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ETHNOBOTANICAL SURVEY OF TRADITIONAL MEDICINE PRACTICE TO TREAT DIGESTIVE DISORDERS OF GURUGRAM DISTRICT, HARYANA, INDIA

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ABSTRACT

An ethnobotanical study was carried out from August 2015 to October 2016 for documentation of ethnobotanical knowledge of rural people of Gurugram district about the digestive disorders by using wild plants. For this purpose, many surveys of this district has been conducted for collecting the ethnobotanical data during the year 2015-2016. Four surveys were carried out in throughout the area for collecting traditional uses of plants, local name, plant parts used and medicinal value. Total 126 species of flowering plants were documented during the ethnobotanical field survey, out of which 18 species were documented for digestive disorders. These species belonged to 17 genera and 16 families. Among all families, Leguminosae and Solanaceae (2 genera and 2 species each) are the more dominant families and 14 families were represented by single genera and single species and most commonly used plant parts are leaves fruits 33.33%, 27.77%, roots 22.22%, whole plants 16.66%, bark 11.12%, flowers 5.55%. Plants of different habits are herbs 61.55%, shrub 5.55%, and trees 33.33%. They are used by the rural peoples and traditional healers for the treatment of various digestive disorders.

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INTRODUCTION

Plants are used as a vital source of traditional medicines for the treatment of various diseases (Bako *et al.* 2005). Since the advent of human beings, it is very much possible that they were afflicted with diseases and in course of time started using various ingredients including plants, animals, insects, or minerals for treatment (Muhammad *et al.* 2014). Many living groups of people, having diversified ethnic history of rituals and performance, who are more or less isolated from the modern world and are closely associated with their ambient vegetation is the emporia of ethnobotanical research (Pal and Jain, 1998). Since then, even after the introduction of modern or allopathic medicine, medicinal plants have played a vital role in the traditional medicinal systems of many countries, as well as being the sources of many modern drugs. Indeed, it has been reported that a number of important allopathic drugs like aspirin, atropine, ephedrine, digoxin, morphine, quinine, reserpine, artemisinin and tubocurarine have been discovered through close observations of traditional medicinal practices of indigenous peoples.

A large portion of the World population, especially in developing countries, depends on traditional medicine for the treatment of diseases and injuries. Hundreds of the plant genera, to mention the most important natural resource of indigenous medicine, are used for that purpose, mainly as herbal preparations, including very potent and powerful drugs which have stood the test of time and could not be replaced by modern medical preparations (Ahmad, 1998).

Utilization of plants for medicinal purposes in India has been documented long back in ancient literature because they are essential for human survival (Panghal *et al.* 2010). Currently, traditional knowledge of primary healthcare system of local communities is under great threat because of a number of factors including deforestation, habitat degradation, biodiversity loss and modern civilization (Uddin *et al.* 2012). So there is an urgent need for documentation of ethnobotanical knowledge, for this purpose, we select Gurugram district of Haryana.

MATERIALS AND METHODS

Study Site

Gurugram or Gurgaon district was selected for ethnobotanical studies and exploration of floristic diversity. Gurugram is one of 21 districts of Haryana state (India) and is located between the latitude of 28.457523, and the longitude is 77.026344.

Methodology

Many field surveys were conducted in Gurugram district in different seasons during 2015-2016.

RESULTS AND DISCUSSION

Total 126 species of flowering plants were documented during the ethnobotanical field survey, out of which 18 species were documented for digestive disorders. These species belonged to 17 genera and 16 families. Among all families, Leguminosae and Solanaceae (2 genera and 2 species each) are the more dominant families and 14 families were represented by single genera and single species (Table-1) and most commonly used plant parts are leaves fruits 33.33%, 27.77%, roots 22.22%, whole plants 16.66%, bark 11.12%, flowers 5.55%. Plants of different habits are herbs 61.55%, shrub 5.55%, and trees 33.33%.

Table 1. Documentation of ethnobotanical uses of collected plant species

S.NO	BOTANICAL NAME	FAMILY NAME	LOCAL NAME	HABIT	ETHNOBOTANICAL USES
1.	*Verbascum thapsus* L.	Scrophulariaceae	Tamak	Herb	Leaves decoction is effective against diarrhoea, constipation, haemorrhoid and bladder infection.
2.	*Mangifera indica* L.	Anacardiaceae	Aam	Tree	Vomiting, constipation, indigestion, flatulence, and cramps.
3.	*Portulaca oleracea* L.	Portulacaceae		Herb	Whole plant used to treat indigestion.
4.	*Azadirachta indica* A.Juss.	Meliaceae	Neem	Tree	Leaf juice is taken orally to treat intestinal worms.
5.	*Ranunculus sceleratus* L.	Ranunculaceae	jaldhania	Herb	Whole plant decoction used to cure digestive problems.
6.	*Solanum surattense* Burm. f.	Solanaceae	Choti katili	Herb	Fruits are eaten during indigestion.
7.	*Sonchus oleraceus* (L.) L.	Compositae	Pili dudhi	Herb	Roots and leaves are used to treat indigestion, chronic dysentery and diarrhoea.
8.	*Plumbago zeylanica* L.	Plumbaginaceae	Chitrak	Shrub	Roots powder is effective against piles, diarrhoea and indigestion.
9.	*Solanum americanum* Mill.	Solanaceae	makoh	Herb	Ripe fruits are eaten as liver tonic, aphrodisiac and also used to treat gastric problems.
10.	*Achyranthes aspera* L.	Amaranthaceae	Chirchita, Latjira	Herb	Inflorescence and stem utilised in the treatment of dysentery and diarrhoea.
11.	*Ageratum conyzoides* (L.) L.	Compositae	Jangli pudina,	Herb	A decoction of plants given in dysentery and diarrhoea.
12.	*Ficus religiosa* L.	Moraceae	peepal	Tree	Fruits are used to treat gastric problems and promote digestion.
13.	Commelina benghalensis L.	Commelinaceae	Kana, Kankawa, Buchna	Herb	Leaves and tender shoots cure loose motion and bacterial infection of digestive tracts.
14.	*Aegle marmelos* (L.) Corrêa	Rutaceae	Patthar Bel	Tree	Ripe fruits are used as coolant in summer stroke and Fruit pulp helps to treat in chronic dysentery and diarrhoea
15.	*Cyperus rotundus* L.	Cyperaceae	Motha	Herb	Root is used to treat vomiting, digestive disorders, hyperacidity and helpful to treat gastric troubles.
16.	*Anisomeles indica* (L.) Kuntze	Lamiaceae	Kala bhangra, Gobara	Herb	Leaves and roots are used to treat gastrointestinal disorders.
17.	*Acacia leucophloea* (Roxb.) Willd.	Leguminosae	Safed babool	Tree	Bark decoction is given to treat diarrhoea, dysentery, and gastric troubles.
18.	*Acacia nilotica* subsp. indica (Benth.) Brenan	Leguminosae	Kikar, Babul	Tree	Bark decoction is used to treat hyperacidity

Standard methods were adopted for collection of voucher specimens, preservation, and for the collection of ethnobotanical information (Jain and Rao, 1977; Jain *et al.*, 2000). Photographs of plants were taken in natural habitat. The ethnobotanical data (use of the plant, plant parts used, local name, Table-1) was collected through interviews and discussions with herbalists, farmers, spiritualist, in the study area. Majority of informants belonged to old age group, who have a very long association with usage of plants. Specimens of all species were identified with the help of available literature. Voucher specimens were prepared and deposited in the herbarium of Botany Department, Kurukshetra University, Kurukshetra (Haryana) India.

They are used by the Rural peoples and traditional healers for the treatment of various digestive disorders (Table-1).

Conclusion

The Floristic and Ethnobotanical survey of Gurgaon district concludes that rural people of district possess rich ethnobotanical knowledge about treatment of digestive disorders but this traditional medicinal knowledge is declining with time due to rapid urbanisation and migration of rural people. Thus, it becomes necessary to document the ethnobotanical knowledge.

This study also suggested that documentation of traditional knowledge about plant medicinal uses provides the raw material for pharmacological investigation and leading to the discovery of various drugs.

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