

**SURVEY ON USAGE, AVAILABILITY AND UTILITY OF  
TRADITIONAL MEDICINES/ FORMULATIONS IN  
BELGAUM REGION**

**FINAL REPORT**

**Period: From 17.03.2006 to 14.03.2009**



**Submitted to  
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**By  
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## **FINAL REPORT**

**1. Title of the Project:** SURVEY ON USAGE, AVAILABILITY AND UTILITY OF TRADITIONAL MEDICINES/ FORMULATIONS IN BELGAUM REGION

**2. Principal Investigator:** Dr. S.D.Kholkute, Scientist 'F'

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**Co-Investigators:** i) Dr. R.C.Mathad, Professor, Dravyaguna Department

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**3. Implementing Institution and other collaborating Institutions:**

Regional Medical Research Centre (ICMR), Nehru Nagar, Belgaum (Karnataka).

**4. Date of commencement:** 17.03.2006

**5. Duration:** 3 years.

**6. Date of completion:** 14. 03. 2009

## **7. Objectives as approved:**

- To compile information on Ayurvedic and other Traditional medicines/ herbal formulations prescribed by the registered practitioners of Ayurvedic systems in Belgaum district for primary health care as well as for treatment / prevention of some of the chronic diseases.
- Collection and compilation of information from Traditional practitioners (from non-codified system) of Belgaum district on diseases treated by them, mode of diagnosis and method of treatment.
- Collection and analysis of Out Patients Department (OPD) data records from Ayurvedic teaching hospitals and Ayurvedic dispensaries for generating baseline data from user's perspective.

## **The survey is mainly based on three components:**

- Information collection from Qualified and registered Ayurvedic practitioners
- Data collection from Two Ayurveda teaching hospitals and from two Ayurvedic dispensaries
- Information collection from Traditional practitioners (non-codified) in Belgaum district

## **8. Deviation made from original objectives if any, while implementing the project and reasons thereof. -Nil-**

## **9. Experimental work giving full details of experimental set up, methods adopted:**

To achieve the objectives following methodology was adopted.

### **Ayurvedic practitioners:**

Names and addresses of Ayurvedic practitioners in Belgaum region were collected from various sources. A questionnaire (Annexure I) was designed, pre-tested and distributed to Ayurvedic practitioners. The practitioners in Belgaum were contacted personally for maximum compliance. Questionnaires were also posted to practitioners who could not be contacted personally.

### **Hospital/ OPD:**

For the collection of OPD data records, two Ayurveda Teaching hospitals and Ayurvedic Dispensaries (Government and Private) were identified. The OPD records of at least 100 prescriptions from patients attending were collected with the help of the Ayurvedic doctors using an OPD record collection format (Annexure II).

### **Traditional practitioners:**

Information regarding Traditional practitioners (non-codified) was collected from various sources. These practitioners were contacted personally along with known person from that area. Information regarding the herbal medicines used for treatment / prevention of various diseases was collected through semi structured interview format. The details of the traditional practitioner and the herbal medicines were filled in a specially designed questionnaire (Annexure III) along with the consent in local language (Annexure D - Kannada).

**Study Area:**

Belgaum district is situated in North-West part of Karnataka state in southern India. It lies between Latitude 15°23 to 16°58' N, Longitude 74°5' to 75°28' E. The district spreads over an area of 13, 415 sq.kms and divided in to 10 talukas. It shares state border with Maharashtra on the west and north side and south west by Goa state.

**Topography:**

The district can be divided into three main parts namely; Hilly area, semi hilly area and plain. The hilly region lies to the west and the south along the line of the Western Ghats ranges of the district and it has a comparatively damp and cool climate with heavy rainfall and thick forest cover. Semi hilly areas composed of solitary peaks of low hilly ranges found here and there with plains on the north-east part of the district. The rest and larger part of the district forms plain area with less amount of rain fall. The average rain fall varies 350 mm to 1500 mm from plain areas to hilly region. Accordingly the vegetation type also varies from scrub jungles, Dry deciduous to Semi evergreen forest types respectively.

The most elevated portion of the district lies to the west & south between 450 to 900 meters above MSL.

Total population of the district as per 2001 census is 4214505. 10.96% and 5.77% of the total population are Schedule cast and Schedule tribes respectively. The following are the some major Tribes and Castes found in the district: Agasa, Banjara, Bedara, Bhois, Holayas, Kurubaru, Naikdas and Kumbis etc. Approximately 75% of the total population is residing in rural areas of the district. So this population has an easy access to traditional herbal medicine than the modern medicine.

**9. Data collected supported by necessary tables, charts, diagrams and photographs & 10. Detailed analysis of results indicating contributions made towards increasing the state of knowledge in the subject:**

**Ayurvedic practitioners:**

Ayurveda has always been preserved by the people of India as a codified traditional health care system despite increasing adoption of western medical system during recent time. Ayurveda is now statutory, recognized medical system of health care like other medical systems existing in India. The Central Council of Indian Medicine governs and recommends policies for the research and development of the system.

There are three types of Ayurvedic practitioners according to Govt. policy

- Traditionally trained practitioners under the guidance as apprentices of some experts. They were registered till the new provisions of IMCC Act, 1970 came in to force.
- Institutionally trained practitioners having degrees of Ayurveda of 4 to 5½ years duration.
- Postgraduate (M.D. Ayurveda) and Doctorate (PhD) degree holders, specialists of Ayurveda.

The practice in this system is being regulated through IMCC Act 1970 & registration of both institutionally qualified and traditionally trained practitioners is recorded in the registers that are maintained by the Government.

As on 1.4.2007 in Karnataka, there are 20352 registered Ayurvedic practitioners, 589 Ayurveda dispensaries and 122 Ayurveda Hospitals with bed strength of approximately 8147.

As the numbers of Ayurvedic practitioners have increased in recent years and information was lacking about the Ayurvedic practice in this region, an effort was made to collect information about their practices through structured questionnaire.

The names and address of Ayurvedic practitioners were collected from different sources like Deputy Director, ISM&H, Ayurvedic Practitioners Association and Ayurveda Colleges. The total addresses collected are more than 500. The feed back on questionnaire was obtained through personal visits and by postal contacts.

25 questionnaires were distributed through post, however response was very poor. In spite of several reminders we could collect only 5 filled questionnaires. 310 questionnaires were distributed by personal visits in various taluka places and different Ayurveda colleges in Belgaum district and 103 questionnaires were collected back with great effort.

Total number of questionnaires (postal and personal visits) received back – 108.

<b>Practicing area</b>	<b>No. Ayurvedic practitioners</b>
Urban	53 (49.07%)
Rural	51 (47.22%)
No answer	04 (3.70%)

We are able to collect equal number of questionnaires from both Urban as well as Rural areas.

<b>Practicing experience (in years)</b>	<b>No. of Ayurvedic practitioners</b>
01-10	55 (50.93%)
11-20	22 (20.37%)
21-30	17 (15.74%)
31and above	11 (10.19%)
No answer	03 (2.78%)

Most of the Ayurvedic practitioners (50.93%) had 01 to 10 years of experience.

<b>Number of patients seen per day</b>	<b>No. of Ayurvedic practitioners</b>
01-10	20 (18.52%)
11-20	35 (32.41%)
21-30	19 (17.59%)

<b>Number of patients seen per day</b>	<b>No. of Ayurvedic practitioners</b>
31-40	10 (9.26%)
41 and above	17 (15.74%)
No answer	07 (6.48%)

It was observed 50% of practitioners have attended to between 11 to 30 patients per day.

<b>Practicing system</b>	<b>No. of Ayurvedic Practitioners</b>
Ayurveda only	62 (57.41%)
Ayurveda with other systems like Allopathy, Homeopathy, Siddha, Yoga etc.	43 (39.81%)
No answer	03 (2.78%)

57.41% of practitioners practice only Ayurveda, where as nearly 40% of the practitioners are practicing other systems of medicine like Allopathy, Homeopathy and Siddha along with Ayurveda.

Other parameters:

<b>Questions asked</b>	<b>Yes</b>	<b>No</b>	<b>No Response</b>
No. of practitioners preparing own formulation (S)	47 (43.52%)	56 (51.85%)	05 (4.63%)

It was observed 43.52% of the practitioners are preparing their own formulations

<b>Questions asked</b>	<b>Yes</b>	<b>No</b>	<b>No Response</b>
Do they prescribe animal source?	32 (29.63%)	64 (59.26%)	12 (11.11%)
Do they prescribe animal product + herbal medicine for treatment?	29 (26.85%)	66 (61.11%)	13 (12.04%)
Do they prescribe shodhita minerals?	29 (26.85%)	40 (37.04%)	39 (36.11%)
Do they prescribe Herbo minerals?	48 (44.44%)	42 (38.89%)	18 (16.67%)
Do they prescribe Bhasma?	48 (44.44%)	44 (40.74%)	16 (14.81%)

44% of practitioners prescribe both Herbo-mineral products and Bhasmas. It was also noted 27% of them use medicine from animal sources.

<b>Questions asked</b>	<b>Yes</b>	<b>No</b>	<b>No Response</b>
No. of practitioners observed side effect	20 (18.52%)	67 (62.04%)	21 (19.44%)

62% of the practitioners have not observed any side-effects. But 18.52 of the practitioners have observed side effects like fever, skin itching, swelling, etc.

### **Hospital/ OPD:**

The OPD data for two teaching hospitals (KLES B. M. Kankanwadi Ayurveda College, Shahapur, Belgaum and Shri J. G. C.H.S. Ayurvedic Medical College & P. G. Centre, Ghataprabha) were collected. The OPD records for Government Ayurvedic clinic were collected from Taluka Government Ayurvedic Hospitals of Athani and Bailhongal. The OPD records for Private Clinic were collected from Belgaum.

In B. M. Kankanwadi Ayurveda College, Shahapur Belgaum (BMK Ayurveda College), the Hospital OPD is divided into different department like Kaya Chikitsa (KC), Shalya, Shalakyas and Stree roga. Among these, KC and Shalya are the two departments receiving more number of patients compared to other departments. Therefore more number of OPD data was collected from these two departments. In Shri J. G. C.H.S. Ayurvedic Medical College & P. G. Centre, Ghataprabha (Ghataprabha Ayurveda College), the OPD is not divided into different departments.

Following is the OPD data analysis and comparison for BMK Ayurveda College, Ghataprabha Ayurveda College, Government Ayurvedic Clinics (GAC) and Private Ayurvedic Clinic (PAC):

<b>Name of the college</b>	<b>BMK Ayurveda College</b>	<b>Ghataprabha Ayurveda College</b>	<b>GAC</b>	<b>PAC</b>	<b>Total</b>
Number of OPD collected	230	150	130	200	710

<b>Age wise classification of the patients (in years)</b>	<b>00-20</b>	<b>21-40</b>	<b>41-60</b>	<b>61 and above</b>
No. of. Patients from BMK Ayurveda College	55 (23.91%)	77 (33.47%)	60 (26.1%)	38 (16.52%)
No. of. Patients from Ghataprabha Ayurveda College	38 (25.33%)	77 (51.33%)	31 (20.67%)	04 (2.67%)
No. of. Patients from GAC	22 (16.92%)	65 (50.00%)	32 (24.62%)	11 (8.46%)
No. of. Patients from PAC	18 (9.00%)	127 (63.50%)	54 (27.00%)	01 (0.50%)
<b>Total</b>	133 (18.73%)	346 (48.73%)	177 (24.93%)	54 (7.61%)

It is observed patients from all age groups take Ayurvedic treatment.

Name of the College	Sex wise details of Patients	
	Male	Female
BMK Ayurveda College	116 (50.43%)	114 (49.57%)
Ghataprabha Ayurveda College	63 (42.00%)	87 (58.00%)
GAC	77 (59.23%)	53 (40.77%)
PAC	121 (60.50%)	79 (39.50%)
Total	377 (53.10%)	333 (46.90%)

It is notable that almost equal numbers of male and female patients are attending Ayurvedic OPD but in Ghataprabha Ayurveda College proportion of female patients are attending the OPD are more.

Occupation of the patients attending the OPD	BMK Ayurveda College	Ghataprabha Ayurveda College	GAC	PAC	Total
Not mentioned	58 (25.22%)	13 (8.67%)	28 (21.54%)	07 (3.50%)	106 (14.93%)
House wife	77 (33.48%)	74 (49.33%)	36 (27.69%)	43 (21.50%)	230 (32.39%)
Student	30 (13.04%)	18 (12.00%)	20 (15.38%)	45 (22.50%)	113 (15.92%)
Farmer	20 (08.69%)	17 (11.33%)	29 (22.31%)	18 (9.00%)	84 (11.83%)
Others (Businessmen, Teachers, Auto drivers, Labors, Factory workers, etc.)	45 (19.57%)	28 (18.67%)	17 (13.08%)	87 (43.50%)	177 (24.93%)

Occupation wise single largest group is Housewives (32.39%) coming for Ayurvedic treatment.

<b>Previous treatment taken</b>	<b>BMK Ayurveda College</b>	<b>Ghataprabha Ayurveda College</b>	<b>GAC</b>	<b>PAC</b>	<b>Total</b>
<b>No</b>	154 (66.96%)	37 (24.67%)	119 (91.54%)	193 (96.50%)	503 70.85%
<b>Not specific</b>	57 (24.78%)	74 (49.33%)	0 (0%)	0 (0%)	131 18.45%
<b>Yes (Allopathic)</b>	15 (06.52%)	35 (23.33%)	09 (6.92%)	07 (3.50%)	66 9.30%
<b>Yes (Ayurvedic)</b>	04 (01.74%)	04 (2.67%)	02 (1.54%)	0 (0%)	10 1.41%

Contrary to the general belief 70% of patients attending the Ayurvedic hospitals had no previous history of treatment. Compared to Teaching hospitals, in Clinics (Government and Private), the patients with no history of previous treatment are more than 90%. On the whole it indicates patients preferred Ayurvedic medicines by choice. It is also observed the major diseases for which they seek Ayurvedic treatment are Abscess, Acidity, Asthma, Back ache related problems, Diabetes, Eye diseases, Female reproductive disorders, Fever, Kasa, Piles, Pregnancy related problems, Skin diseases, Vata etc.

<b>Prescribed Dose duration ( in days)</b>	<b>BMK Ayurveda College</b>	<b>Ghataprabha Ayurveda College</b>	<b>GAC</b>	<b>PAC</b>	<b>Total</b>
<b>Not mentioned</b>	10 (04.34%)	04 (2.67%)	02 (1.54%)	17 (8.50%)	33 (4.65%)
<b>00-05</b>	10 (04.34%)	04 (2.67%)	19 (14.62%)	6 (3.00%)	39 (5.49%)
<b>6-10</b>	126 (54.78%)	28 (18.67%)	20 (15.38%)	137 (68.50%)	311 (43.80%)
<b>11-15</b>	62 (26.97%)	14 (9.33%)	25 (19.23%)	24 (12.00%)	125 (17.61%)
<b>16 and above</b>	22 (09.57%)	100 (66.67%)	64 (49.23%)	16 (8.00%)	202 (28.45%)

It is observed that 44% of the prescription is given for 6-10 days duration followed by 28% for 16 days and above.

### **Traditional practitioners:**

Plants and plant-derived products are part of health care system since ancient human civilizations. The dependency of man on the plants around him made him to acquire the knowledge of economic and medicinal properties of many plants by trial and error method. Globally, about 85% of the traditional medicines used for primary healthcare are derived from plants.

An African expert group defines “A traditional healer is a person who is recognized by the community in which he lives as competent to provide health care by using vegetable, animal and mineral substances and certain other methods based


on the social, cultural, and religious background as well as on the knowledge attitudes, and beliefs that are prevalent in the community regarding physical, mental and social well being and the causation of disease and disability”

The Local Traditional Medicine is a set of practices handed over from one generation to the next, most of the information is verbal i.e. unwritten or non codified and not documented properly.

An important part in this survey is the study of Traditional practitioners in Belgaum region which was lacking so far. The ground level information regarding traditional practitioners is collected from Village chiefs, NGO’s, School teachers, Anganwadi and Health workers and various Teaching institutes.

Addresses of 150 Traditional practitioners were collected and 121 traditional practitioners were visited personally. During the visits, Traditional practitioners were interviewed and questionnaires were filled up with photographs taken in most cases. In some cases conversations were video recorded. Consent was taken from Traditional practitioners before interview.

The sample format is presented here.

<b>Code: -----</b>	
	<b>Name: Hameed Abdul aziz Mulla</b>
	<b>Address: c/o Hotel Samadhan, House No. 233, Kalmani. (Jamboti) Belgaum.</b>
	<b>Phone: 9945575103</b>
	<b>Diseases</b>   <b>Fracture, Gangrene, Food poisoning Wounds, Ear discharge</b>
<b>Formulation:</b>	

Efforts were made to collect information on Traditional practitioners from all taluka's of Belgaum dist.

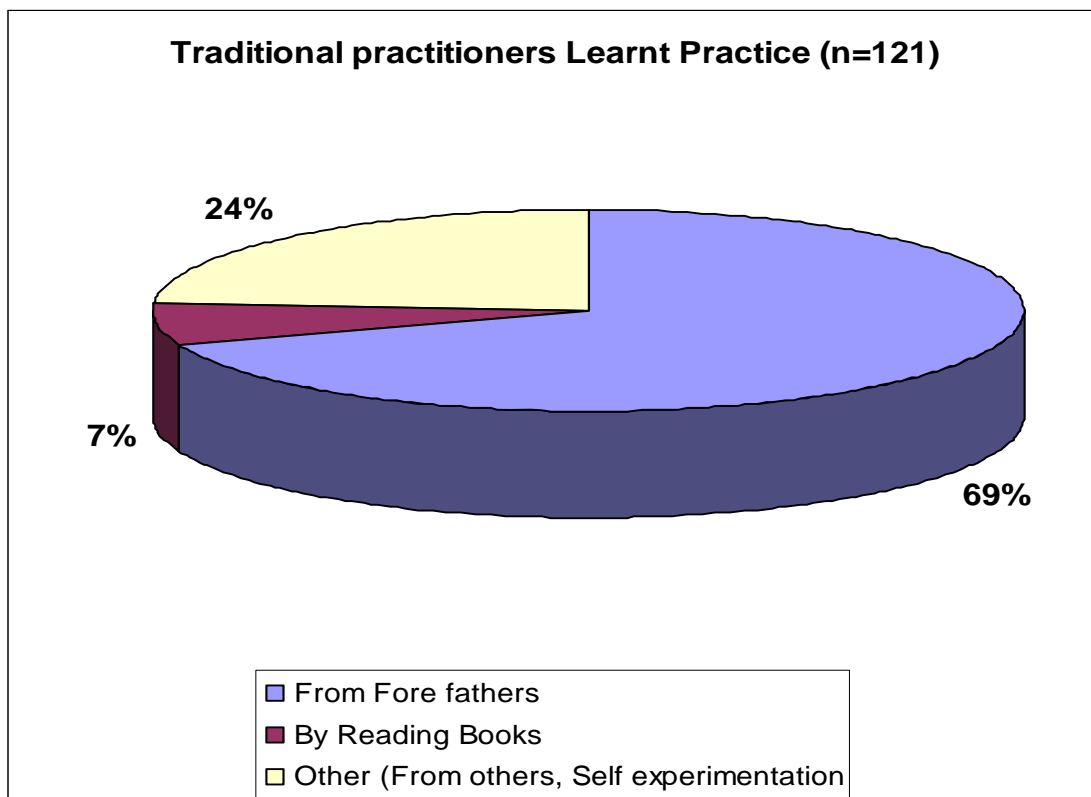
<b>Name of Taluka</b>	<b>No. of Traditional practitioners</b>
Athani	06
Belgaum	20
Bhailongal	13
Chikkodi	12
Gokak	36
Hukkeri	06
Khanapur	06
Raibag	06
Ramdurg	10
Saundatti	06
<b>Total</b>	<b>121</b>

The major diseases treated by the Traditional practitioners are Bone fracture, Diabetes, Herpes, Jaundice, Kidney stone, Male and Female Fertility problems, Leucorrhoea, Menorrhoea, Piles, Snake bite, etc. They also give treatment for the common diseases like Cough, Cold, Fever, Vomiting, Stomach ache, Mouth ulcers, Wounds, etc. Some of the Traditional Practitioners also “claim” effective treatments for the diseases like HIV and Cancer.

Among 121 Traditional practitioners 21 claimed that they give the treatment for all types of diseases. 35 (28.93%) practitioners are specialized for treatment of

single disease. Rest of the Traditional practitioners gives the treatment for more than two diseases.

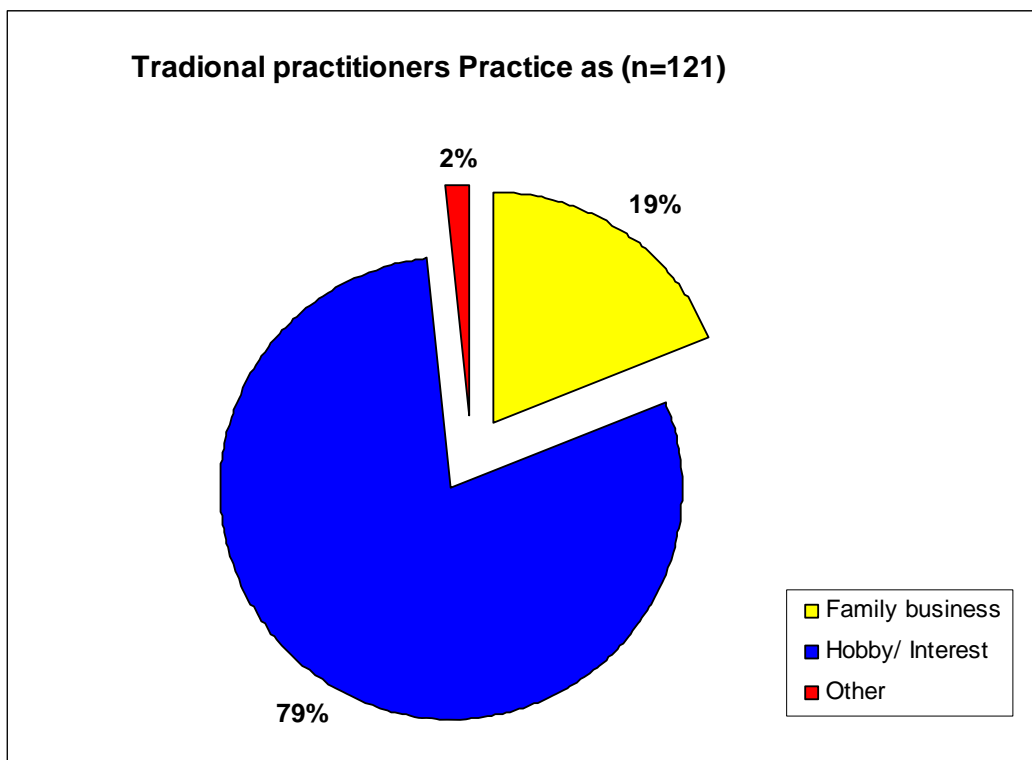
Single Disease	No. of Traditional practitioners
Asthma	01
Bone fracture	01
Burns	01
Dog bite	02
Ear problems	01
Eczema	01
Eye problem ? (Kannali kasa biddare)	02
Food poisoning (Kappa)	06
Herpes	03
Jaundice	08
Scorpion sting	01
Snake bite	07
Vayu	01
Total	35



69% of the Traditional practitioners learnt the practice from their forefathers.

<b>Practicing years</b>	<b>0-20</b>	<b>21-40</b>	<b>41-60</b>	<b>61 and above</b>
No. of Traditional practitioners	63 (52.07%)	36 (29.75%)	18 (14.88%)	04 (3.31%)

52% of Traditional practitioners have practicing experience between 0-20 years and 14.88% of the Traditional practitioners have experience between 41-60 years.

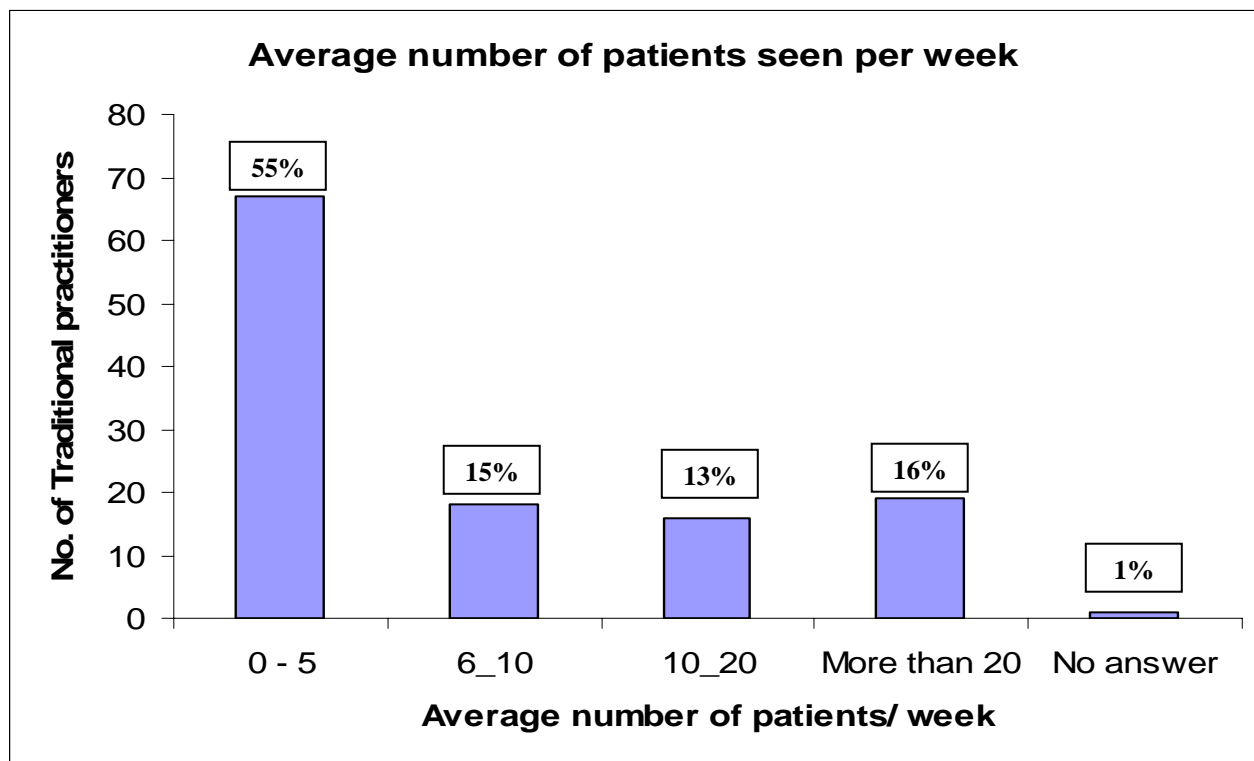


79% of the Traditional practitioners practice this system as a hobby or by interest in the system and only 19% of the Traditional practitioners practice as a Family business.

Disease diagnosis mode (n=121):

<b>Mode of Diagnosis</b>	<b>Observation of External body features</b>	<b>Nadi and Body inspection</b>	<b>Medical Examination reports</b>	<b>No answer</b>
No. of Traditional practitioners	90 (74.38%)	22 (18.18%)	06 (4.96%)	03 (2.48%)

The Nadi (Pulse) method is an ancient method used to diagnose the diseases and 18% are using this technique while 74% follow external body features examination. They have set individual parameters for this.



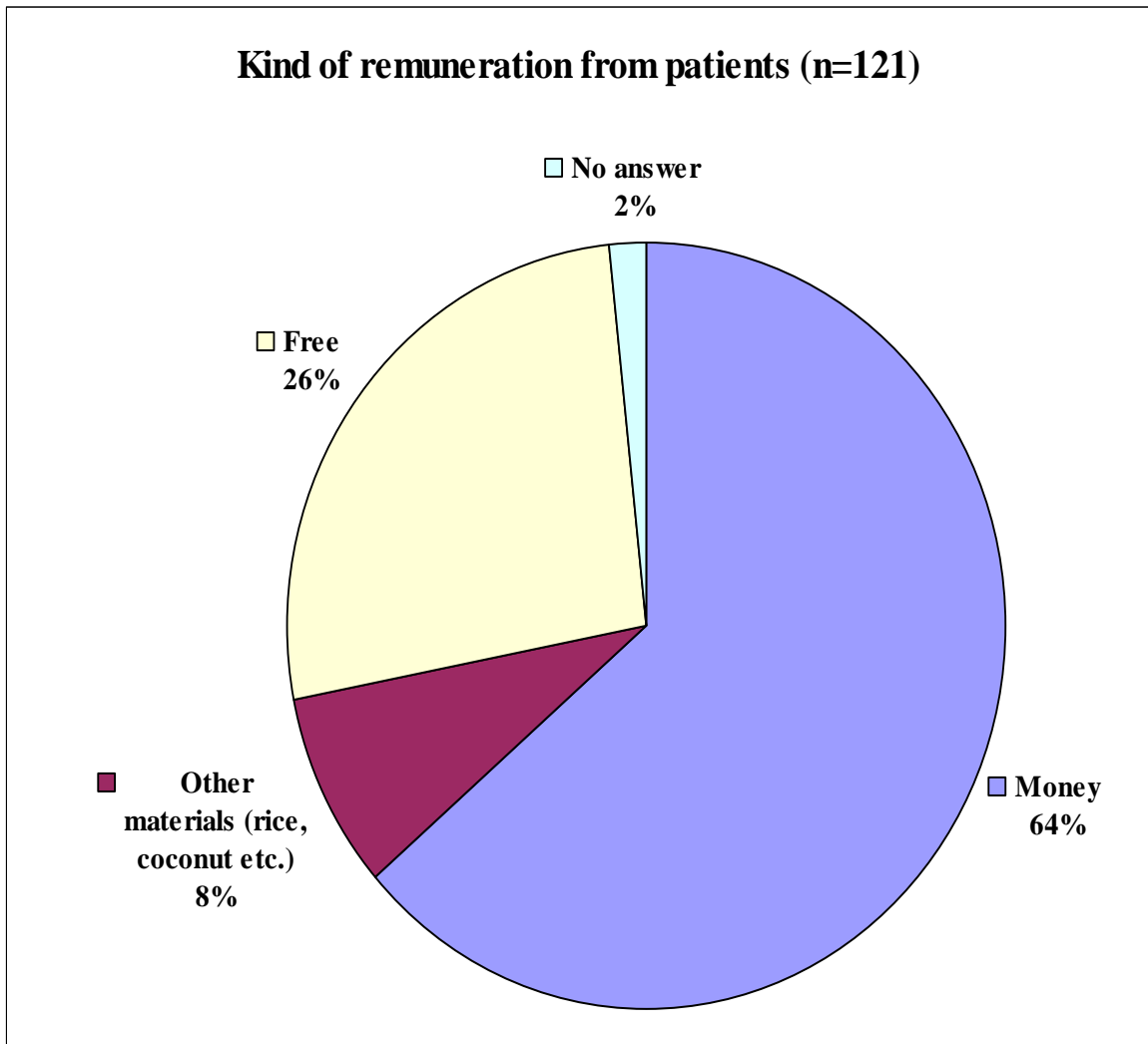
It was observed that majority of Traditional practitioners (55.37%) get only up to 5 patients per week but in some cases like Snake bite, Dog bite, etc., the average

number of patients per week is less than 1 as they treat maximum 4-8 patients in a year. Proportion of patients getting more than 10 patients per week is 29%.

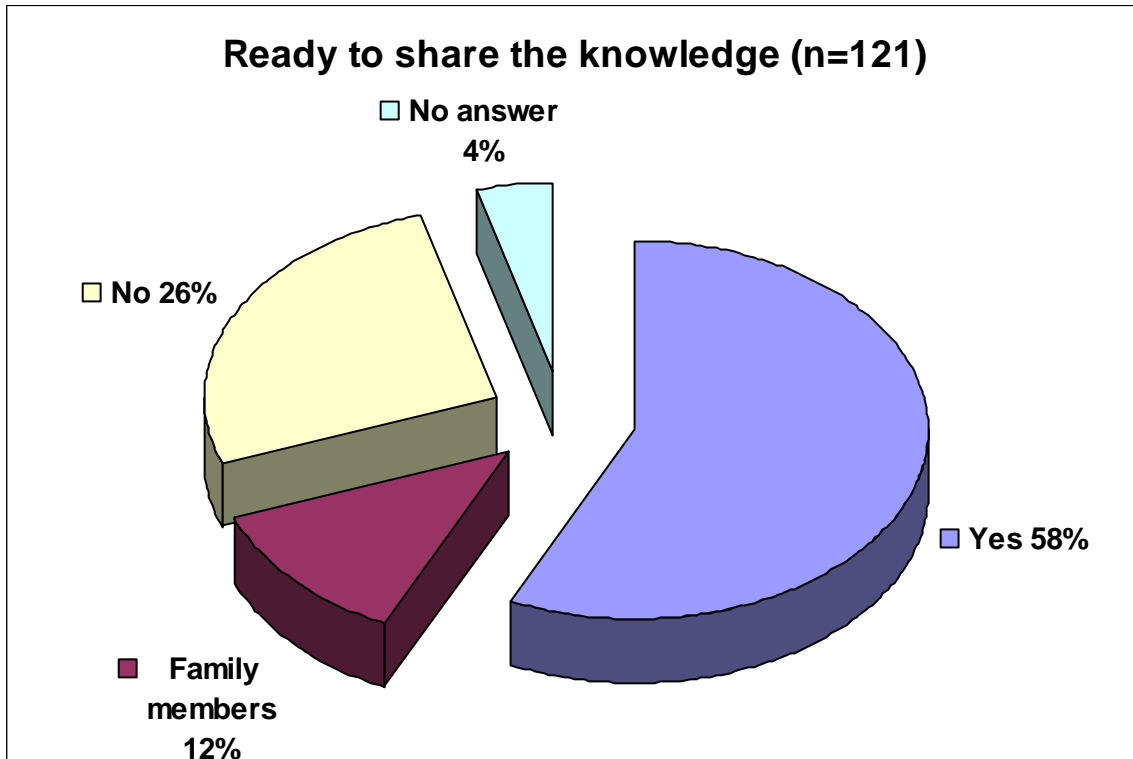
**Other parameters studied (n=121):**

<b>Question Asked</b>	<b>Yes</b>	<b>No</b>	<b>No answer</b>
<b>Do they store Medicinal plant?</b>	82 (67.77%)	26 (21.49%)	13 (10.74%)
<b>Do they process medical plants before prescribing?</b>	36 (29.75%)	57 (47.11%)	28 (23.14%)
<b>Do they prescribe animal product for treatment?</b>	10 (8.26%)	92 (76.03%)	19 (15.70%)
<b>Do they get medicinal plants in sufficient quantity?</b>	74 (61.16%)	20 (16.53%)	27 (22.31%)

Nearly 68% practitioners store medicinal plants. They collect the medicinal plants and their parts like seeds, fruits, root, flowers, etc., in the season for off season usage purpose and only 8.26% practitioners' use animal based medicines along with plant medicines in the treatment.



26% of the Traditional practitioners practice the Traditional medicine as service to the society, 08% of the Traditional practitioners take materials like rice, coconut, oil, etc. and nearly 64% of the Traditional practitioners take remuneration in the form of money.



It is inspiring to note that 58% Traditional practitioners are ready to share the knowledge with others, while 12% practitioners are ready to share with their family members only.

Total number of formulations documented during the study is - 153.

<b>Formulation</b>	<b>Number</b>
Single drug Formulation	131 (85.62%)
Two drug Formulation	09 (5.88%)
Three or more than three drug Formulation	13 (8.50%)
Total	153 (100%)

Single drug formulation means there is single plant used as a drug.

The study resulted in the documentation of 115 medicinal plant species belonging to 56 families used to cure 71 types of diseases with 33.33% of External application and 64% of Oral usage.

## **11. Conclusions summarizing the achievements and indication of scope for future work.**

The main objectives of the proposed study was to compile information on Ayurvedic and other Traditional medicines/ herbal formulations prescribed by the practitioners of these systems in Belgaum district for primary health care as well as for treatment/ prevention of some of the chronic diseases.

It is known that herbal formulations may differ from region to region depending on their availability. Therefore, it was important to compile information on herbal medicines prescribed for different ailments from Belgaum region which is situated close to Western Ghats. This is very important as systematic information about the usage of herbal preparation in prevention and treatment of various diseases, the mode of administration, whether these are prepared by practitioners personally afresh or purchased from manufacturer etc. were not available from this region. We planed to compile such information and create a database of herbal medicine used in this area which may provide some important lead for future research. We are happy that the outcomes of this survey have met the objective. It is hoped that the results of the survey on actual usage of herbal medicine will help in selection of important medicinal plants used in a given geographical area for cultivation, conservation and for further research.

We wanted to know from different sources the current status of Ayurvedic system prevalent and practiced in this area. Even though response from Ayurvedic practitioners was poor in responding to our questionnaires we could get 108 filled up questionnaires. The analysis revealed that 57% of the practitioners follow Ayurvedic system only and rest of the practitioners practice other systems of medicine like Allopathy, Homeopathy, Siddha, Yoga etc., along with Ayurveda. Ayurvedic practitioners prescribe animal products, herbal medicine, mineral based products and also Bhasmas. Following feedback was received from the practitioners to improve the system:

- To increase public awareness regarding Ayurveda and Ayurvedic medicine in rural areas through various ways like free health camps, etc.
- Availability of genuine Ayurvedic medicines at all the taluka centers.
- Standardization of Ayurvedic drugs like followed in Allopathy.
- Seminar/ workshop/ CME for practicing Ayurvedic practitioners.

The analysis of OPD data from Ayurvedic hospitals indicated that people (70%) do prefer Ayurvedic system over Allopathy as a first choice. All age groups and from all walks of life do utilize this system.

The most important contribution of this survey is response from traditional healers of this region. They are ready to share (58%) their precious knowledge for the benefit of all. Majority of them (69%) learnt this practice from their forefathers and they have fear that the knowledge will vanish with them due to the apathy by younger generation. With this survey at least we have made a beginning and tried to document many formulations. Hopefully this will serve as base for taking them for scientific validation based on priority and feasibility.

Many unique plants used by traditional healers have been identified. These can be recommended for cultivation and easy availability.

Apart from routine lacunae common for these kind of surveys over all the survey has met the basic objectives and can serve as a baseline information for future research in the area of traditional/herbal medicine of this region.

## **12. S&T benefits accrued:**

### **I. List of research publications with complete details:**

Paper communicated for publication;

Authors: Vinayak Upadhya, Divakar Mesta, H.V. Hegde, Shripad Bhat & S. D. Kholkute

Title of paper: Ethnomedicinal plants of Belgaum Region, Karnataka.

Name of Journal: The Journal of Economic and Taxonomic Botany.

Oral presentation at National Seminar on 'Forest, medicinal Plants and People':

Title: Assessment of Traditional Medicinal practice in Belgaum region.

Place and date: College of Forestry, Sirsi, on February, 2008.

### **II. Manpower trained on the project:**

a. Research Scientists or Research Fellows – One.

- b. No. of Ph.Ds produced – Nil.
- c. Other Technical Personnel trained – Nil.

III. Patents taken, if any: Nil.

Products developed, if any: Nil.

### **13. Abstract (300 words for possible publication in ICMR Bulletin).**

The present study was carried out to compile information on herbal medicine/herbal formulations by practitioners of Ayurvedic systems as well as traditional practitioners (Non-codified system) of Belgaum district for treatment of various diseases. Ayurvedic practitioners of the region were contacted personally or through postal questionnaire. Similarly OPD records of two Ayurvedic teaching hospitals and two clinics were also collected and screened. Information regarding traditional practitioners (Non-codified) was collected from various sources. They were contacted personally and information regarding the herbal medicine used for treatment of various diseases was collected through semi structured questionnaire and interview forms. The prior consent was obtained before interview.

It was observed that almost 60% Ayurvedic practitioners practiced Ayurveda system only while 40% of them also followed other systems. Furthermore 44% were preparing their own formulations from local natural resources. The survey revealed that almost 69% of the traditional practitioners (Non-codified) learnt this from their forefathers. Nadi method was used to diagnose the disease by 18% of practitioners while 74% followed external body examination for diagnosis. 68% practitioners stored medicinal plants. It was encouraging to note that 58% of the traditional practitioners are ready to share their knowledge with others.

The study also documented use of 115 medicinal plants belonging to 56 families used by traditional practitioners to cure 71 types of diseases. Most of these were single plant formulation. 66% of the plants were administered orally while 34% were applied externally.

#### 14. Procurement/usage of Equipment: Nil.

a.

Sl. No.	Name of Equipment	Make/Model	Cost FE/Rs	Date of Installation	Utilisation rate %	Remarks regarding maintenance/breakdown
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b. Suggestions for disposal of equipment(s) – Nil.

#### Acknowledgement:

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