

Health ailments and their cure using indigenous flora and fauna in district Budgam of Jammu and Kashmir

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Abstract

Indigenous Traditional Knowledge is the knowledge that a community possesses for its daily survival with respect to health, food, shelter, agriculture and livestock among many other things. It is rather the survival manual of a community that is handed down from one generation to the other through word of mouth. The current paper presents the key findings of a study in the State of Jammu and Kashmir, District Budgam aimed at documenting the current health practices for common ailments followed by people therein. The study was undertaken in three blocks of the district Budgam (four villages from each block) using semi-structured interview schedule and Focussed Group Discussion. The study revealed that people depend on local flora and fauna for dealing with day to day health problems. Common ailments like, cough, cold, burns, oral hygiene, skin problems, stomach, intestinal problems, eyes and nose problems among many others are taken care of at the grassroots. One of the plants used in health care practices has been reported for the first time. There is a need to document this system as they are passed down through word of mouth and have a risk of getting lost. A decline in these systems would not only end the traditional practices of a defined community but also break its nexus with its history. Such a study can bring forth uses of indigenous flora and fauna that can be beneficial for the entire human race and pave way for enhanced research as well.

Keywords: Indigenous Knowledge, Health Care Practice, Budgam, Jammu and Kashmir

Introduction

Ever since man walked earth he has been interacting with nature for his survival for food, clothing and shelter. Continuous experimentation with nature led him to experiment and identify useful herbs and weeds which he used for his own benefit and then passed this information to the next

generation. This set of information that is native to a particular community with respect to vital aspects of survival culminated into what came to be known as Indigenous Knowledge. The indigenous knowledge (IK) or the Traditional Knowledge (TK) is the term that refers to the knowledge systems rooted in the cultural

traditions of any given community or ethnic group. It is rather the local knowledge that enables a particular community with traditional techniques of survival with respect to day to day living. IK contrasts with the international knowledge system generated by universities, research institutions and private firms. It is the basis for local-level decision making in agriculture, health care, food preparation, education, natural-resource management, and a host of other activities in rural communities. (1) People in different communities have been using their native flora for their survival. Since the earliest of civilisations, man has used plants for healing which is a tradition that even survived the arrival of modern medicine and found newer strength at the end of 20th century. (2).According to a WHO estimate, nearly 80% of the population in the developing countries depend directly on plants for its medicine.(3,4). In Asia, India and China have the richest arrays of registered and relatively well known medicinal plants. (5). India alone is bestowed with a rich flora the medicinal use of which has manifested into different Indian Systems of medicine such as Ayurveda, Unani and Siddha (6).The Indian Himalayan Region, (IHR) which is more than 2800 km long and 300 km wide, is a mega-hot spot of biological diversity. (7)Within this IHR is located the Kashmir Himalaya, also known as the paradise on earth. (8) which has a rich diversity of medicinal plants owing to its varying topography that changes from valley floors to terraced tablelands (Karewas) and dense forests upto Alpine peaks. (9,10). While the state is inhabited by several ethnic groups that possess unique information on the know-how of medicinal plants, much of this is passed down to generations orally. There is a need to document and preserve this knowledge as few studies have been undertaken in this regard, largely because of the remote and difficult terrain. (11,12,13).

Even though many studies have been taken up in the past decade in this area, the current paper presents a fresh leaf in some facets of traditional health care.

Methodology

The study was conducted in three blocks of District Budgam of the northern state of Jammu and Kashmir of the Indian Sub-continent. District Budgam was carved out of District Srinagar in 1979 and shares its borders with District Pulwama south, District Srinagar in North and Poonch in southwest side. Known as Deedmarbag in the ancient times, it has a total geographical area of 1361 sq.km. and a forest cover of 477 sq.km. The region is situated at an average height of 5,281 ft above sea-level and at 75 degree E longitude and 34 degree N latitude. The topography of the region is hilly as well as plain with a temperate type of climate. The southern and south-western parts are mostly hilly, the eastern and northern parts are relatively plain. Average height of its mountains is 1610 metres. Loose soil and denuded karewas mark the landscape of the district. The higher reaches witness heavy snowfall in winter. The average rainfall is 585mm.

Within each block Khag, Khansahb, Hard Panzu four villages each were taken up. Inclusion of a tribal village in each block was deliberate in order to garner holistic information. Random sampling was used to select block as well as villages. Information was generated using a semi-structured questionnaire and Group Discussion. The sarpanch were approached in each village as an entry point into the community who arranged for people with a group strength of 30 amounting to a grand total of 360 people in district Budgam. Bohris (traditional practitioners of Indigenous medicine system also known as Ved or Hakeem) and women who assisted in traditional deliveries (Traditional Birth Attendants or the

“*Warin*” as they are called in kashmiri) were also approached. The aim of the study was explained to the group and prior informed consent was obtained from them. The discussion was carried out in local kashmiri language for exact understanding of the methods and processes involved therein.

Results and Discussion

This paper presents the indigenous health care practices followed by people of district Budgam to cure common ailments utilising the local flora and fauna. Owing to its geography, the people of Budgam use the locally available plant material as remedy for minor ailments. These plants manifest into an excellent clinic/dispensary of sorts that offer instant, low cost remedy to these people who live in rural areas of Budgam. While this may be their alibi to use the local flora, worldwide, herbal remedies are increasingly becoming popular as these are thought of safe and natural. There is ample information on use of various plants as that assist in maintaining health and hygiene among humans. In the present study, the stakeholders were approached for obtaining information on health care practices through a semi-structured interview schedule. Local community leaders, women, men and Bohris and Traditional Birth Attendants participated in the discussion. The plants and weeds mentioned by them were collected, dried and pressed and submitted to the KASH Herbarium for validation and further preservation. Various parts of plants namely, root, bulb, stem, leaf, fruit and

flower are utilised for bringing about relief from different health disorder. Among the 36 plants identified by the stakeholders, leaves were used in 44.44% ailments as potential health remedies followed by stem (22.22%), whole plant (16.6%), seed (13.8%), root (11.11%), bulb (5.5%), fruit (5.5%) bark (2.7%) and flower (2.7%). These were found to be administered in the form of powder, paste, concoction, decoction, infusion and juice. Nearly 55.5% of these remedies were made from single species while the rest were prepared by complimenting with other substances. Plants are at the base of the food pyramid of living organisms and are the main providers of nutrients for humans (15) About 30.55% were cooked to be consumed as vegetables with meal. It was learnt from the stakeholders that only the choicest plant, in that, disease-free, was selected for preparing the remedy in order to ensure efficacy.(16,17) The people of district Budgam use these plants for varying health ailments affecting skin, hair, vision, respiratory tract, digestive system, urinary system, chill blains, bone and muscles. However, it is worthy to mention that most of the information was shared by the stakeholders in the age group of 45 to 65 and above. Younger people exhibited little know-how of these remedies.

The information collected has been consolidated in the following table under different heads scientific name, local name, part of plant used, utility and brief description:

Table 1.

S. No	Scientific Name	Local Name	Part of Plant used	Utility	Method of Use
1.	<i>Centaurea iberica</i> <i>Trevir. Ex Spreng</i>	Kretch	Leaf	Improved vision/eyesight	Leaves are crushed and cooked with egg as a dish to be eaten with rice. It is believed to improve eye vision and is

					mostly consumed by the goldsmith and artisan community.
2.	<i>Rheum rhabarbarum</i>	Pomb Tchalan	Leaf Root Leaf	1. Pimples and acne 2. Wound healing 3. Chill blains	1. Leaves are boiled in water which is then used to wash face bearing pimples 2. The root is crushed and sprinkled on wound for quick healing. 3. The leaves of the same are boiled and used to wash feet to cure chill blains.
3.	<i>Trigonella foenum-graecum</i>	Myeth	Seed	Tan or skin rash	Myeth byol or seed of fenugreek are boiled well in water. This concentrate is used to wash face to sooth skin against rashes and sun tan.
4.	<i>Anagallis arvensis Linn.</i>	Chari saban	Whole plant	Prickly heat and Skin rash	The whole plant is crushed and juice is applied on skin to treat rashes especially prickly heat.
5.	<i>Lolium perene</i>	Beeryun	Stem	Dental floss	The dried stems are cut sizeably to the length of average toothpicks and are used for dental floss commonly in most of the households. The stems are sturdy enough to be used as toothpicks.
6.	<i>Kochia scoparia</i>	Mazin Kul or Theer	Stem	1. Broom to maintain hygiene. 2. Ear stud 3. Straining starch from rice	1. When the whole plant dries out, it is removed from soil. It becomes like hardy bush which is used as a broom to maintain hygiene in courtyards and homesteads. 2. The stem twigs are burnt on either sides and stubbed out quickly. These small sticks measuring less than a centimetre are used as studs for newly pierced ears. These are believed to prevent infection and aid in hole formation. 3. In the whole broom form, it is used to strain starch from rice while cooking. Straining rice for starch is an indigenous practice

					keeping weight under control and this whole plant aids in this practice.
7.	<i>Abrus precatorius</i>	Rati Booti	Whole plant	Hair conditioning	Whole plant is crushed and the resultant juice is applied to scalp for hair conditioning.
8.	<i>Oryza sativa</i> Linn.	Daani	Seed	Mumps	Cooked and chewed rice paste is applied around the throat for bringing relief from mumps.
9.	<i>Viola odorata</i> Linn.	Nunposh or gunafash or bunafash	Flower	Throat infection and cough	The flowers are collected and crushed along with sugar. It is then stored in glass bottles for about ten to fifteen days for fermentation. The fermented mixture called “bunafash khambeer” is administered with kehwa (herbal tea made from boiling cardamom, cinnamon and tea leaves) in the treatment of cough, sore throat, hoarseness of voice.
10.	<i>Alcea rosea</i>	Sazposh	Root	Hair conditioner	One of the most popular antidote in Kashmir is hair wash with holly hock root for conditioning. Paste is formed and applied on throat 2-3 times to bring about relief from throat infections. A special herbal tea is also derived by boiling this with yeast in water to bring about relief in pharyngitis.
11.	<i>Morus nigra</i> Linn.	Mulberry juice	Fruit	Burning sensation in food pipe/oesophagus.	The fruit is crushed to pulp and the juice obtained thereof is consumed to bring relief from a burning sensation in throat.
12.	<i>Allium cepa</i> Linn.	Onion	Bulb	Diorhea	The bulb part cooked in oil along with tamarind. This consumption is believed to arrest diarrhoea.
13.	<i>Mentha arvensis</i> Linn	Pudne	Leaves	Diorrhoea	The menthe leaves are washed and crushed and taken with curd in order to control loose motions. Dried leaves are crushed and taken with curd or lassi for the same purpose.

14.	<i>Raphanus sativa L.</i>	Radish	Root	Diorrhoea	Radish is crushed and juice obtained thereof is mixed with rice starch. <i>Kaenzab</i> as it is called in kashmiri is fermented and radishes are cooked in this to arrest diorrhoea.
15.	<i>Oryza sativa</i>	Daani	Seed	Acidity	Rice grains are soaked overnight and the resultant water is consumed empty stomach the next day. This water called <i>chalinwain</i> in Kashmiri is also taken in case of asthma and typhoid.
16.	<i>Acorus calamus Linn.</i>	Waiy	Root	Acidity	Root is sundried and chewed empty stomach, early in the morning by those ailing from acidity.
17.	<i>Podophyllum hexandrum</i>	Wanwan gun	Fruit	Constipation	The fruit is cooked and consumed to bring about relief from constipation.
18.	<i>Artemisia absinthium Linn.</i>	Tethwan	Leaves	Hookworm infestation Felon	The leaves are administered orally to children for deworming of the gut. Whole plant is boiled till tender and used as a pack wrapped in a cloth tied around the abdomen to get rid of hookworms. Felon or dyog as it is called in Kashmir is a painful, sore condition of the thumb. Traditionally people use the tethwan leaf to foment the thumb 3-4 times till relief is obtained.
19.	<i>Linum usistatissimum Linn.</i>	Alish	Seed	Felon	Seeds are crushed along with soil (red soil used for making bricks) and few munaka and used as a poultice around nail tied with a clean cloth. This brings about significant relief in pain.
20.	<i>Bryophyta</i>	Hill	Whole weed	Burns	Moss growth on brook stones, swamps and other marshes is applied on burns to provide instant relief from burns.

21.	<i>Conyza Canadensis</i> (Linn) <i>Cronquist.</i>	Praan	Bulb	Bruises	Shallot bulbs are chopped and fried. It is then used as a poultice followed by Kale or Haakh poultice for relief against bruises.
22.	<i>Brassica oleracea var haka</i> Linn.	Haakh	Leaf	Pustule, carbuncle	Kale leaf is boiled in water and is placed in pustules or carbuncles. This brings about rupture in the boil thereby rendering relief to the person.
23.	<i>Juglans regia</i> Linn.	Doon	Leaf Bark	Chill blains Oral hygiene	Walnut leaves are immersed in water and feet are washed in it for relief from chill blains. Walnut bark near the base of the tree called doon mool in kashmiri is used to rub teeth with for oral hygiene.
24.	<i>Cotula antemoides</i>	Bobul	Whole plant	Muscle pain and cramps	The whole plant heap is obtained and boiled in water. Legs and feet are immersed in it to bring relief from muscle pain and cramps.
25.	<i>Salix alba</i>	veer	Stems and leaves	Muscle cramps and pain	A heapful of willow leaves and stems boiled in water is used to immerse legs and feet in water to ease out muscular pain and cramps.
26.	<i>Marrubium vulgare</i> Linn.	Troppar	Whole plant	Arthritic pain and muscle pain	Freshly procured leaves are immersed in hot water till they soften. Drained, the leaves are then crushed to form poultice which is applied on arthritic joints and wrapped with a cloth. This brings about significant relief from arthritic pain.
27.	<i>Taraxacum officianale</i>	Hund	Leaf and stem	Therapeutic food in post-partum phase	Hund, believed to be rich in iron, is generously fed to pregnant and nursing mothers to maintain a high iron level in blood. The whole weed is hunted from surrounding, washed and sundried and cooked before it is consumed.
28.	<i>Amaranthus spimosus</i>	Lisse	Leaf and stem	Nutrition	This is an important weed flora that is commonly cooked in households of Budgam and available in plenty.

29.	<i>Portulaca oleraceae</i> Linn	Nunnar	Leaf and stem	Nutrition	Purslane as it is commonly called is also a popular weed that is collected from various places to complement the green leafy vegetables in diet. Slightly sour, it is cooked and consumed with rice.
30.	<i>Malva sylvestris</i> Linn	Sotchal	Leaf	Nutrition and Laxative	It is the common solution for constipation in every household of Kashmir. Slimy when cooked, it is consumed with rice to aid bowel movement.
31.	<i>Cynodin dactylon</i>	Droab	Leaf and stem	Nutrition	Another weed flora, it is cooked and eaten with rice to complement the green leafy vegetables in the diet.
32.	<i>Capsella bursa pastoris</i> L.	Kral mond	Leaves and stem	Nutrition and laxative	The shoot is cooked till tender and is consumed with rice as meals mostly by gujjars. It acts as laxative and diuretic.
33.	<i>Polygonum hydropiper</i> Linn.	Tchoke-tchine	Leaves	Dysuria, high blood pressure and burning sensation in stomach.	Leaves are cooked and eaten as meals with rice. It is consumed for relief against dysuria, high blood pressure, stomach heat up.
34.	<i>Adiantum capillus-veneris</i> Linn.	Gyav Theer	Whole plant	Therapeutic bath	The whole plant is boiled and the nursing mother uses this to bathe herself. This is believed to have therapeutic properties.
35.	<i>Plantango lanceolata</i> Linn	Gulleh	Seeds	Urinary irritations	Seeds have a cooling effect and are taken with water for curing urinary irritations.

Besides utilising flora from the surrounding areas, people also make utilise fauna for deriving relief from minor health ailments. The use of animals, just like flora, has existed since ancient times. The Ayurveda mentions the use of 41 mammals, 41 aves, 16 reptiles, 21 fish and 24 insects. (18) The use of honey finds mention in the Holy Quran as well where in it illustrates the therapeutic value of honey which is

considered a health drink. (19) Even in present times, certain ethnic groups and tribals use animals and their products for health care practices. (20) The Hindus invariably use products obtained from cow like milk, urine, dung, curd and ghee since ancient times (21). The use is of therapeutic in nature. The findings on the use of fauna have been tabulated as under:

Table 2.

S.no	Zoological Name	Local Name	Part Used	Utility	Brief Description
1.	<i>Equus caballus</i>	Gur	Tail Hair	Cyst	Hair is plucked from a horses tail and is tied tightly around the cyst on any part of the body. This causes the cyst to dry and fall out eventually.
2.	<i>Bubalus Spp</i>	Daand	Trotter	Fractures, sprains	The trotters of buffaloes or cows are boiled hard in water till a concentrate is formed. This is then poured into a shallow tray for drying. Once dry it is broken into pieces and stored. In case of fractures or sprains, a piece of this drood is taken and heated with some water. A punched paper is spread on the ailing body part and the mixture is then poured on it while still warm. This is said to bring about significant relief in bone ache.
3.	<i>Bos Taurus</i>	Gaav	Dung	Chill blains	Chill blains common in harsh winters of Kashmir are given a unique therapy dose. The ailing feet are immersed in dung of freshly slaughtered cow or buffalo.
4.	<i>Bos Taurus</i>	Gaav	Milk	Constipation	A cup of piping hot milk with a spoonful of sugar aids bowel movement for those having acute constipation.
5.	<i>Bos Taurus</i>	Gaav	Curd	Diorhea	Curd derived from milk of cow is consumed to bring about relief from diorhea.
6.	<i>Bubalus Bubalis</i>	Maesh	Milk	Diorhea	Buffalo milk is used to make <i>Maeshkradi</i> that helps in arresting diorhea. Buffalo milk is stored for 10-15 days and is then

					churned for butter. The resultant residue is then boiled hard till a thick consistency is arrived at which is poured out with a deep ladle onto flat surfaces lined with leaves or newspaper to be dried in sun. Dried, they become like chapattis and are cut into quarters and fried for eating.
7.	<i>Gallus galus domesticus</i>	Kokur	Chicken Fat	Burns	Chicken fat brings about cooling effect on minor burns.
8.	<i>Capra aegagrus hircus</i>	Gaeb	Ghee derived from milk	Burns	Fat or ghee derived from Sheep (Eve) has cooling properties and brings about quick relief from burns.
9.	<i>Hirudinea</i>	Drekk	Leech	Releasing clotted blood	Leeches are used for thrombosis on skin. Leeches are placed on skin sites that are thrombosed to take out accumulated blood.
10.	<i>Anthophila</i>	Tuller	Honey	Cold and cough	Honey is used both for prevention and cure in case of cough and cold. A teaspoon is consumed in winters to keep cold and cough at bay.
11.	<i>Common Carp</i>	Gaad	Meat	Enhanced milk flow in nursing women	Fish is de-scaled, de-gutted and cut into pieces. It is fried and cooked and fed to nursing mothers for enhanced milk flow in nursing women.
12.	<i>Schizothorax</i>	Gaad	Meat	Same as above	Fish is de-scaled, de-gutted and cut into pieces. It is fried and cooked and fed to nursing mothers for enhanced milk flow in nursing women.

Similar to flora, there are some faunal utilization for treatment of minor health ailments in these areas. A total of 12 faunal uses were stated by the respondents in which 58.33% were domestic animals, 16.7% were fish, 16.7% were insects and 8.3% was chicken. In 50% cases animal products were used for treatment. Animal parts were used in 25% cases followed by use of excreta in 16.6% cases. Animal was used to render service in only one case (8.3%). Animal products like milk, curd, ghee are used extensively by these communities for instant and sure relief from various health ailments. Horse hair is also a unique technique of getting rid of unwanted warts on surface of the skin owing to the toughness of the horse hair. "Drood" is believed to be highly therapeutic in bone and muscle injuries. Traditionally, fish has great significance in the diet of a nursing mother as it is believed to enhance milk supply for lactation. Curd has extreme importance in intestinal disorders like owing to the high lactobacillus content. *Maeshkradi or Kaladi* as it is known are buffalo milk processed products that control diarrhoea.

Conclusion

It is evidently clear that that there is a close nexus between human and flora/fauna of Budgam which present a wide range of simple solutions to some of the basic health ailments. A total of 36 floral and 12 faunal uses were reported in this study. In a country like India, where accessibility and health care infrastructure pose huge challenges, these flora provide a wide range of antedotes to meet the demands of the rural people. Infact, the high cost and side effects of allopathic medicines is rather done away with given the deep rooted traditional knowledge of these people. During the Group Discussion, the participants shared that even though the preparation of these remedies takes time, they are their first aid whenever a health problem arises. This

underlines the importance of traditional knowledge in health care practices of the people of these communities.

It is important to mention that most of the information was shared by elders which hint that the new generation is not well versed with such use of flora. There is a need to re-familiarise and popularise the uses of these flora among people for meeting their health needs since they are safe and user friendly. Grassroot agencies like Krishi Vigyan Kendras and NGOs can assist in this process.

There is an urgent need to inventorise and document the list and utility of this flora as a useful and reliable database which can serve as a resource for further scientific researches and validation. This can advance research in the fields of botany, pharmacy and ethnomedicine to develop alternative therapies for health ailments. Therein also lies an opportunity for establishment of small enterprises for cultivation of these flora for commercial benefits.

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