Ethnomedicinal examination on Primitive Tribal Groups of Eastern Ghats, Visakhapatnam District, Andhra Pradesh

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Abstract

The recognition of ethnomedicine is huge from the tribal occupants; however the data is restricted inferable from absence of scientific substantiation. The point of the present investigation is to identify the ethnomedicinal data from PTGs (Primitive tribal groups) of Koyyuru Mandal, Visakhapatnam District, North Coastal Andhra Pradesh, India. In light of the meetings from neighborhood tribal specialists and through talks with them, an all out number of 74 ethnomedicinal plant species with 70 genera of 43 families have gathered which thusly treat an all out number of 59 ailments. Few plants are utilized as medication straightforwardly and remaining plants are utilized in combine with other plant species. Most oftentimes the plant leaves were utilized for getting ready ethnomedicine. The perspective on possible information and increment the utilization of ethnomedicinal plants have additionally contended.

Key words: *Eastern Ghats, Ethnomedicine, plants, primitive tribal groups, Koyyuru.*

Introduction

Worldwide the utilization of plant materials to counteract and treat irresistible diseases effectively throughout the years has pulled in the consideration of researchers. Plant-based anticancer/cancer prevention agent mixes can give out the reason with no symptoms regularly connected with engineered drugs and furthermore minimal possibility of improvement of obstruction [1, 2]. As indicated by the old century of ISM (Indian System of Medicines), there are 400 unique kinds of plants which are underway to use as inborn, Unani, Siddha, and Ayurvedic prescriptions [3]. India is the one of the extra-huge decent variety nations with around 18,000 blossoming plant species attributable to a broad assortment of atmosphere and environment, however roughly 7500 of those plants are appropriately archived in Indian arrangement of medication (ISM) [4]. The wide scope of extension in ethnomedicine could be perceived to monetary advantages, scholarly ampleness, and convenience not for various illnesses contrasted with fake drugs. Subsequently, it is important to create freshness in drugs effectively [5, 6]. The therapeutic plants in India abide the huge spot in strict, socio-culture, and restorative ground of the rustic people [7]. The information on ethnobotany is reported in

different districts of India and the restricted occupants have utilized various plant species and herbs as ethno drug to recuperate the clutters of individuals [8]. Besides, various bound groups in the nation particularly tribal networks have encounters in various ethnomedicinal plants and they are very much aware of arranging plants and their parts to treat the assorted maladies. The innate networks have oral information on restorative plant utilization and have aggregate financial tribulations by virtue of changing natural conditions [9, 10]. Raju *et al* [11] have studied the importance of folk medicine for women's diseases used by tribal konda reddis of Andhra Pradesh, India. From their studies, 37 plant species related to 28 families were used to heal different women diseases. Aruna et al [12] studied the influence of different ethnomedicinal plants used by Jatapu women in Eastern Ghats of Andhra Pradesh, India. They have concluded that a total number of 63 traditional plants of 40 families were documented as medicine. Padal *et al* [13] carried out the ethnomedicinal survey in Visakhapatnam district of Kondadora tribes, India. From their reported, they have collected 68 traditional medicine plant species belongs to 63 genera of medicinal value.

Study region

Figure.1 shows the region of the field study. Koyyuru Mandal located between a Latitude and Longitude of 17°40′00″N and 82°14′00″E in the part of Eastern Ghats in Visakhapatnam District in South India. Vegetation of this area is a tropical dry deciduous forest with an enormous ethnomedicinal plants species practicing by local tribes.

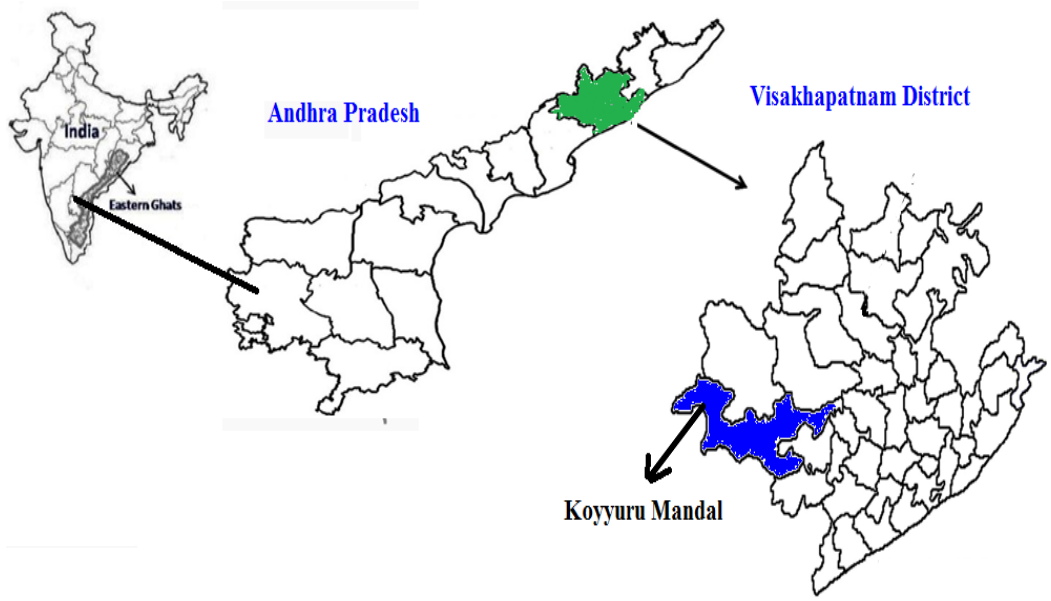

Figure.1 Representation of location of the field study

Among all the tribes Gadaba, Porja, Nuka dora, Kondu, and Malis are treated as Primitive Tribal Groups. They are the oldest inhabitants of their native place. They live in confined**,** restricted, remote and unfriendly areas such as hills and forests. Their source of revenue is based on primitive cultivation, low level of closed financial system with a near to the ground rank of technology. They possess a lower literacy rate and inferior health. The tribal people

are habitually depending on traditional plants as medicine for their difficulties from various diseases. Further, they have developed their individual unique culture, language communication, and religious conviction.

Methodology

The field review was completed to gather distinctive medicinal plants and the immensity of ethnomedicinal plants was recorded through meetings from various conventional specialists and neighborhood tribal individuals during the years of 2018-2019 secured rainstorm, pre storm, and post storm periods. Likewise, the data as respects various methods for utilizing restorative plants for relieving the ailment was accumulated and moment recuperating of medicinal plants was gathered. To get point by point data concerning the medicinal plants field works were done at various Villages and met diverse ancestral customary specialists. The information which was gathered from the nearby tribal specialists of various villages was cross-checked and approved for the better usage as medication. Likewise, the data on various methods for utilizing the plants and their parts as medication from various specialists in the examination district. This data identified with restorative qualities was gathered from innate specialists, town seniors, individual meetings, and gathering exchanges included people of PTG. A portion of the significant species was readied herbarium and stored in Andhra University Herbarium (AUH).

Results and discussions

The gender sharing of Koyyuru Mandal was 50.28% and 49.72% for male and female separately, and the literacy rate was 48.83%. The present outcome makes realized that the PTGs of the investigation area have unrivaled consciousness of their medicinal services by utilizing the ethnomedicinal plant species. In light of the data accessible from the neighborhood tribal individuals, as delineated in Fig.2 an absolute number of 74 unique plants of 43 families with 70 genera were gathered and revealed from Primitive Tribal Groups of Koyyuru Mandal. Acacia, Capparis, Smilax, and Tephrosia Genus are with 2 species and staying 70 genera are with single species. Figure.3 depicts the point by point data concerning the plant parts utilized and it very well may be seen that the most extreme possession of 30% intended for Bark, 25% for leaves, and 17 % for root which were utilized as medication to treat an assortment of infections. The left over parts are likewise remembered for the Fig.3 with their percentage commitment.

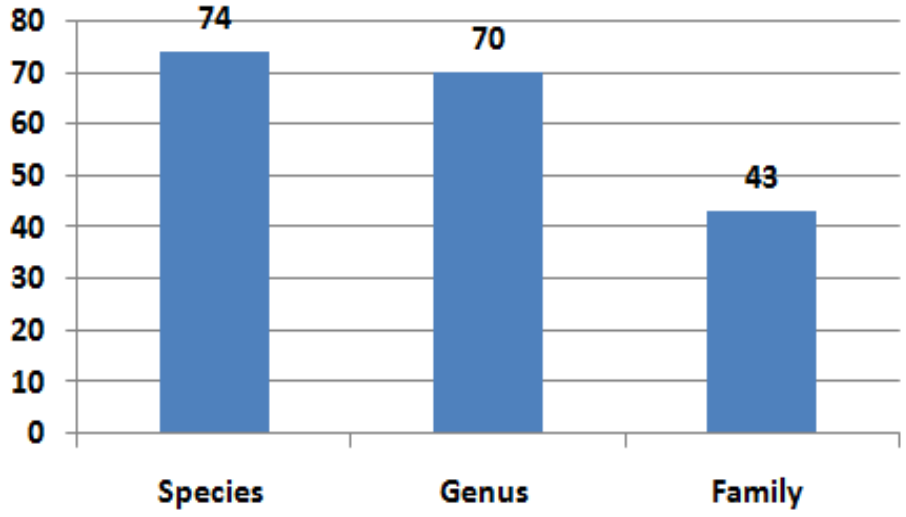

Figure.2 Details of plant species, genus, and family.

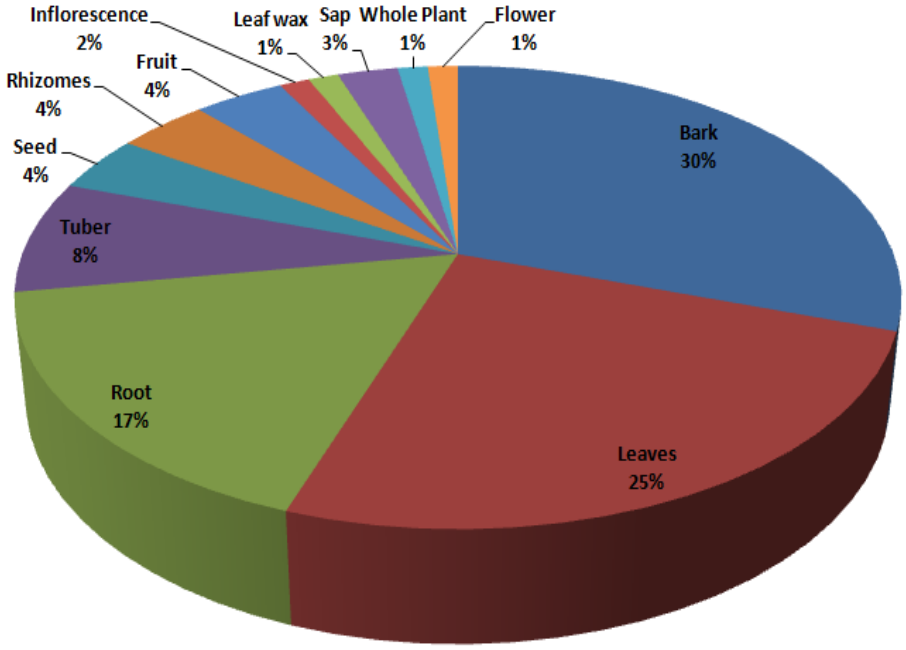

Figure.3 Percentage of plant parts used in preparation of ethnomedicine

The habitation of plant species are shown in Fig.4. It can be seen that the maximum number of herbs (30) were used out of 74 plant species compared to trees (19), shrubs (8), and Climbers (17).

Figure.5 represents the maximum quantity of families observed from the collected ethnomedicinal plants. The observation made from this analysis is that the there are 43 families for plant species in which Fabaceae (11) has the highest occupancy and poaceae (4) dwell in second maximum occupancy.

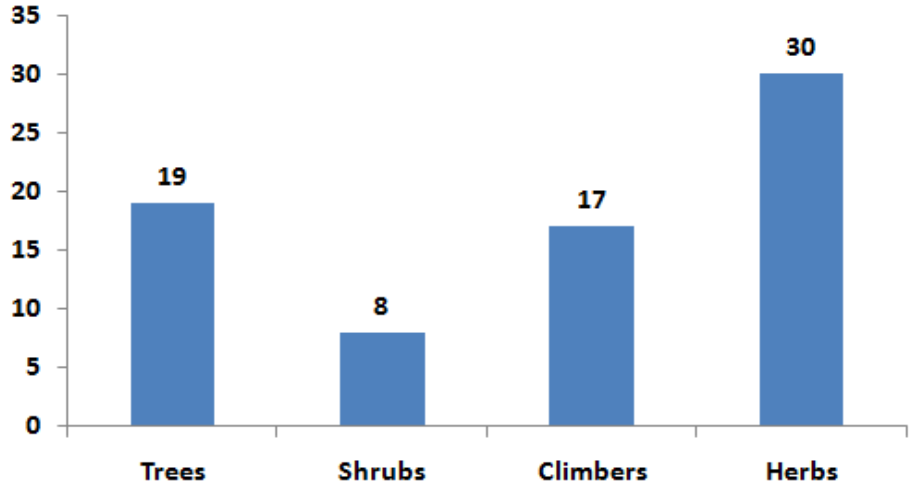

Figure.4 Representation of habitation of plant species

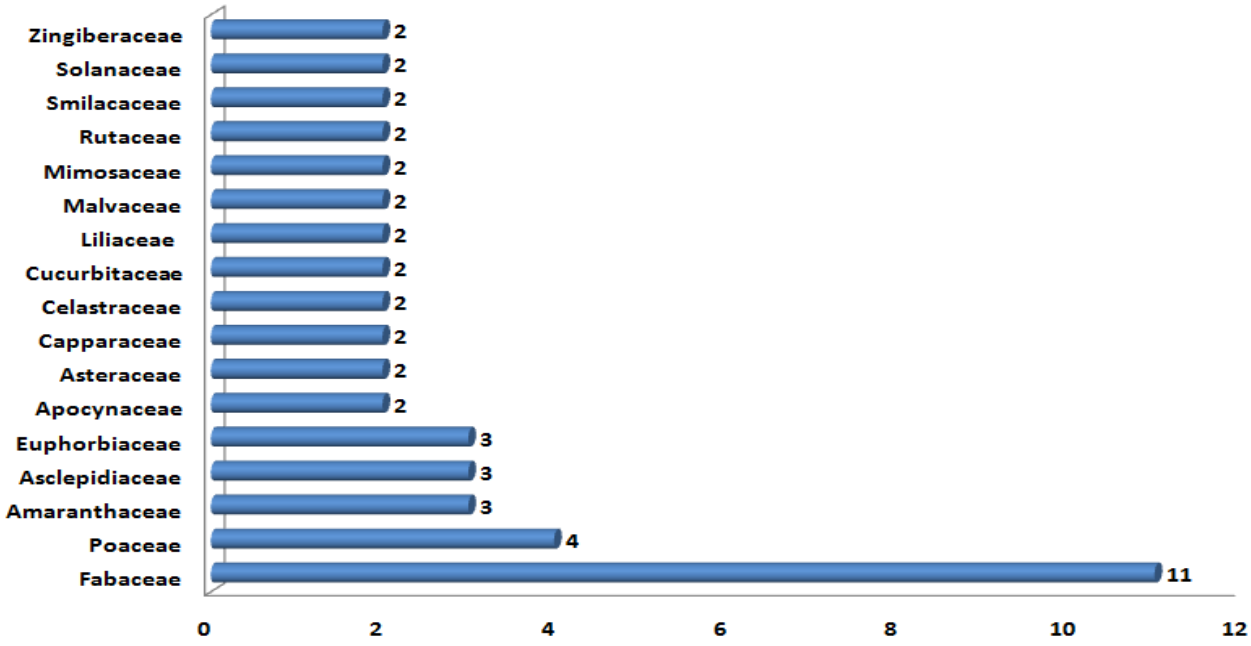

Figure. 5 Depiction of maximum sharing of ethnomedicnal plant families

Figure.6 demonstrates the disease based analysis of various plant species. Among the total 74 ethnomedicinal plants, 53 plants were used for single disease, 12 plants were for 2 diseases, 6 plants were for 3 diseases, and 3 plants for 4 diseases.

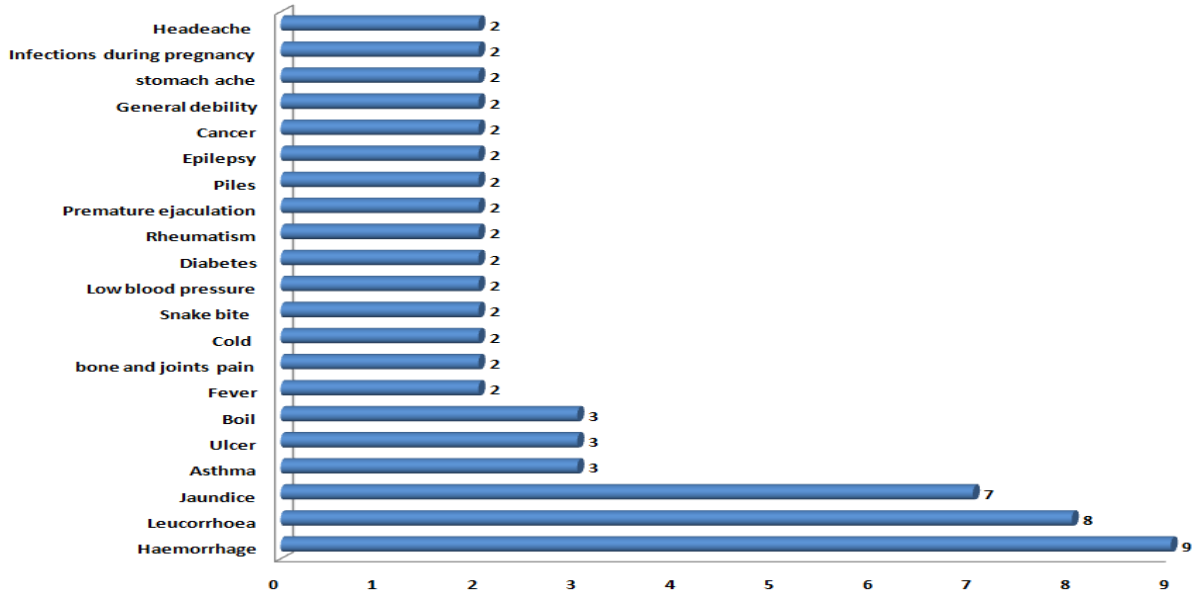

Figure.6 Disease based analysis (Maximum number of plants used for few diseases)

Figure.7 depicts the tribal based analysis of plant species. Among the 5 Primitive Tribal Groups, highest number of plants were used by T1 (40 Species) and T4 (40 Species) followed by T3 (39 Species), T2 (36 Species), and T5 (31 Species).

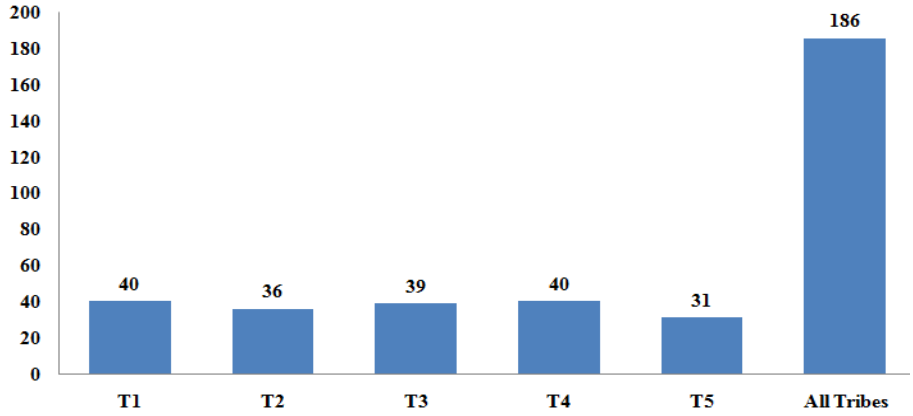

Figure.7 Tribal based analysis of various plant species

Some of the significant ethno medicinal plants collected were *Abrus precatorius* L., *Pterocarpus marsupium* Roxb., *Acacia chundra* (Rottler) Willd, *Xanthium strumarium* L., *Aerva lanata* (L.) Juss., *Xantolis tomentosa* (Roxb.) Raf., *Andrographis paniculata* (Burm.f.) Nees, *Argemone mexicana* L., *Oroxylum indicum* (L.) Kurz, *Argyreia nervosa* (Burm. f.) Bojer, *Aristolochia indica* L., *Buchanania lanzan* Spreng., *Celastrus paniculatus* Willd., *Chloroxylon swietenia* DC., *Curcuma caesia* Roxb., *Dichrostachys cinerea* (L.) Wight & Arn., *Mucuna pruriens* (L.) DC., *Gloriosa superba* L., *Gmelina arborea* Roxb., *Gymnosporia montana* (Roth) Benth., *Pterocarpus marsupium* Roxb.,and *Mimosa pudica* L.

Conclusions

The result of present study points out that abundance of ethno medicinal plants is found for healing number of diseases in different ways. The study revealed that the total number of 74 plant species with 43 families have been recognized and documented for their healing practices related to 59 diseases. The comparison of ethnomedicinal plants data have been carried out with various Indian medicinal plant literature and many of the information is matching with the existing studies. The complete understanding of ethnomedicinal plants, quantitative analysis, and phytochemical analysis need to be carried out further.

Acknowledgment

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Nomenclature:

T1: Kondu tribe

T2: Nuka dora tribe

T3: Porja tribe

T4: Gadaba tribe

T5: Mali tribe