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STUDY OF SOME ETHNOMEDICINAL PLANTS FROM KANZETA FOREST, DAHOD, GUJARAT, INDIA

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Abstract

Dahod districts located in Gujarat state in Western India. It is one of the tribal district of Gujarat state situated in the North-East fringe of Gujarat state, adjoins with Rajasthan and Madhya Pradesh States. Total area is 3,642 km^2. It's territory is divided into two parts namely Baria (Devgadh) and Sanjeli. DevgadhBaria is 45 km away from Dahod. DevgadhBaria is famous forit's beauty of nature, specially of Ratanmahal and Kanzeta forest range. The Kanzeta forest range covers 350 acer of area. It's longitudinal angel is 22^{0}45'13" N and 73^{0}57'5". This deciduous type of forest range covers about 11 villages. Present work deals with collection of ethnomedicinal information of 10 plant species belonging to Fabaceae, Caesalpiniaceae, Mimosaceae, Asteraceae, Sapotaceae, Exclepidaceae, Convolvulaceae, Cuscutaceae, Moraceae families from the tribal of Kanzeta forest range. Main tribes inhabiting forest range are Machhaar, Sangoda, Baria, Ninama, Vasaiya, Vasava, Parmar and Chauhan. During the study period an extensive field survey was conducted in the forest areas and first hand information were collected through interactions with tribal and rural people. The plant species were identified by using Flora of Gujarat. The present paper deals with description of medicinal plant species and detail ethnomedicinal information for curing several diseases.

***Key words*:** Ethnomedicinal plants, Kanzeta forest range and Gujarat.

Introduction

Dahod district is located in Gujarat state in Western India, It's total area is 3,642 Km^2. It territory divided in to two parts namely Baria (Devgadh) and Sanjeli. Devgadhbaria is 45 km away from the dahod and 70 km away from the center of Dahod district. Devgadhbaria is famous for its beauty of nature specially Ratanmahal and Kanzeta forest range. Present research work is deal with research of ethnomedicinal plants in kanzeta forest. This Kanzeta forest is 30 km away from Devgadhbaria. It's longitudinal is 22^{0}45'13" N and 73^{0}57'5" E. This forest is span 35 acre of area and 25 km^2. This forest covers about 11 villages. The present paper deals with description of medicinal plant species and detail ethnomedicinal information for curing several diseases. Some of the plants are very useful to cure major diseases like cancer, diabetes, TB and many more. It is deciduous type of the forest which includes dry teak forest and dry bamboo breaks on the periphery. It is the third-most backward district in Gujarat. It was only 6.96% urban as of 2001. Ethnobotanical studies were carried out to collect information on the use of medicinal plants by local communities of Jhalod Taluka of Dahod district. The utilization of plants for medicine is an ancient, global tradition that represents the cornerstone of health care for many rural communities and citizens in developing countries (Robbin, 2000). Ayurveda is expanding, with the integration of herbs and minerals discovered in other countries and the strengthening of academic knowledge networks worldwide (Puri, 2003). Nearly 80% of world population is depending upon traditional system of India (Sandhya *et al*., 2006). Antioxidants are compounds that can delay or inhibit the oxidation of lipids or other molecules by inhibiting the initiation or propagation of oxidizing chain reactions (Karou *et al*., 2005). The use of plants for medicinal purposes date back a long time ago and probably happened when primitive people noticed that animals like chimpanzees partake of certain plants when they got sick (Rahmatullah *et al*., 2009). Research has been geared towards finding scientific evidence for the claims as to the therapeutic efficacy of African herbs by traditional healers. Most of the published and unpublished written ethno medicinal data with valuable and complementary information are scattered in forest area (Lawal *et al*., 2010). Ethnic groups and rural people of this area used to treat their alimentary by using fresh plants materials (Patel and Patel, 2010). The Himalaya have a great wealth of medicinal plants and traditional medicinal knowledge. Himachal Pradesh is one of the pioneer Himalayan states is rich in repository of medicinal flora (Boktapa and Sharma, 2010). The tribal people of the Jhalod

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used different plant materials in various diseases like fever, cough, headache, hepatitis, constipation, scorpion bite, muscular pain, asthma, snake bite total 30 ethnomedicinal plants belonging 29 Genera and 21 Families (Maru and Patel, 2012). Traditional herbal ramidies are radially available in rural area in forestfor the treatment on snake bite. Application of plant is sap on bite area, chewing leaves or bark or drink plant extract or decoction (Durairaj *et al*., 2012). Tribal people of Ambaji forest range directly depend upon forest resources for their daily needs. The aim of Ethnobotany is to study how and why people use and conceptualize plants in their local environments (Patel, 2015). Ethnobotany is the study of how people of a particular culture and region make of uses of indigenous plants. Ethnobotany explore how plants are used for such things as food, shelter, medicine, clothing, hunting and religious ceremonies (Patel and Patel, 2015). Ambaji range forest is representing 434 angiosperm species (20% of the Gujarat flora) belonging to 85 families (Patel, 2015). The tribal women of the Jhalod used different plant materials in gynec diseases like lucceouria, ovary disease. Urine infection, lactation, maturation-problem sexual-potential-problem and infertility (Maru *et al*., 2016). Diabetes is the greatest public health problem and is considered as the silent epidemic of the 21st century. In Iran, there are approximately 1.5 million diabetic patients. Before the discovery of insulin, medicinal plants were widely used for the treatment of diabetes in Iran (Ahmadi *et al*., 2016). The WHO (World Health Organization) has recognized the role of traditional systems of medicine and considers them a part of strategy to provide health care to masses (Dave and Patel, 2017). Human beings have been using plants for long time and research workers are constantly bringing to light additional information on the relationship between plants and man. Some plants used for the treatment of earache from forest areas of JhalodTaluka, dahod district, gujarat, india (Maru *et al*., 2017). It was observed that the tribes have specific folk remedies for almost all kinds of diseases except severe cases (Soni *et al*., 2012). Besides these some minorforest products like bark, gum, flowers, fruits, fuel wood are interwoven with tribal's life fortheir survival. The species like *Dendrocalamus, Holoptelea, Phoenix, Wrightia, Acacia* etc. are used for various purposes (Patel, 2017). There are 550 plant species are growing, among them 120 species are trees, 40 species are shrubs, 238 species are herbs, 48 species of grasses, 87 species of climbers, 2 species of partial parasite and 9 species of orchid. In present research paper, I have taken 10 ethnomedicinal plant species belonging Fabaceae, Caesalpiniaceae, Mimosaceae, Asteraceae, Sapotaceae, Asclepidaceae, Convolvulaceae, Cuscutaceae and Moraceae.

Materials and Method

To get information about medicinal plants, first of all I have contacted local tribal medicinal men from kanjeta forest and its surrounding villages and convince them about to give knowledge about ethnomedicinal plants and ethnobotanical plants. Main tribal vaidhy are Ramsingbhai and Premsingbhai. All plant species were identifying by Flora of Gujarat and another valuable literature. All plants are arranged as Bentham Hooker type of classification system. Research method and its approaches were guided by Dr. R.S. Patel.

Result and Discussion

The present research work is based on ethno medicinal plants used to cure different diseases. These plant species are used medicinally and given to tribal society by premsingbhai rathod and ramsingbhai bariya. In these 10 plant species i have taken it's botanical name, common name, family and it's ethnomedicinal uses.

By this research work our society will get ancient knowledge about medicinal plants. Knowledge about medicinal plants is bounded only in tribal people and their next generation. These tribal people are depending upone forest products. They use these product as medicine, agriculture and as cosmetics. This tribal medicine men give plant as a medicine to local rural people of forest and cure diseases. According to study of Neena rani Baktapa and Avinashkumar Sharma among 21 plants 33% of plants are used to cure acidity, cold, cough, cuts and wound and according to my research work among 10 plants 40% of plants are used to cure acidity, wound, cough and cold. 60% of plants are used to cure another disease like blood diseases, white wash, Joint pain, respiratory diseases, diabetes, jaundice and body pain.

Main advantage of this research work our society will know about medicinal plant uses. This medicine having no side effect and cure any kind of diseases and disadvantage of research is if any patient take double dose in one time it will directly or indirectly effect body worsely.

Enumeration of Ethnomedicinal Plants of Kanzeta Forest

1. **Botanical Name:** *Butea monosperma* L.

   Common Name: Deshikhakharo

   Family: Fabaceae

   Ethnomedicinal uses: Stem bark is useful to remove heat from the body. Mixture of stem bark and and fresh flowers of *Butea monosperma* is prepared, boiled mixture is applied on child who has suffering from rims.

2. **Botanical Name:** *Pterocarpus marsupium* Roxb.

   Common Name: Biyo

   Family: Faaceae

   Ethnomedicinal uses: Stem bark is fermented and drunk one glass for two to three times in a day to increase blood counts.

3. **Botanical Name:** *Cassia fistula* L.

   Common Name: Garmalo

   Family: Caesalpinaceae

   Ethnomedicinal uses: Juice of seed is drunk to decrease digestive problem. Decoction of stem bark is taken early morning with empty stomach to cure white discharge in ladies.

4. **Botanical Name:** *Acacia nilotica* L.

   Common Name: Baval

   Family: Mimosaceae

   Ethnomedicinal uses: Latex of stem is useful to cure joint pain.

5. **Botanical name:** *Spilenthes acmella* L.

   Common Name: Gobari

   Family: Asteraceae/Compositae

   Ethnomedicinal uses: Leaf and whole plant is pounded together to cure wound and bleeding from wound.

6. **Botanicalname:** *Madhuca indica* J.F. Macbr

   Common Name: Mahudo

   Family: Sapotaceae

   Ethnomedicinal uses: Mixture of flower of *Madhuka indica* and fruits of *Cicer arientum* L. are baked, mixture is taken to relief in joints pain. Juice of *Madhuka indika* Flowers ("***Haro***") is taken as a medicine in cough and cold. Wine is made from them. Fresh fruit liquid is known as "***Haro***" is given to child 2-3 drops to cure cold. Oil of *Madhuka indica's* fruits is called "*Doliyu*" is use in soap making and edible also.

7. **Botanical Name:** *Calotropis procera* (Aiton) W.T. Aiton

   Common Name: Akdo

   Family: Asclepidaceae

   Ethnomedicinal uses: Dried flowers of the *Calotropis procera* are pounded and powder is made. One teaspoon ful of powder is mixed with honey and taken twice a day to cure asthma and respiratory diseases. Fresh leaves of *Calotropis procera* are taken, ventral part of the leaves are bounded on heal of foot to cure diabetes. 500ml milk of cow is boiled then stir with 1ft of *Calotropis procera* stem and sweet mud is made. Then this sweet mud is eaten orally twice or thrice a day to cure Malaria and any kind of fever.

8. **Botanical Name:** *Rivea hypocrateriformis* (Desr.) Choisy

   Common Name: Fang

   Family: Convolvulaceae

   Ethnomedicinal uses: To cure acidity and gas trouble, fresh juice of leaves are taken at early morning after lunch.

9. **Botanical Name:** *Cuscuta reflexa* Roxb.

   Common Name: Pilivel

   Family: Cuscutaceae

   Ethnomedicinal uses: Dried the whole plant and made a powder from it. Then mixed this powder is mixed with water and taking bath to cure jaundice.

10. **Botanical Name:** *Ficus hispida* L.

    Common Name: Kaloumbaro

    Family: Moraceae

    Ethnomedicinal uses: Stem bark is used to remove body pain. White latex of whole plant is smeared on ringworm.

Here, Figure 1 shows 10 Ethno-Medicinal plants images, Figure 2 shows graph of plant form; here one parasitic plant species is found which name is *cuscuta reflexa* L. related with Cuscutaeae family. Figure 3 shows graph of different diseases curing by ethnomedicinal plant species; here 10 plant species are used to cure 17 types of diseases like jaundice, asthma, respiratory diseases, improve digestive system and many more.

Conclusion

Plants play an important role in every aspect of our lives and without them life is not possible. Plants not only regulate the concentration of gases in the air, but also the only organisms capable of transforming sunlight into food energy on which all other forms of life ultimately depend upon. Apart from that this paper throws some light on various traditional and medicinal aspects and utility of plants. This research work is very useful to our society, who does not know the uses of some plant as a medicine. By this research work our society will aware and turn their mind in Ayurveda treatment. Right now our society want to use and trust on Ayurveda medicine. Some diseases are cured with the help of local plant species because they believe that there is no side effect of by using the plant as a medicine. They will also aware about the uses and curing of plant species. So in this way we can save some important and primitive plant species and save our biodiversity.

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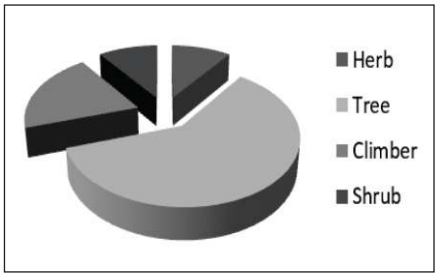

Figure 2: Compairsion of Plants Forms

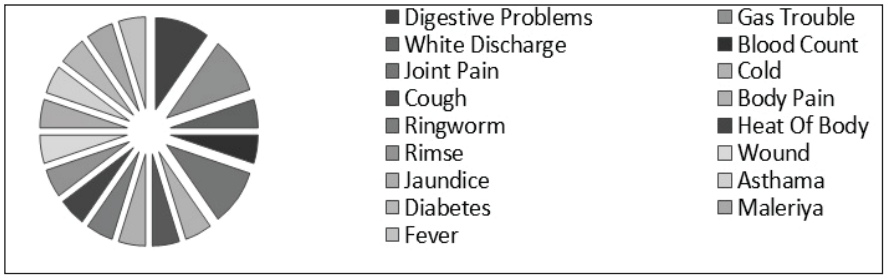

Figure 3: Diseases cured by Ethnomedicinal plants

Butea monosperma L.

Pterocarpus marsupium Roxb.

Cassia fistula L.

Acacia nilotica L.

Spilenthes acmella L.

Madhuca indica J.F. Macbr

Calotropis procera (Aiton) W.T

Rivea hypocrateriformis (Desr.) Choisy

Cuscuta reflexa Roxb.

Ficus hispida L.

Figure 1: Images of 10 Ethnomedicinal plants