ISSN No: 0976-5921

Research Article

Ethno-medicinal survey on Folklore Practices for Jaundice in taluks of Belagavi

Sri Venkata Krishnan V[1], Divya Khare[2*], Harsha V Hegde[3], Arun Chougale[4]

1. Post Graduate Scholar, Department of Dravyaguna, KAHER's Shri B.M.K Ayurveda Mahavidyalaya, Belagavi.- 590003. India.
2. Associate professor, Department of Dravyaguna, KAHER's Shri B.M.K Ayurveda Mahavidyalaya, Belagavi. India. 590003.
3. Scientist – E, ICMR – NITM, Belagavi – 590010. India.
4. Professor, Department of Dravyaguna, KAHER's Shri B.M.K Ayurveda Mahavidyalaya, Belagavi. -590003. India.

Received: 09-05-2025 Accepted: 15-12-2025 Published: 31-12-2025

Abstract

Introduction: Ethno-medicinal survey has been helping both Folklore and *Ayurvedic* practitioner hand in hand for regularly updating knowledge. Belagavi that comes under the roof of Western ghats has abundant flora throughout its region. The ethnomedicinal practices for *Kamala* (jaundice) weren't explored. The prevalence of kamala, or jaundice, in India is 2.76 per 1000. Over the past one to two decades, there has been an increase in the incidence of liver injury due to changes in lifestyle, food consumption, and other variables. Newer and more effective drugs from ethno-medicinal practices could help tackle the disease more effectively. *Materials &* Methods: Two taluks of Belagavi—Bailhongal and Saundatti—were chosen for an ethnomedical survey because of their close proximity to water sources, because they were more susceptible to water-borne diseases. Using a semi-structured questionnaire, data regarding the herb usage, preparations, and habits of 23 folklore practitioners was collected between June 2024 and November 2024.Use value, fidelity level, diagnosis method, Rasa panchaka, formulation, and preparation were the subjects of the data analysis. Result & Discussion: During this survey, 40 plant species from 28 distinct families were observed; all of the plants were gathered, and a herbarium was made. The Use Value (UV) of *Tinospora cordifolia* and *Sacchrum officinarum* were 0.47 and 0.39, respectively. A total of 52 formulations with various preparation methods and administration methods were observed. Both therapeutic treatment and pharmacopeial preparations that are helpful in the management of *Kamala* (jaundice) can benefit from an improvement through phytochemical analysis and additional clinical research on the formulations.

Keywords: *Kamala*, Bailhongal, Saundatti, Ethno medicine.

Access this article online

Website: https://ijam.co.in

DOI: https://doi.org/10.47552/ijam.v16i3.6244

Introduction

Despite the great advancement in modern medicine, Medicinal plants have played a huge role in preserving health of both humans & animals. India being the land of Traditional medicine is playing a crucial role in treating various diseases. Although, there are various classical literatures, pharmacopeias that help in knowing various plants usage in various disease, ethno-medicinal survey is one of the great sources of knowing about the plant taxonomy of the locality that are used in management of diseases.

Jaundice is one of the common disease or a symptom that is observed in various hepatic diseases such as Hepatitis, Alcoholic Liver Diseases (ALD), Cirrhosis of liver and etc. It has been one of major disease that is successfully managed by Traditional practitioners. Though there are enough ethno-medicinal surveys that are done in various states of India such as Maharashtra, Assam, Tripura, Tamil Nadu & Madhya Pradesh, there are only a handful of survey and medicinal plant documentations regarding the data on the plants used in management of jaundice in western ghats.

Western Ghats, a place that is global hotspot of bio-diversity and has a huge vegetation is under a great stress of anthropogenic disturbances. Up-to 5800 species of flowering plants are available here, out of which 56 genera and 2100 species are endemic. The state of Karnataka has around 3900 species belonging to 1323 genera and 199 families. (1)

Ethno-medicinal survey in this area regarding jaundice will update the Pharmacopeia, given knowledge on various flora available and used in managing jaundice. Nevertheless, it will add on few medicinal plant knowledge that makes the AYUSH pharma companies, practitioners and traditional medicine vendors to encourage in prescribing other drugs in the management of jaundice.

Materials & Methods

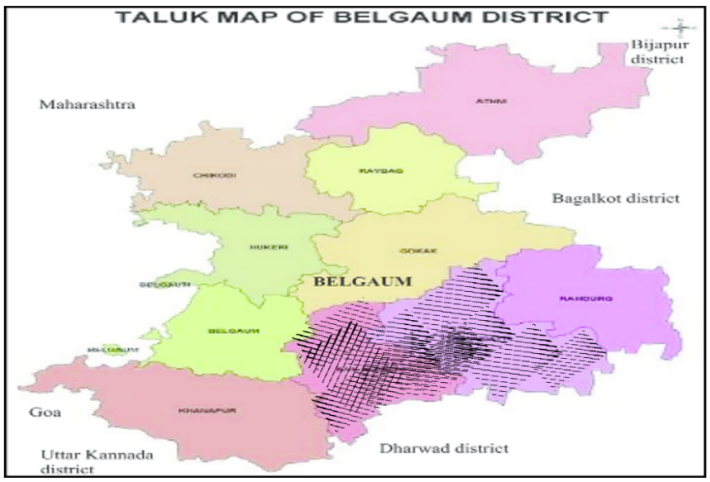
Study area

Two taluks from Belagavi district were chosen i.e., Bailhongal and Saundatti. Baihongal is 44 kms from the Belagavi city and Saundatti is 78 kms from Belagavi city. Both the study areas have

*** Corresponding Author:**
Divya Khare
Associate Professor, Department of Dravyaguna, KAHER's Shri B.M.K Ayurveda Mahavidyalaya, Belagavi. India. 590003.
A Constituent unit of KLE Academy of Higher Education and Research, Belagavi, India.
Email Id: divyakhare2008@gmail.com

population up to 119,411 according to 2011 census (2), which comprises of several communities, tribes and castes such as Agasa, Banjara, Bant, Beda, Bedara, Bhois, Gonda, Gouli, Halakki, Vokkaliga, Holayas, Kurubaru, Naikdas, Kumbis, Kunabi, Siddhi and Valmiki (3). The two taluks are located at 15.817°N 74.867°E & 15.7833°N 75.1167°E respectively. Bailhongal is approximately 15.30km^2 in area and located at an altitude of 664 (2,178 ft) (4), while Saundatti is approximately 16 km^2 in area and located at an altitude of 858 (2,815 ft). Both the areas have abundant source of flora due to the presence of Malaprabha dam & its continued flow in Saundatti named as Naviluteertha & Renuka sagara. (5)

Figure 1: Taluk map of Belagavi District and the survey area is highlighted



Selection of Traditional practitioners

Since this survey is related to jaundice, The traditional practitioners who are ready to share the information regarding their treatment protocol, diagnosis and complications of jaundice were chosen. The survey involved collection of the data from human intelligence hence approval from Institutional Ethics Committee (IEC) was taken. IEC. No: IEC/BMK/38-2023

Sampling method

Since the number of key informants was not known, the sample size could not be determined initially. So we had followed snow ball sampling i.e. few of the known traditional practitioner were communicated first and with their reference other traditional practitioner were contacted, and the survey was done. Nevertheless, villagers of the taluk, Medicine vendors and government school staffs were also contacted and asked for the traditional practitioners who are practicing in and around the taluk..

Ethnomedicinal survey

After deciding taluks and key informants, the contact number, address and place of practice were enquired through NGO's, Villagers of the taluk, Traditional medicine vendors, local government school staffs such as aayas etc. Once the contact with the traditional practitioners was made, they were informed about the method of survey and followed by this informed consent was taken from them.

The survey was conducted with semi-structed questionnaire that was made by ICMR-NITM, Belagavi which contained the details of the plants, storage method, side-effects of the treatment, usage of any animal products in the treatment and dietary lifestyle modifications if any specific and whether this was their full-time work. The survey was conducted from the month of June 2024 to November 2024 in both Bailhongal and Saundatti taluk, each practitioner was visited 3 times.

Identification of plants were done with the help of repeated walking with the practitioners to the field and forest from which they collect the plants followed by collecting the samples from the field and identifying them with the help of taxonomist. The local name of the plants was noted from the practitioners and then confirmed their source name or botanical name with the help of flora books, photos of the plants that were captured during the survey and plants that were collected during the survey.

Herbarium preparation

The collected and identified medicinal plants during the survey was pressed and herbarium sheets were made and it was submitted to the Department of *Dravyaguna* (Plant pharmacology), KAHER's Shri B.M.K Ayurveda Mahavidyalaya, Belagavi. The herbarium sheets were scrutinised by taxonomist. Voucher specimen of the collected plants was made and authentication was done from Central Research Facility (CRF), KAHER's Shri B.M.K Ayurveda Mahavidyalaya, Belagavi. *Voucher specimen no:* CRF/Auth/2024/625-629,CRF/Auth/2025/384-398,CRF/Auth/2025/402-411 and CRF/Auth/2025/421-435.

Data analysis

Data that was collected during the survey such as age of the practitioners, diagnosis methods, plants used in management of jaundice, habitat, form in which the plants are used. Based on the collected data, use value and fidelity level of the plants used in the management of jaundice was analysed and tabulated in table.1. The statistical data of the plants includes mainly 2 data: 1) Use value [UV] 2) Fidelity level [FL]:

Use value

Use value is calculated on the basis of key informants or traditional healers. Use value is calculated using the formula UV = N^{cp}/TN, here N^{cp} is Number of citations of plants and TN is total number of informants. Ex: if *Guduchi* (*Tinsospora cordifoila)* is cited 11 times by practitioners, then N^{cp} is 11 & TN is 23, then it's use value is calculated as UV = 11/23 x 100, UV = 0.47. (6)

Fidelity level

To identify the medicinal plant species most favoured by informants for treating jaundice, the fidelity level (FL) was calculated. FL = (Np/N) × 100 Where Np denotes the count of use-reports per plant used in treating jaundice, while N represents the total number of use-reports for that plant species. Ex: if *Guduchi* (*Tinsospora cordifoila)* is cited 11 times by practitioners, then Np is 11 and N is 40, then its fidelity level is calculated as FL = 11/40 x 100, FL = 27.5%. (7)

Results & Discussion

Traditional practitioners

Among 52 identified traditional practitioners in the selected area, 23 practitioner were chosen on the basis of two criteria, one is those who provide treatment for jaundice and second one is those who consented to share the folklore knowledge. In Bailhongal taluk there are about 78.26% of the practitioners, while in Saundatti taluk there were 21.74% practitioners present. This was mainly due to availability of rich flora in the region of Bailhongal compared to Saundatti taluk as per information given by

traditional practitioners. Among this 82.61% of practitioners were men and 17.39% of practitioner were women, 78.2% learnt the practice of traditional medicine from their father.

As per the information given by the practitioners the learning process was mainly by transfer of traditional knowledge from their ancestors through various manuscripts that are written in local languages such as Kannada, Hindi & Marathi. Usually, they started learning this practice from the age of 10-12 years and they completed after 5-7 years. Experience of the practitoners ranges from 15 years to 45 years, almost about 34.78% of practitioners have been practicing from the past 30 years.

Various diseases such as haemorrhoids, Fistula-in-Ano, warts, veterinary disorders, insect bites were also treated by various practitioners. This information is mentioned in fig.2. 17. 39% of practitioners exclusively treated jaundice. Almost 39% of the practitioners are procuring the plants from forest & farms, 26% from local shops & vendors. All the practitioners who are procuring from the forests and farms told that they get sufficient quantity of medicines from the respective areas while it was little difficult to get plants during summer. Most of the practitioners give medicines on every Sunday and Wednesday.

Method of diagnosing the jaundice in patient was done by seeing the colour of the skin, eyes and nails, this method was widely used among practitioners which was about 69.56%. All practitioners had advised regarding diet to be followed during the course of treatment. Most of the practitioners told to quit meat, deep fried, oil cooked and spices used in the food. These aggravated the symptoms of jaundice and hence they told to stop the above said items for a period of around 30-45 days.

During the survey a unique method of diagnosing jaundice was noted, seeds of *Kulattha* (*Dolichous biflorus*) was put into a container/cup, the patient suspected of jaundice was told to collect his/her fresh urine sample in early morning or the urine just before the sleep. It is kept in the cup/container for 8-12 hours. Later, it is observed that the colour of *Kulattha* (*Dolichous biflorus*) seeds turn into black if the patient had jaundice. This method of diagnosis was used by 13.04% of practitioners. Another method of diagnosis was *Shigru patra swarasa* (leaf extract juice of *Moringa orlifera*) or *Bhringaraja patra swarasa* (leaf extract juice of *Eclipta alba*) is taken 3-5 drops approximately and this is placed in the centre of the hands, within 1 minute if the *swarasa* gets dried then the practitioners confirm it as presence of jaundice, while the *Shigru patra* method was followed by 8.69% of practitioners the *Bhringaraja patra* method was followed by 4.34% practitioner which is mentioned in fig.3.

Animal products such as *go mutra* (cow urine), *aja mutra* (goat urine), *Go and Aja ksheera* (milk of both cow and goat) were used in treating jaundice, around 73.91% of practitioners are using these products. However, 90% traditional practitioners were ready to explain treatment protocol followed by them since they felt that their practice is getting ceased because of lack of interest in both public and younger generations in knowing about herbal medicines. All the traditional practitioners were receiving monetary benefits from patients.

Analysis of the used plants

There are around 40 plants out of 28 families were found to be used in alleviating jaundice, among these families mentioned Apiaceae, Rutaceae & Liliaceae had 3 plants each, while rest of the other families had 2 or 1 plant each. Most of the Apiaceae family members were collected from local markets and shops, while the plants under Rutaceae & Liliaceae were mostly

Figure 2: Pie chart of disease treated by folklore practitioner

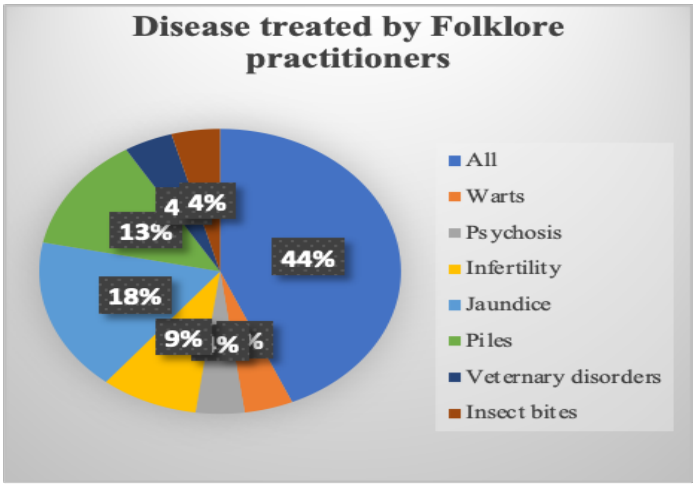
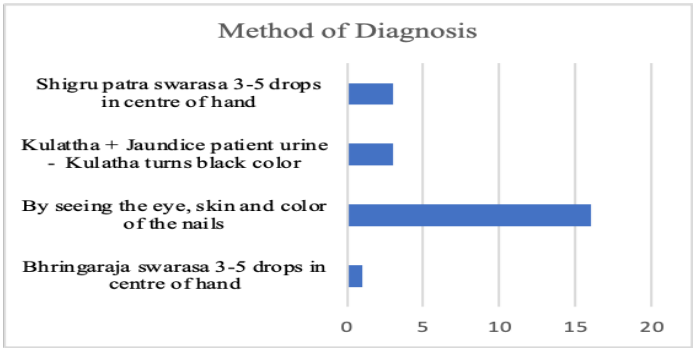


Figure 3: Bar diagram of method of diagnosis used by folklore practitioner



collected from farms and forests since they were abundant around the taluks. Herbs were one of the major habitats in this area used by these practitioners, it was about 42.5% of the total habitat used. 25% of the habitat were small tree & medium sized trees, while 12.5% were shrubs, the percentage of the habitat is clearly described in fig.5. Useful part of the plants which was used in case of treatment was mainly roots and leaf which constituted 25.60% and 23.07% respectively, it is mentioned as a pictorial description in fig.4.

Rather than the most commonly used plants such as *Bhumiyamalaki* (*Phyllanthus niruri*), *Guduchi* (*Tinsospora cordifoila)*, *Triphala* (*Emblica officinalis, Terminalia chebula* & *Terminalia bellarica*), Kumari (*Aloe vera*), *Katuki* (*Piccrorhiza kurro*), *Trikatu* (*Piper longum, Piper nigrum* & *Zingiber officinale*) there were other plants such as Cactus (*Opuntia ficus indica*) – mentioned as *Nagaphani*(8), *Kapittha* (*Feronia elephantum*), *Lashuna* (*Allium sativum*), *Bimbi* (*Coccinia indica*) and *Ela* (*Elattaria cardomum*) which didn't have any classical reference for its usage in *Kamala,* still it was used by folklore practitioners. Though the UV & FL of these plants were not as much of other plants, phytochemical analysis or in-silico analysis of these plants will give us an added knowledge about the mode of action of these plants.

The UV & FL data of each plant is mentioned in Table.1 along with the part used, mode of administration and common name of the plant is given in the language of Kannada.

Figure 4: Plant useful part pie chart in the survey

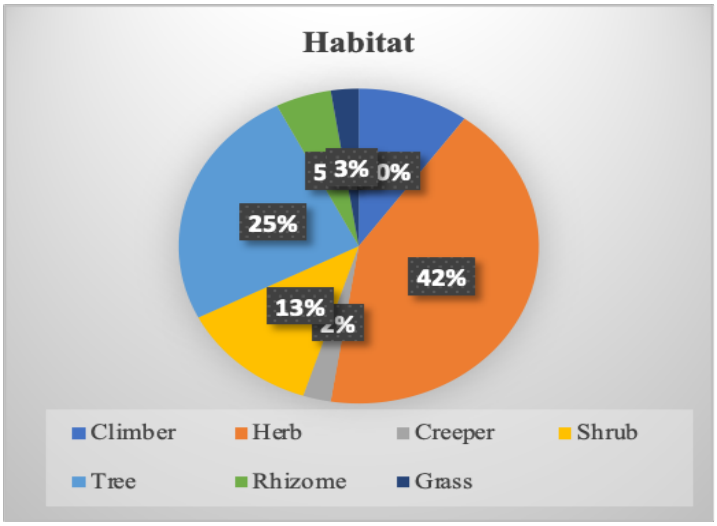
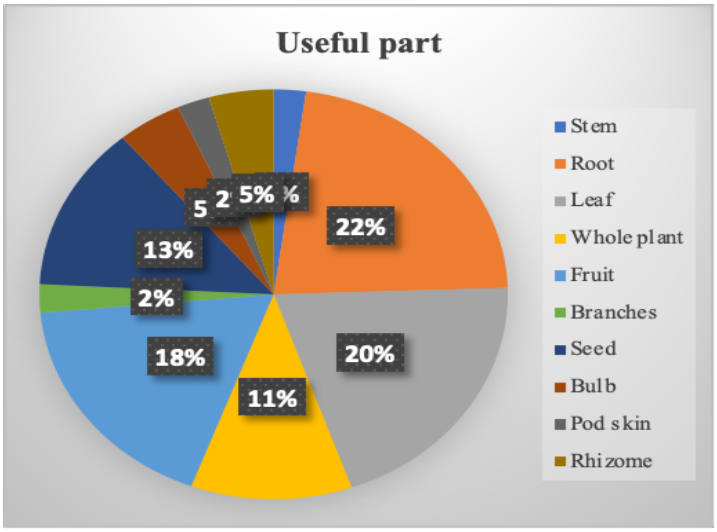


Figure 5: Plant habitat pie chart



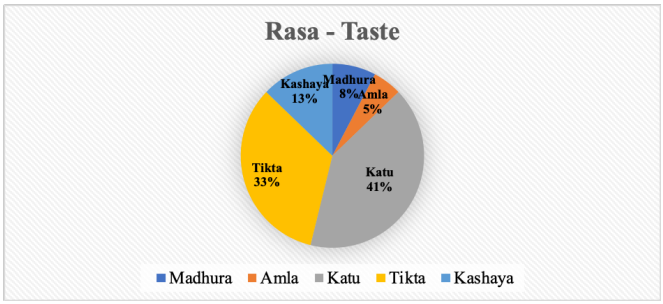
Analysis of plants on the basis of Rasa Panchaka

Among the *Rasa* of the plants, *Katu rasa* (spice taste) is present in 41% of the plants and *Tikta rasa* is present in 33% of the plants. *Katu rasa* (spice taste) that has *Bandhanschinnatthi* (breaks the obstruction) and *Margavivarnoti* (clears the channels) due to which this *rasa pradhana* plants may be used in case of *Shakashrita Kamala.* (9) Though there is limitation in usage of *Katu rasa* (spice taste) plants, it may increase the *dushita pitta* even futher since the *Nidana* of *Kamala* is *Ati sevana* of *Katu, Amla* and *Lavana rasa ahara.* (10)

Krimighna (alleviates germs), *Vishaghna* (alleviates toxins), *Jwaraghna* (alleviates fever), *Lekhana* (scrapes away unwanted tissues), *Kandu* and *Kusta prashamana* (Itching and Skin disease prevention) all these properties of *Tikta rasa pradhana* drugs help in the management of jaundice. (11) And even according to the *Ashraya Ashrayi sambhanda* of *Rasa* and *Dosha* suggests, intake of *Tikta rasa ahara & aushadha* reduces *pitta dosha.* (12) Since the treatment principle of *Kostashakasrita kamala* is *Mrudu tikta virechana,* usage of *tikta rasa* in the management of this variety is ideal. (13) Most of the drugs and formulations that are indicated for *Kamala* in various *samhitas* are mostly comprising of *Tikta* and *Katu rasa pradhana dravyas.*

Most of the *dravyas* have *Laghu* (lightness), *Snigdha* (*oilness*), *Ruksha* (dryness) properties. While *Laghu guna* has properties that will bring down *Shakashrita kamala, Snigdha guna* helps in the proper formation of mala that is needed in case of *Kostashakashrita kamala.* 64.1% of the plants that are used in treatment Jaundice in the survey are *Ushna virya dravyas*, the *karma* of *Ushna virya dravya* is *Pachana* (digestion) and *Virechana* (purgation). (14) The *Kamala* treatment principle is "*Mridu virechana"* (mild purgation) and *Ushna virya* having *virechana* as its action makes the formulations used by these practitioners a furthermore proof for its action in *Kamala.* Thus, the analysis of *Rasa panchaka* of each *dravya* helps in knowing its probable mode of action on *Kamala* whether it acts on the basis of *Rasa* or *Guna* or *Virya* or *Vipaka.*

Figure 6: *Rasa* (Taste) percentage pie chart of the plant used by folklore practitioner



Analysis of Kalpana (Formulation)

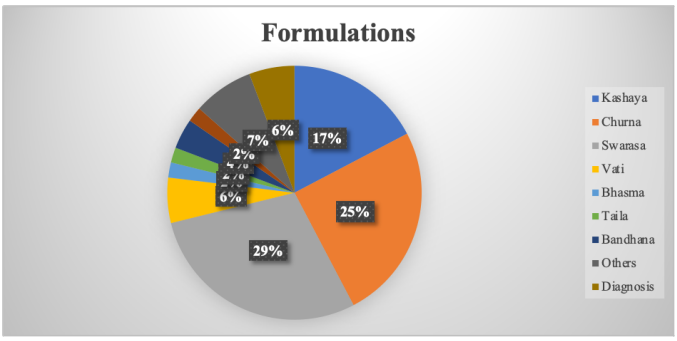
Among 52 preparations used by folklore practitioners, *swarasa* (extract juice) and *Churna* (powder) is the most used preparation in the management of jaundice by the practitioners with 29% and 25% respectively of total formulations. Some of the different preparations or method of treatment principle observed during this survey was *Chirabilwa* (*Holeptelia integrifolia*) roots or the branches of *Babbula* (*Acacia niliotica*) are taken dried and tied around the arms exactly in the bicep's region for 5 – 7 days especially in right hand for male and left hand for female, the practitioners weren't ready to share its mode of action. After 5-7 days the bandage had left a mark that will be present in the same place for about 15 – 20 years.

66.67% of the preparations were single drug preparations which constituted of various preparation methods such as *Churna* (powder), *swarasa* (extract juice), *Kashaya* (decoction), *Bandhana* (Bandage), *Taila* (oil) and *Bhasma* (Ash). Rest of the preparations were mostly in combination with 3-4 drugs. Though *taila & ghrita* isn't indicated by Allopathy practitioners but still here *Eranda taila* (oil of *Ricinus communis* seeds) are prescribed in this case, because due to the indication of *mrudu virechana* is indicated as *Kamala chikitsa* and *eranda taila* having *bhedana* (purgation) as its property will help in case of doing the *shodhana* (purificatory measures) (15), there is a reference for *Narikela taila* (oil of *Cocos nucifera*) when used in CCl4 induced rabbits, it showed its Hepato-protective activity at 200mL/kg compared to 100mL/kg body weight of silymarin as control drug. In this the author has told that it helped in the excretion of the excessive bilirubin in the liver thus showing the activity of oil in case of *kamala* (jaundice) (16). In-vitro, In-vivo & clinical studies on *Eranda taila* (castor seed oil) on its Hepato-protective activity will prove its efficacy and its mode of action in *kamala* (jaundice).

Nasya (Inhalation) and *Bandhana* (Bandage) were some of the new procedures that were found out during this survey, though there is reference for *Nasya* (inhalation) in *Lolimbaraj granthivali,*

(17) there is no reference for *Bandhana* (Bandage) in classics. The mode of action of *Nasya* is it stimulates the liver's natural repair mechanisms, enhancing drainage of toxins and potentially altering the balance of *pitta dosha*. (18) Nevertheless, due to the administration of it doesn't undergo hepatic first pass metabolism helping it in a very quick absorption by giving a potential effect of the *Dravya* used. (19)

Figure 7: Formulations pie chart used by folklore practitioners



Conclusion

Ethno-medicinal survey on jaundice in Bailhongal and Saundatti gave almost 40 plants species in management of jaundice and 52 formulations including both single drug and compound formulations. There were some of new add up plants such as *Nagaphani* (*Opuntia ficus indica*), *Kapittha* (*Feronia elephantum*), *Lashuna* (*Allium sativum*), *Bimbi* (*Coccinia indica*), *Ela* (*Elattaria cardomum*), Palandu (*Allium cepa*) and *Shigru* (*Moringa orelifera*) these plants didn't have a classical reference for its usage in *kamala* (jaundice). Even there were some new diagnostic methods and treatment modalities followed by these practitioners in treatment

As told by *Acharya Charaka*, the knowledge in the nomenclature and properties of plants can be learnt from people living in forest and shepherds likewise (20). Regular updation of *Ayurvedic* pharmacopeia can be done with the help of Ethno-medicinal or botanical survey, the knowledge so collected should be further confirmed by its In-vitro, In-vivo and clinical studies.

Acknowledgement

I whole heartedly thank the traditional practitioners of Bailhongal and Saundatti, Dr. Adavesh B Holayache and who have given the details regarding the formulations, plants and mode of administration and supported me for doing this survey.

Funding source: Nil

Conflict of interest: There is no conflict of interest.

Table 1: Plant data collected during survey

Sl.no	Vernacular name (Kannada)	Botanical name	Family name	Mode	Habitat	Citation	UV	FL In %	Used part
1	**Amrutaballi**	*Tinospora cordifolia*	Menispermaceae	D, P, EJ	Climber	11	0.47	27.5	Stem
2	**Nelanelli**	*Phyllanthus urinaria*	Phyllanthaceae	D, P, EJ	Herb	8	0.34	20	Whole plant
3	**Lolesare**	*Aloe vera*	Liliaceae	D, EJ	Herb	7	0.3	17.5	Leaf
4	**Nelabevu**	*Andrographis paniculatus*	Acanthaceae	P	Herb	4	0.17	10	Whole plant
5	**Jirige**	*Cuminum cyminum*	Apiaceae	P	Herb	5	0.21	12.5	Seed
6	**Baalehannu**	*Musa paradisiaca*	Musaceae	P	Herb	3	0.13	7.5	Fruit
7	**Kabbu**	*Saccharum arundinaceum*	Poaceae	EJ	Grass	9	0.39	22.5	Stem
8	**Nellikai**	*Phyllanthus embelica*	Euphorbiaceae	D, P	Tree	8	0.34	20	Fruit
9	**Alalekaai**	*Terminalia chebula*	Combrataceae	D, P	Tree	8	0.34	20	Fruit
10	**Tarekkai**	*Terminalia bellarica*	Combrataceae	D, P	Tree	8	0.34	20	Fruit
11	**Ishwari**	*Aristolochia indica*	Aristolochiaceae	D	Creeper	1	0.04	2.5	Leaf
12	**Pappaskalli**	*Opuntia ficus indica*	Cactaceae	EJ	Shrub	2	0.08	5	Leaf
13	**Haralu**	*Ricinus communis*	Euphorbiaceae	P, O, D	Shrub	7	0.3	17.5	Seed
14	**Bangada balli**	*Operculina turpenthum*	Convolvulaceae	P	Herb	1	0.04	2.5	Root
15	**Kutki**	*Picrorhiza kurroa*	Plantaginaceae	D	Herb	2	0.08	5	Root
16	**Ashvagandhi**	*Withania somnifera*	Solanaeceae	P	Shrub	1	0.04	2.5	Root
17	**Elakki**	*Elettaria cardamomum*	Scitamineae	I	Herb	2	0.08	5	Pod skin
18	**Jatamamsi**	*Nardostachys jatamansi*	Caprifoliaceae	I	Herb	1	0.04	2.5	Root
19	**Kodasige**	*Holerrhena anti-dysentrica*	Apocynaceae	D	Small tree	1	0.04	2.5	Root
20	**Garugada soppu**	*Eclipta alba*	Astraceae	Diagnostic	Herb	2	0.08	5	Whole plant
21	**Ingalikkai/ Baelada hannu**	*Feronia elephantum*	Rutaceae	T	Tree	2	0.08	5	Leaf
22	**Oma**	*Trachyspermum ammi*	Apiaceae	P	Herb	2	0.08	5	Seed
23	**Somphu**	*Foeniculum vulgare*	Apiaceae	P	Herb	2	0.08	5	Seed
24	**Belulli**	*Allium sativum*	Liliaceae	EJ	Herb	6	0.26	15	Bulb
25	**Kari manesu**	*Piper nigrum*	Piperaceae	T	Climber	4	0.17	10	Fruit
26	**Hippali**	*Piper longum*	Piperaceae	T	Climber	2	0.08	5	Fruit
27	**Shunti**	*Zingiber officinalis*	Zingiberaceae	T, P	Rhizome	2	0.08	5	Rhizome
28	**Bilpatre**	*Aegle marmeolous*	Rutaceae	T	Tree	2	0.08	5	Leaf & Root
29	**Tulasi**	*Ocimum sanctum*	Lamiaceae	D	Shrub	2	0.08	5	Whole plant
30	**Nugge gida**	*Moringa orlifera*	Moringaceae	EJ, Diagnostic	Tree	2	0.08	5	Leaf

31	**Uttarani**	*Achyranthus aspera*	Amaranthaceae	Others	Herb	2	0.08	5	Leaf & Root
32	**Nimbe gida**	*Citrus medica*	Rutaceae	EJ	Smalltree	2	0.08	5	Fruit
33	**Erulli**	*Allium cepa*	Liliaceae	Others	Herb	2	0.08	5	Bulb
34	**Tapasi mara**	*Holoptelea integrifolia*	Ulmaceae	A, B	Tree	2	0.08	5	Root
35	**Tonde balli**	*Coccinia indica*	Curcurbitaceae	EJ	Climber	2	0.08	5	Leaf
36	**Belavantada gida**	*Leucas cephalotes*	Lamiaceae	T	Herb	1	0.04	2.5	Whole plant
37	**Jaali gida**	*Acacia nilotica*	Mimosaceae	B	Tree	2	0.08	5	Branches
38	**Arishina**	*Curcuma longa*	Zingiberaceae	P	Rhizome	1	0.04	2.5	Rhizome
39	**Hurali kaalu**	*Dolichos biflorus*	Leguminosae	Diagnostic	Herb	3	0.13	7.5	Seed
40	**Adshoge**	*Adathoda vasica*	Acanthaceae	D	Shrub	2	0.08	5	Leaf

*TH- Traditional healers; EJ – Extract juice; D – Decoction; P – Powder; I – Inhalation; T – Tablet; O – Oil; A- Ash; B – Bandage.

Table 2: Preparations by Traditional practitioners in the management of Jaundice

***Swarasa* (Freshly extracted juice) (14)**		***Churna* (Powder) (13)**	
1)	Fresh stem extract juice of *Guduchi* (*Tinospora cordifolia*) – 20 ml for 15 days once a day	1	Bhumiyamalaki (*Phyllanthus niruri*) – 5 gms + Hot water – 50ml
2)	Fresh whole plant extract juice of *Bhumiyamalaki* (*Phyllanthus niruri*) – 20 ml for 15 days once a day	2	*Jeeraka* (*Carum carvi*) – 5gms + Hot water – 50ml
3)	*Ikshu swarasa* (Sugarcane extract juice) – 100ml for 15 days	3	*Bhunimba (Andrograhis paniculata)* powder 1 gm applied in a piece of Banana (*Musa paradisiaca*) and taken internally along with powder of *Emblica officinalis*.
4)	*Ikshu swarasa* (Sugarcane extract juice) – 100 ml for 7 days	4	2 gms Powder of Triphala (*Emblica officinalis, Terminalia chebula and Terminalia bellarica*) mixed together. It is taken along with 200ml of cow urine
5)	*Kumari (Aloe vera)* extract juice 15ml	5	*Bhumiyamalaki* (*Phyllanthus niruri*) – 5 gms + Honey – Q.S.
6)	Fresh stem extract juice of *Guduchi* (*Tinospora cordifolia*) – 50ml	6	*Kalamegha (Andrographis paniculata)* - 5-10 gms + *Ashwagandha (Withania somnifera)* 5 gms should be taken and pinch applied in *Kadali* (*Musa paradisiaca*) and given for the Patient for x 15 days in Empty stomach in Early morning.
7)	Fresh leaf extract juice of *Opuntia ficus indica* – 20ml along with Hot water or Cow urine – 20 ml either once or twice a day according to patients' condition for 3-5 days	7	Root powder of *Eranda* (*Ricinus communis*) 5-10gms + Goat milk – 50ml approx.
8)	*Kumari (Aloe vera)* extract juice 15ml for 10 days	8	For cleansing the gut, root powder of *Trivrit* (*Operculina turpenthum)* – 5 gms approx. is used along with hot water (50ml) early morning.
9)	Sugarcane extract juice – 200ml twice a day without adding lime	9	*Cynamum cumminum*, *Trachyspermum ammi* & *Foeniculum vulgare* – 2gms each + Hot water – 50ml and taken internally
10)	*Kumari (Aloe vera)* extract juice 20 – 30 ml at night before sleep.	10	Rhizome powder of *Zingiber officinale* taken along with cow milk – 25ml
11)	Fresh stem extract of *Guduchi* (*Tinospora cordifolia*) – 20 ml + Honey – 5 ml	11	*Trachyspermum ammi, Foeniculum vulgare* & salt – 1gm each +Hot water- 50ml
12)	Fresh leaf extract juice of *Shigru (Moringa orlifera)* – 100ml + 3 drops of *Citrus medica* added to this	12	Rhizome powder of *Haridra (Curcuma longa)* – taken around 5 grams & taken along with 100ml of milk.
13)	9 Leaves of *Bimbi (Coccinia indica)* along with 9 bulbs of *Lashuna (Allium sativum)* is taken together pounded and given as extract juice. This combination is given for 3 days. Day 1 - 9 in number, Day 2 & 3 - Seven and Five	13	*Bhumiyamalaki (Phyllantus uraria)* – 5 gms + milk – Q.S.
14)	Fresh extract juice of *Ricinus communis* – 20ml and *Eclipta alba* – 15ml given for once		
***Bhasma* (Ash) (1)**		***Taila* (Oil) (1)**	
1	*Chirabilwa (Holeptele integrifolia)* roots should be dried then burn it and powder it and take it internally about 1 tsp + Hot water.	1	Oil prepared out of seeds of *Eranda (Ricinus communis)* – 10ml at night for 3 days
***Kashaya* (Decoction) (8)**		***Vati* (Tablet) (3)**	
1	Decoction of *Bhumiyamalaki (Phyllantus uraria)* is made and given in a dose of 100-150ml for 15 days +Soda – 1 pinch (approx. 1 gram)	1	*Kapittha (Feronia elephantum)* extract juice– 20 ml, Sugar candy – 10 gms & *Ela (Elattaria cardomum)* skin pod, the seeds inside must be removed and 10 gms of it is taken pounded made into tablet. Given for 14 days, at the dosage of 2 times a day
2	*Eranda (Ricinus communis)* leaves (approx. 5-10gms) that are tender made into decoction and given for patient – around 100ml. 10gms powder mixed with 150ml of water and reduced to 100ml and it is given for the patient.	2	Leaf extract of *Dronapushpi (Leucas cephalotes)* – 12ml, *Chirabilwa (Holeptele integrifolia)* root powder – 12 gms, *Kapittha (Feronia elephantum)* fruit extract – 12 gms these all are pounded and made into Vati and given 2 BD.

3	Decoction of *Bhumiyamalaki (Phyllantus uraria)* is made and given in a dose of 100-50ml for 7 days	3	*Shunti (Zingiber officinale)* rhizome powder – 12gms, *Lashuna (Allium sativum)* bulb – 7 pcs, *Maricha (Piper nigrum)* fruit powder – 7 pcs, Fruit powder of *Pippali (Piper longum)* – 7 pcs & *Bilwa (Aegle marmeolous)* leaf extract juice – 10ml are taken pounded together and made into tablet. This is given for 7 days at the dosage of 2/day
4	Seeds of *Kumari (Aloe vera)* is taken 6 grams and decoction of this is given internally 2 times a day	***Nasya* (Inhalation) (1)**	
5	Powder of *Triphala (Emblica officinalis, Terminalia chebula and Terminalia bellarica)* mixed together and made decoction, to this *Amalaki (Phyllanthus emblica)* powder 10 grams is added and this is taken internally.	1	In case of Jaundice associated with Vomiting to control the vomiting: *Ela (Elattaria cardomum)* powder - 1 part + *Jatamansi (Nardostachys jatamansi)* powder - 1 part, a wick is made and inhalation procedure is done for the Patient.
6	Decoction of *Guduchi* (*Tinospora cordifolia*) – 30ml is given internally.	**Diagnosis (3)**	
7	*Tulasi (Ocimum santum)* leaves are dried, pounded and made powder, this powder is made into decoction and given 20ml internally	1	Seeds of *Kulattha (Dolichous biflorus)* was put into a container/cup, the patient suspected of jaundice was told to collect his/her fresh urine sample in early morning or the urine just before the sleep. It is kept in the cup/container for 8-12 hours. Later, it is observed that the colour of *Dolichous biflorous* seeds turn into black colour if the patient had jaundice.
8	Powder of *Guduchi* (*Tinospora cordifolia*) along with *Ishwari* (*Aristolochia indica*) – each of 5 grams is taken and boiled with 200ml of water, this is reduced to 50ml and taken internally,	2	Leaf extract juice of *Shigru* (*Moringa orlifera*) about (3-5 drops) in the center of the hand, after 30 seconds if the juice gets dried then the patient is diagnosed with jaundice.
		3	Leaf extract juice of Bhringaraja (*Eclipta alba*) about (3-5 drops) in the center of the hand, after 30 seconds if the juice gets dried then the patient is diagnosed with jaundice.
***Bandhana* (Bandage) (2)**	1. *Chirabilwa (Holeptele integrifolia)* roots should be tied in the right hand around 8-10cm below the shoulder joint, it forms a mark and it burns the skin. As skin burns and mark forms Jaundice reduces.	2. *Babbula* (*Acacia nilotica*) spike is taken out and the bark is tied to right arm for male and left arm for female, this will form a mark around the arm, that depicts that jaundice is cured, this is removed after 1 – 2 weeks, acc. to pts condition.	
Other Preparation (4)			
1. Leaf extract juice of *Kumari (Aloe vera)* 50ml + *Triphala (Terminalia bellarica, Terminalia chebula & Emblica officinalis)* fruit powder 5gms mixed and taken internally.			
2. *Apamarga (Achyranthes aspera)* whole plant extract juice – 10ml, Curd – 10ml, *Cuminum cyminum* fruit powder – 1 tsp (3 grams approx.) mixed and given internally			
3. *Palandu* (*Allium cepa*) raw is made to eat after 30 mins sugarcane juice is given.			
4. *Eranda (Ricinus communis)* leaf extract juice, *Maricha (Piper nigrum)* - fruit powder +*Lashuna* (*Allium sativum)* – bulb all are taken in equal quantity of 2 grams and added to Goat milk of 20ml and given internally			

Reference

1. Rao Raghvendra, Floristic diversity in western ghats: documentation, conservation and bioprospection– a priority agenda for action, Sahyadri E-News, Volume 2.
2. District Census Handbook – Belgaum, Census of India – 2011, Series 30, 1-387.
3. Upadhya. V et al., Ethnomedicinal plants used to treat bone fracture from North-Central Western Ghats of India / Journal of Ethnopharmacology 142 (2012) 557–562.
4. Location details of Bailhongal, Available at: https://en.wikipedia.org/wiki/Bailhongal#cite_note-1 Accessed on: 12/03/2025 on 15:30 IST
5. Location details of Saundatti, Available at: https://en.wikipedia.org/wiki/Saundatti#cite_note-2 Accessed on: 12/03/2025 on 15:35 IST
6. Kunjal Chetanbhai Chauhan et.al., An Ethnobotanical Survey of Medicinal Flora Employed in Cancer Management in Kutch District, International Journal of Ayurvedic Medicine, Vol 15 (4), 2024; Pg. No: 1063.
7. Jha Santhosh, Research methodology in Ethnobotany, Advances in Ethnobotany, Sathish serial publishing house, Delhi, 2018, Pg: 169-191
8. Bapalal G. Nighantu Adarsha. Varanasi: Chowkhamba Vidya Bhavan; 1968. p.663. (Nagaphani Varga, Chapter 55).
9. Hegde L Prakash, A. Harini, A Textbook of Dravyaguna Vijnana, Chaukhambha publications, Varanasi, Volume 1, Pg. No: 231-232.
10. Sharma.R.K, Dash. Bhagwan, Charaka Samhita, Chaukhambha publications, Varanasi, Volume 4, Chikitsa sthana, Chapter 16/34.
11. Hegde.L. Prakash, A. Harini, A Textbook of Dravyaguna Vijnana, Chaukhambha publications, Varanasi, Volume 1, Pg. No: 233-234.
12. Sreekumar.T, Astanga Hrdaya Vagbhata Sutrasthana – 1, Chaukhambha publications, Varanasi, Chapter 1/15, Pg. No:14-15.
13. Sharma.R.K, Dash. Bhagwan, Charaka Samhita, Chaukhambha publications, Varanasi, Volume 4, Chikitsa sthana, Chapter 16/43.
14. Srikanthamurthy.T.R, Sushruta Samhita, Chaukhambha Orientalia, Varanasi, Sutrasthana, Chapter 41/11.
15. Srikanthamurthy.T.R, Sushruta Samhita, Chaukhambha Orientalia, Varanasi, Sutrasthana, Chapter 45/114.
16. Ahmad. B, Khan. W, Haq. T.U, Ahmad.S, Zahoor.M, Alotaibi. A, Ullah. R et.al., Beneficial effects of coconut oil (Cocos nucifera) on hematobiochemicl and histopathological markers in CCL4 intoxicated rabbits, Brazilian Journal of Biology, 2024, vol. 84, Pg. No: 1-8.

17. Brahmanand Tripathi, Lolimbraj granthavali, Chaukhambha Surbharti Prakashan, Varansi; Vimana sthana, Chapter 3.
18. Rohit Kumar, Rajalaxmi MG. A case report on effect of Dronapushpi Swarasa Nasya in Kamala induced Hyperbilirubinemia. J Ayurveda Integr Med Sci [Internet]. 2022Sep.11 [cited 2025May5];7(7):191 -195.
19. Jeevan R. Rajguru, Priti B. Shinde, Sanket P. Shinde, Komal A. Humbe, Priyanka P. Pawar, Nasal routes of drug delivery: a creative approach, IJCRT | Volume 12, Issue 1 January 2024, 1-12.
20. Hegde.L. Prakash, A. Harini, A Textbook of Dravyaguna Vijnana, Chaukhambha publications, Varanasi, Volume 1, Pg. No: 459.

*****