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Original Research

Medicinal Plants Used by Herbal Healers in Narasipura and Manchale Villages of Sagara Taluk, Karnataka, India

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Abstract

The present study was designed to study the Medicinal plants used by herbal healers in Narasipura and Manchale villages of Sagara Taluk, Karnataka, India. The people, particularly from rural places, depend on herbs for primary health care where ethnomedicinal use of plants has been practiced since time immemorial. Sagara taluk is located in the midst of the Western Ghats region of Shivamogga District, Karnataka State, India. Ethnobotanical field surveys were conducted from January to March 2012 to document the uses of medicinal plants by herbal healers in villages Narasipura and Manchale of Sagarataluk, Karnataka state, India. A total of 21 plants in Narasipura and 14 plants in Manchale were documented. The information about local name, partsused, type of formulation and disorders for which they were used are documented.

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INTRODUCTION

India's traditional system of medicine is related to richness of plant and cultural diversity. The indigenous knowledge on medicinal plant utilization not exceeding the resilience of surrounding environment is regarded as an important measure of plant biodiversity conservation. Apart from modern systems of medicines, even today people rely on herbal plants for primary healthcare. This dependency is even more in rural areas where ethnobotanical use of plants has been known since time immemorial. This is because of lack of primary healthcare centers, besides, medicinal plants are easily available natural products, easily formulatable and cost-effective with no side-effects. Tribal people depend on forest for their survival and are aware of the medicinal uses of plants in their surroundings. The traditional folk medicine is mostly unscripted, has been handed down orally from generation to generation (Kingston *et al.,* 2009; Gupta *et al.,* 2010; Rajakumar and Shivanna, 2010).

Sagara taluk is located in the midst of the Western Ghats region (one of the 'hot-spots of biodiversity' in India) of Shivamogga District, Karnataka State, India. The taluk is situated between $13^0$51' and $14^0$20'N latitude and between $74^0$37' and $75^0$17'E longitude in about the mid-south western part of Karnataka State, India at an altitude of 595m above the mean sea level. The areas selected in this study are the villages Manchale and Narasipura of Sagara Taluk, Karnataka, India. The study area has evergreen, semi-evergreen, moist and dry deciduous forests and is rich in diversity of plants with medicinal value. The area receives an average rainfall of 950 to 2130mm. Agriculture is the main occupation in this area and areca, banana, cotton, ginger, maize, paddy, pepper and sugarcane are the main crops (Rajakumar and Shivanna, 2010). In this study, an ethnobotanical field survey was conducted to document the uses of medicinal plants by herbal healers in villages Narasipura and Manchale.

MATERIALS AND METHODS

Regular field visits to the study areas were made for observation and documentation of herbs for a period of three months from first week of January 2012 till last week of March 2012. The places of collection and observation are shown in Figure 1.

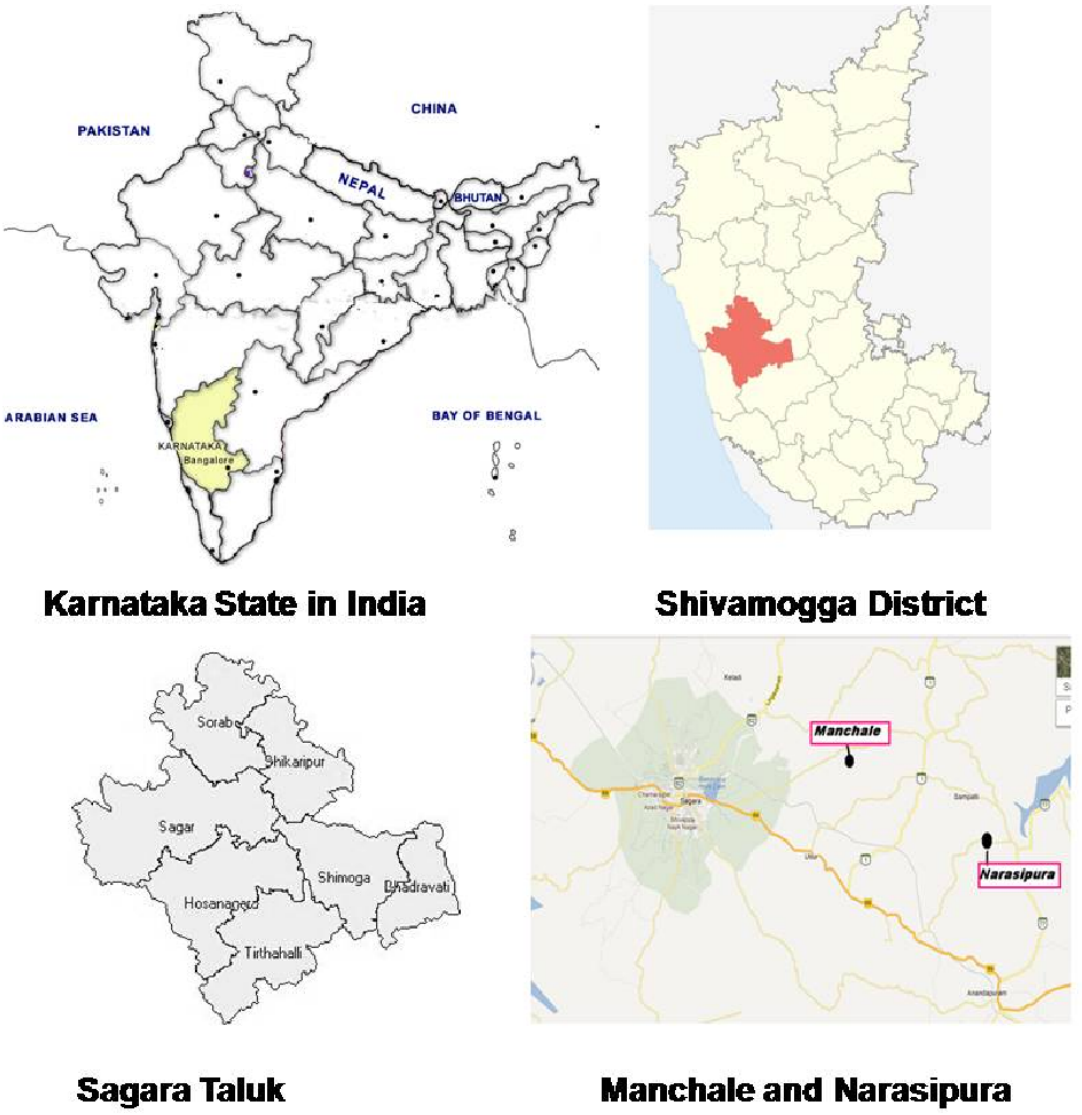

Figure 1: Study Area.

During field trips, ethnomedicinal information about the plants was recorded through interaction and discussion with herbal healers of study area along with field observation. Medicinal plants were documented and detailed field notes were taken along with voucher number, locality, habit, floral characteristics, nature of the fruit, colour of the ripe fruit, local name, local medicinal uses, etc. The identification of plants was made by referring flora (Gamble, 1995; Ramaswamy *et al.*, 2001). Herbaria were prepared for selected plants.

RESULTS AND DISCUSSION

Plants Documented in Narasipura

In the study area Narasipura, a total of 21 plant species belonging to 18 genera and 15 families were documented and these plants were being used to treat 21 human ailments (Table 1).

Table 1: Plants used by herbal healer in Narasipura.

Plant name	Family	Local Name	Part Used	Preparation	Medicinal Uses
Achyranthus aspera Linn.	Amaranthaceae	Uttrani	Leaves	Paste	Brain disorders
Plumbago zylanica Linn.	Plumbaginaceae	Bili Chitramoola	Root	Paste	Jaundice, Hepatitis B, Hepatitis C
Plumbago indica Linn.	Plumbaginaceae	Kempu chitramoola	Root	Paste	Hepatitis A
Dipteracanthus prostrates	Acanthaceae	Kalighavani	Leaves	Decoction	Ear diseases and cancer
Rauwolfia serpentina Benth.	Apocyanaceae	Sarpaghandi	Root	Paste or decoction	Very effective to control high Blood Pressure
Zinziber officinalis Rosc.	Zinziberaceae	Shunti	Rhizome	Decoction with tea	Analgesic
Bacopa monniera Pennel.	Scrophulariaceae	Neeru brahmi	Leaves	Juice	Bronchitis and diarrhoea in children
Sauropus andragynus	Euphorbiaceae	Chakramuni	Leaves	Decoction	Vitamin deficiency
Croton roxburghii	Euphorbiaceae	Somare	Root	Paste with *Myristica fragrans* fruit	Tumors
Aristolochia indica Linn.	Aristolochiaceae	Eshwari balli	Root	Root extract with pepper	Applied on spot of snake bite and also taken to cure high fever
Ficus racemosa Linn.	Moraceae	Atti mara	Root	Paste with water	Diabetes mellitus
Ficus krishnae	Moraceae	Krishna aala	Root	Paste	Liver disorders
Dodonaea viscose N,jaeq.	Sapindaceae	Angaraka	Bark	Strong decoction	To balance Hb count in women
Mangifera indica Linn.	Anacardiaceae	Maavu	Bark	Powdered and boiled with water	To treat mental diseases
Sapindus laurifolia Vahl.	Sapindaceae	Antavaala	Raw Fruit	Extract of it	Lungs blockage
Ocimum kilimandscharicum	Lamiaceae	Karpura tulasi	Leaves	Paste and juice	Paste for acne treatment and juice for cough
Ocimum tenuiflorum	Lamiaceae	Shri tualsi	Leaves	Powder with ghee or decoction	To relieve stress and also to cure respiratory disorders
Tectona grandis Linn.	Verbenaceae	Sagvani	Leaves	Paste	Dermatitis
Nerium indicum Mill.	Apocyanaceae	Kanagale	Bark and root	Paste with Calatropis leaves.	Cancer tumors of stomach
Tinospora cardifolia Miers.	Menispermaceae	Amrutha balli	Leaves	Paste	Diabetes mellitus & heart weakness
Tylophora indica W&A.	Asclepiadeceae	Aadu muttada soppu	Leaves, bark and roots	Paste or powder	Asthma and lung inflammation

Maximum plant species documented were from the families Plumbaginaceae, Apocyanaceae, Euphorbiaceae, Morceae, etc. The number of plants from each family is shown in Figure 2. Various plant parts were used, among which leaves and roots were more commonly used followed by bark and stem (Figure 3). The most preferred type of drug formulation in Narasipura is paste and decoction followed by powder, latex and juice (Figure 4).

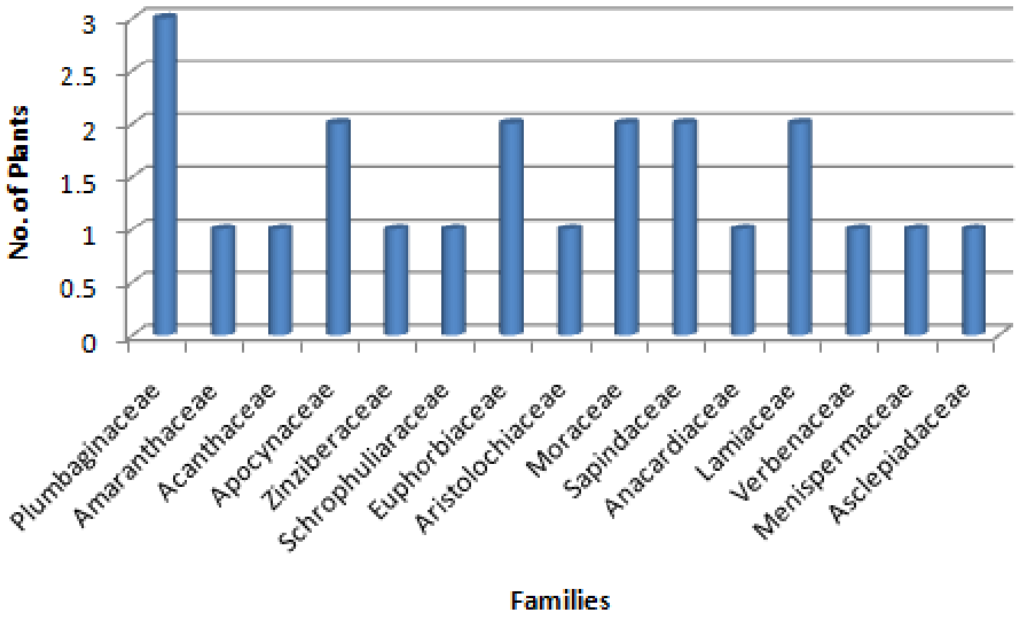

Figure 2: Total number of plants in each family.

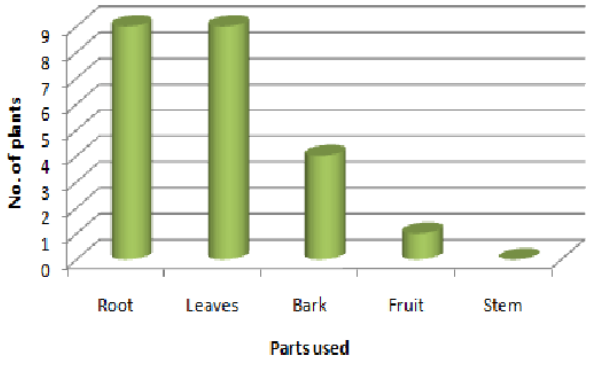

Figure 3: Plant parts used.

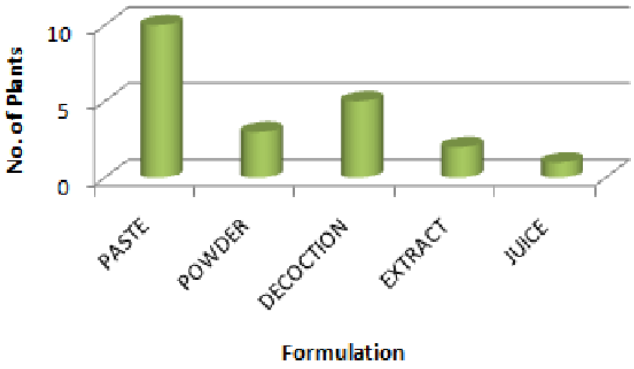

Figure 4: Types of formulation.

Plants Documented in Manchale

In the study area Manchale, a total of 15 plants belonging to 12 families were used to treat 18 human ailments (Table 2).

Maximum plant species used were from the families Apocyanaceae and Verbenaceae. Number of plants used from each family is shown in Figure 5. The frequently used plant parts were leaves followed by root, bark and stem (Figure 6). Decoction formulation was more commonly used than paste, powder and juice (Figure 7).

Most of the plants documented were herbs followed by shrubs, trees and climbers. The plants were given as herbal medicines to cure various kinds of ailments ranging from skin to brain disorders. Majority of the plants in Narasipura were used for treating diabetes, liver and lung disorders and in Manchale menstrual disorders and arthritis. In both Narasipura and Manchale, the healers preferred use of a single plant for a particular disease rather than preparing medicines by combination of plants.

Some plants are widely distributed throughout the state and same plants are used to treat different ailments by different herbal healers. *Rauwolfia serpentina* is best known for its medicinal properties. In Narasipura, the decoction of root is used for controlling high blood pressure, whereas same is used as paste for snake bites in region of Bhadra Wild Life Scantuary (Parinitha *et al.,* 2004). In coastal Karnataka, the root paste of the plant is used by a herbal healer to treat herpes and this has proven to be very effective (Bhandary and Chandrashekar, 2011).

Table 2: Plants used by herbal healer in Manchale.

Plant name	Family	Local Name	Part Used	Preparation	Medicinal Uses
Mimosa pudica Linn.	Mimosae	Nachike mullu	Root	Paste	Menorrhagia control and control of high BP
Plumbago auriculata	Plumbaginaceae	Neeli chitramoola	Root	Paste with water	Piles
Tabernaemontana divaricata	Apocyanaceae	Nandi batlu	Bark	Decoction	For Healthy pregnancy
Vitex negundo Linn.	Verbenaceae	Kari lakki	Leaves	Powder in water	Curing of arthritis
Lawsonia inermis	Lythraceae	Madrangi	Leaves	Fresh leaves are directly taken	Amenorrhoea and dysmenorrhoea, balance of Hb count, ulcers.
Pomenta officinalis	Myrtaceae	All-spice	Leaves	Decoction	As a stimulant
Polyalthia longifolia	Annonaceae	-	Bark	-	To prevent abortion in pregnant women
Gymnema sylvestre Retz.	Asclepiadaceae	Madhunashini	Leaves	Extract as tonic	Diabetes and also to lose weight
Diospyros montana Roxb.	Ebenaceae	Jagalaganti mara	Bark	Decoction	Liver disorders, Jaundice, Kidney stones & Hepatitis B.
Asparagus racemosa Wild.	Liliaceae	Shatavari	Fasciculated roots	Decoction or paste with water	Dysentery, Diarrhea and menstrual problems.
Areca catechu Linn.	Arecaceae	Adike	Root	Boiled with water	Insect bites and skin allergies
Canscora decurrens	Gentianaceae	Shanka pushpa	Leaves	Decoction or tonic	Urinary tract infections
Gmelina arborea	Verbenaceae	Shivane	Leaves	Paste mixed with dosa batter	Arthritis
Ervatamia heyneana Stapf.	Apocyanaceae	Maddarasa	Stem	Latex is used	Applied to throat to treat tonsils

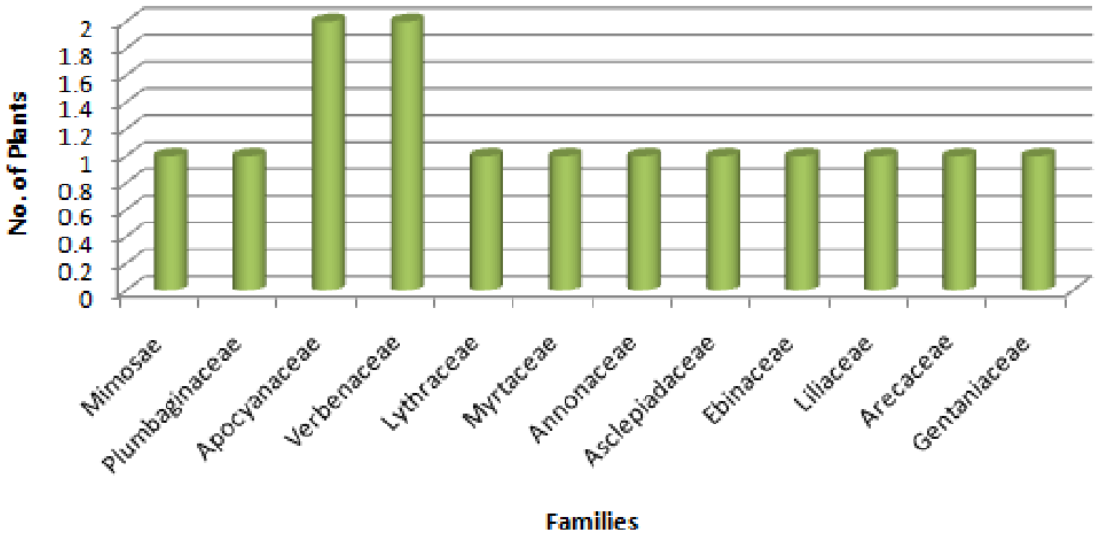

Figure 5: Number of plants from each family.

Tinospora cardifolia is another such well known medicinal plant which is popularly called as 'Amrutha Balli'. In our study, the leaf paste is used to treat diabetes and heart weakness in Narasipura, while the ground stem of the climber is taken orally for 5 days to cure malaria in Kargal

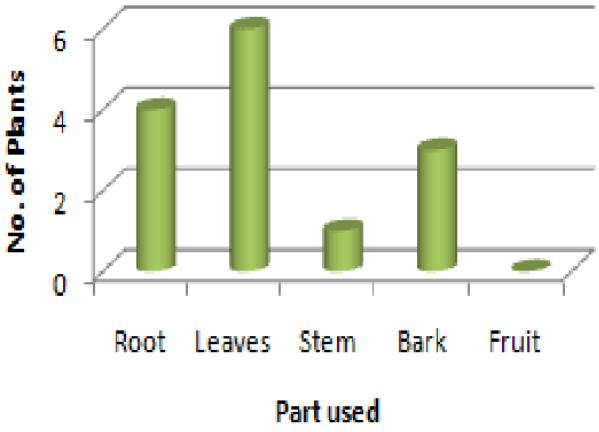

Figure 6: Plant parts used.

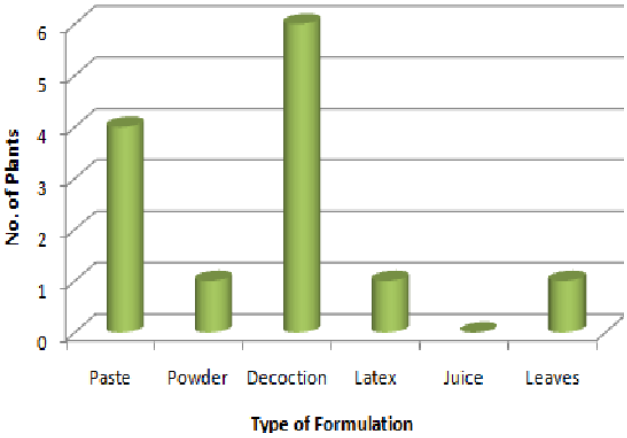

Figure 7: Types of Formulation.

region (Rajakumar and Shivanna, 2010). In Bhadravathi taluk, the leaf paste with turmeric powder is applied externally on boils and for itchy skin (Shivanna and Rajakumar, 2010).

In our study, *Vitex negundo* leaf powder was used in Manchale to treat arthritis, whereas leaf paste with lime juice was applied externally to treat ring worm in Bhadra Scantuary area (Parinitha *et al.,* 2004) and leaf juice is used to treat poisonous bites in cattle in Uttar Kannada district by a herbal healer (Harsha *et al.,* 2005).

Ervatamia heyniana stem latex was applied to throat to treat tonsils in Manchale, crushed bark with water was used for treating dysentery and diarrhea in Uttar Kannada (Harsha *et al.,* 2005). *Lawsonia inermis* leaves are used in treatment of all kinds of menstrual disorders in Manchale, whereas same is used in treatment of acne in Bhadra Sanctuary (Parinitha *et al.,* 2004).

CONCLUSIONS

The entnomedicinal knowledge about plants is vital in primary healthcare system. High costs coupled with side effects of synthetic drugs are driving people towards herbal medicines. These plants are to be scientifically evaluated and conserved for well being of mankind. These herbal formulations need further pharmacological investigations to prove their efficacy and for their use as effective drugs in treatment of many human diseases.

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