Solanaceae, Lythraceae, Scrophulariaceae.

Most of the Medicinal Plants were harvested from the wild, from farms and some home gardens. But in our Ethnobotanical survey we were very fortunate enough as we found many medicinal Plants from the Moolika vannam, Aziz Nagar, Hyderabad, Telangana. Which is under the control of Government of Telangana Medicinal Plants Board Department. Each Plant is identified and authenticated by the available traditional medical Practitioner after exploring each plant. The same Plant sapling were collected from the Moolika vannam and replanted in our College Premises in Shadan college of Pharmacy and they have given the individual voucher specimen number which are maintained for future reference in the

Department of Pharmacognosy, Shadan College of Pharmacy.

DISCUSSION:

In the current study a total of 20 medicinal plants species in 12 families were identified and studied in detail as they are used by the local community. Based on the Documented medicinal plants used. It is understood that there are many more Plants in Aziz nagar, Moolika vannam to be explored. The knowledge of the traditional plants being used for the medicinal purpose. However, During the study, there was also evidence of possible loss of traditional medicinal knowledge, it may be attributed to the nature of the traditional Medicinal knowledge to be translated from one generation to the future generations, which has to be translated usually orally and in the written forms.

Based on the traditional knowledge of the herbal medicine as it is a recognized system of the traditional system of medicine which is being followed throughout the world. Since time immemorial the Plants with medicinal properties have been utilized successfully in the treatment of various ailments, From our survey we came to know that the leaves, roots, stems are most frequently used for the treatment of various ailments which is given in the form of extracts, decoctions, pills, etc., So the traditional Medicinal Plants knowledge is very much necessary for the today's generation as to correctly identify and use the Plant knowledge correctly for mankind.

CONCLUSION:

The Ethnobotanical survey shows that a large number of Medicinal Plants are used by the Human for treating various disorders. The traditional knowledge of the use of Plants to treat diseases has been with the people

for generations. But it has not been recorded and this traditional knowledge will remain mainly with the traditional Medical practitioners who are mostly old people and now-a-days very rarely available and most of the Medicinal Plants are obtained from the wild source. A part from their Medicinal uses, some of these Plants have other uses also. There is an extensive need to educate the local population about the widely available medicinal plants and about the sustainable methods of harvesting Plants to treat various ailments without compromising about their availability for the next generation.

In the present scenario youth population should also be encouraged to expedite the traditional Medicinal Plants knowledge to preserve it from being extinct with the older generations

Acknowledgement:

We wish our sincere thanks to the Telangana Medicinal Plants Board, Tilak Nagar, Abids. For giving the permission to visit the Moolika Vannam situated at the Aziznagar, Hyderabad. Also acknowledge for reviewing the Questionnaire and interaction with the deputy forest officer Mr. Mohd Raffiuddin for exploring traditional Medicinal Plants knowledge which are available in the Moolika Vannam.

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