World Journal of Pharmaceutical and Life Sciences
WJPLS
www.wjpls.org
SJIF Impact Factor: 6.129

INDIGENOUS KNOWLEDGE ON HEALTH CARE PRACTICES IN RURAL AREAS OF CHAMOLI DISTRICT IN UTTARAKHAND

***Dr Ashok Kumar Sahani**

Scientist, G B Pant National Institute of Himalayan Environment, Garhwal Regional Centre, Srinagar, Garhwal, Uttarakhand-246174.

Corresponding Author: Dr Ashok Kumar Sahani
Scientist, G B Pant National Institute of Himalayan Environment, Garhwal Regional Centre, Srinagar, Garhwal, Uttarakhand-246174.

Article Received on 30/08/2020 **Article Revised on 21/09/2020** **Article Accepted on 11/10/2020**

ABSTRACT

More than 80% of the human population in developing countries still depends on traditional medicines; mostly plant derived drugs, to meet their primary health care needs. Over 50,000 plant species are used for medicinal purposes worldwide out of which almost 13% are angiosperms. Two-third of the estimated medicinal species in use is still harvested from the wild, out of which 4,000- 10,000 species may now be endangered. Sixty five percent of the human population depends on traditional medicine where over 8000 plant species have been recorded as being used in traditional and modern medicines. The Indian Himalayan Region (IHR), recognized for its rich biodiversity, supports about 18,440 plant species (i.e. 8,000 angiosperms, 44 gymnosperms, 600 pteridophytes, 1,737 bryophytes, 1,159 lichens and 6,900 fungi, of which over 1,748 species (Angiosperms 96.3%, Pteridophytes 3.0% and Gymnosperms 0.6%) are known for their medicinal value. The Garhwal Himalayan region has been regarded as veritable emporium largely medicinal plants. About 90% of wild plant species collected from sub-alpine and alpine regions of the Himalaya is used in various herbal industries. Uttarakhand contributes 50% of the total plants used by the medicine industry as per the British Pharmacopoea. WHO caters to 80%, 46% and 33%, demands for medicine in Ayurvedic, Unani and Allopathic systems, respectively and contributes a major share in the economic earnings of rural communities[1]. Among the Indian Himalayan states, the highest i.e. 964 species of medicinal and aromatic plants (MAPs) have been recorded in the state of Uttarakhand.

KEYWORDS: Indigenous, traditional, vaidya, ayurved, health, herbal, healer, Himalaya.

According to World health organization "traditional medicine refers to health practices, approach, knowledge and beliefs incorporating plant, animal and mineral based medicine, spiritual therapies, manual techniques and exercises, applied singularly or in combination to treat, diagnose and prevent illnesses or maintain well-being.[1] Traditional health care practices are found throughout the world in different societies and culture. In African, Asian and Latin American countries, traditional medicine (TM) is used to meet some of their primary health care needs. In Africa, up to 80% of the population uses traditional medicine for primary health care. In industrialized countries, adaptations of traditional medicine are termed "Complementary" or Alternative" (CAM). Western medicine is based on scientific beliefs that practitioners use to understand and interact with human biology.[2]

Traditional, folk, herbal, and many other types of "medicine" are generally built upon other sets of belief systems that have a greater emphasis on psychological, social and spiritual health. A sampling of major global health belief system includes the biomedical model (e.g., Western, allopathic medicine), osteopathy and homeopathy; the Asian models, including Chinese, Japanese, Korean, Taoist and Buddhist healing traditions and Ayurvedic system.[2] Some of the traditional practices such as yoga can reduce asthma attack, acupuncture is effective in relieving postoperative pain, nausea during pregnancy, nausea and vomiting resulting from chemotherapy, TM can also have impact on infectious diseases, and 25 of modern medicine have been derived from traditional medicine are proven fact.[2]

Traditional plant-based medicines are often favored as they are inexpensive, culturally familiar and readily available. Traditional health practitioners seem to be more accessible than conventional health care services in many rural areas. In Uganda, for example, there is only one western doctor for every 20,000 people, whereas there is one traditional health practitioner per 200-400 people.[3] In Ilorin area of Nigeria 30 plant species are used for treatment of various diseases by the local people,[4] about 92% of the population knows about collection, processing and preparation of various

formulations used for treatment of malaria, scurvy, headache etc. through the scientific procedure which is replicable and acceptable. Aboriginal Australian simultaneously uses three different ways to treat a sick person viz. i) *Ngangkari* or power and Shamans of traditional healer, ii) *Yawulyu* or ceremonies and healing songs, and iii) herbal medicines. Power and Shamans of traditional healer removes the influence if sorcery and evil spirit.[5] About 70% of urban American native patients in primary care often used traditional health practices; use was strongly associated with cultural affiliation.[6] Traditional health system of Guarani tribes of the Izozong region of South eastern Bolvia is declining.[7] Their indigenous knowledge and supernatural healing power of Guarani possesses through generation to generation is declining due to sharp declining in traditional healers in number.

In India traditional health care practices, particularly use of medicinal herbs for healing is a practice of time immemorial. Approximately two million traditional health practitioners still use medicinal herbs for curing various ailments.[8] In Bareilly district of Uttar Pradesh, traditionally women treat 27 types of ailments using 124 formations prepared from herbs.[9] They also found that more than 30% of the respondents had the local technical knowledge about fever, dysentery, vomiting, boils, and measles, wounds, and cough, conjunctivitis and worm infections separately. In the Kerala utilization of traditional medicines are more for their characteristic in relation to illnesses (or illness specificity) rather than as alternative.[10] Herbal Folklore Research Center (HFRC) Tirupati and Medicinal and Aromatic Plant Programme of Asia (MAPPA) have done validation of 12 herbal therapy practices of Chittoor district of Andhra Pradesh.[11] The validation result showed that therapeutic efficacy ranging from 60-80% in the different patient treated.

Health problem and practices of any community are profoundly influenced by interplay of complex social, economic and political factors.[12] Due to the belief in supernatural elements and religion in matters concerning health, the tribal's are almost invariable found to repose faith in diviners or the traditional medicine men, sorcerers and Shamans.[13] Khonds of Vishakhapatnam district of Andhra Pradesh had seven different types of medical specialist such as general practitioner, traditional bonesetters, and specialist in the treatment of disease among children, poisonous bites, epilepsy, dental care, infertility and abortion.[13]

Sizable numbers of traditional health practiceners regards the Himalayas as store house of various medicinal herbs. The rich and diversified flora of India provides a most valuable storehouse of medicinal plants. The curative properties of medicinal herbs have long been known and documented in ancient manuscript, such as the Sanskrit Rig Veda, Garuda Purana.[14,15] These treatises focus on potential of plants and herbs to cure human ailments and diseases.[16] *Amchis* in the trans Indian Himalaya in the region of Ladakh in Jammu & Kashmir, Lahaul & spiti in Himachal Pradesh and Manari in Uttarakhand use about 337 plant species for their traditional health care.[17] Out of 337 plant species 45 plant species were of endangered category. Besides this, in the Amachi system, 38 species of animals and birds and 6 types of mineral and their compounds are also used.[17] Three communities of the Bhotia tribe (Tolchha, Marchha and the Jadhs) of Uttarakhand use 30 plant species to treat 10 major ailments in their traditional way.[18] They also found that four plants species (hardy orchid) *Dactylothiza majalis*; (some kind of plume thistle) *Cirsium vesutum; Picorrhiza kurooa*; and kuth root (*Saussurea obvellata*) were used in two different treatments. Interestingly, no plant used by one of the sub- communities for a particular ailment was mentioned by the other as a treatment for the same ailment. And yet, the method are often the same or comparable.

In Uttarakhand majority of traditional health care practitioners are herbal healers (vaidyas); they are accessible in the rural areas and are useful in the community in absence of modern health services. In the Pauri district of Uttarakhand 60 traditional herbal healers (Vaidya) were practicing in the rural area.[19] Their age group ranged from 16 to >46 years. These Vidhyas used about 156 medicinal plant species for preparing 243 formulations to treat 73 ailments. It is also found that this traditional practice, mainly acquired from generation is declining and lesser number of young people are choosing this profession. During one of the studied on social aspects of traditional health practices in central Himalaya.[20,21] found that females were the real custodies of the indigenous knowledge system as 52% of them have the knowledge on thirty practices against that of 26% for males. This indigenous knowledge system of medicine existing as a super structure, effectively serves the people of the region. Further, the indigenous practices being easily administrable and cheaper relieve the practitioners from time and financial hardship.[21] Recognizing the present escalating demand for herbal medicines, and also in order to reduce the possibility of bio-piracy and to protect the right of traditional herbal healers, there is an urgent need to document the various uses of plant species.[22] Plants are the major ingredients in most of the medical formulations developed by the traditional healers.

Available literature depict that largely ethno- botanical studies on medicinal herbs have been done in Indian.[9,13] as well as Himalayan region.[16,17,18] Studies on traditional health practices are a few.[19] So far no any scientific study regarding documentation of traditional health care practices, plant species used in traditional health care practices, IK of practices, processes and knowledge involved in traditional health care practices have been documented. Information about availability of herbs in the wilds, and identification of probable IPR

issues are also meager in Indian Himalayan regions in general and Uttarakhand in, particular. The present paper envisage to document the practice, process, resources and knowledge involved in the traditional health care practices, particularly herbal healing practices of rural area of Uttarakhand. The study also envisages documenting the role of traditional practitioners in the rural community of the hilly environment.

The study analyzed in Badrinath valley of Uttarakhand Himalaya to know the indigenous practices by the Vaidyas the following methodologies were followed.

1. Documentation of traditional health care practices

A thorough literature survey was done to document and compile existing information on tradition health care practices. An open ended questionnaire was also prepared for extensive data collected for traditional health care practices. Information was also collected from knowledgeable senior citizen and traditional health care practitioners. Information about traditional heath care practices were also recorded from published literature.

2. Documentation of plant species used in traditional health care practices

With a semi-structure questionnaire the survey was carried out among traditional herbal healers (Vaidya) together information on the uses of medicinal plant species and the preparation of various herbal medical formulation. Traditional herbal healers were interviewed. Herbs extraction and methods were also recorded.

3. Documentation of IK of practices, processes, knowledge and resources used in traditional heath care practices

For every medicinal plant the herbal healers were extensible interviewed about its therapeutic uses and the part(s) of the plant used. Use of plant species, plant parts, mode of use of plant material used and tentative composition of formulation and method of preparation were also asked (**The vaidyas never reveal their exact composition of formulation**). Uses of formulation for treatment of ailment were also documented. Help of a local botanist was also taken to identify herbs with its vernacular names. Interviews with patients were conducted about status of healing after completion of treatment for selected treatment.

4. Status of herbs used by the traditional herbal healer in the wild

To know the status of their herbs in wilds and extensive study through questionnaire surveyed were done. Senior citizen, traditional herbal healer and herbs suppliers were interviewed for verification of the data, regarding status of herbs, survey of their distribution pattern were done through following standard ecological methods (quadrate method). Species were recorded for frequency, density, abundance etc. if some traditional healers are maintaining their own medicinal gardens it was also recorded.

5. Present status of traditional health care practitioner

Number of traditional practitioner at village level, age, educational qualification, generation of herbal practice, number of disciples, trend etc were collected to know status of traditional practitioner in the society. Interviews of the senior citizen and vaidyas were also conducted to monitor changes and causes of changes in numbers (increase, decrease, stable) of the traditional practitioner in the society within a decade.

6. Identification of possible IPR value

All the practices, processes, knowledge and resources used by the traditional herbal healers were studied and compared with published information. In ayurvedic expert shall be also hired as a consultant for valuation of formulation with reference to published formulations. If some new information is emerging out of the study, initiated shall be taken to safe guard the traditional knowledge of the practitioner under existing legal frame work.

Table-1: The following table 1 showed the studied area and its physical locations from the road heads.

S.N.	Name of Village	Distance from road head (km)	Altitude (M)	Latitude (N)	Longitude (E)
1.	Ghingram	0.1	1755	30^0 24’	79^0 19’
2.	Mayapur	1	1272	30^0 24’	79^0 25’
3.	Pipalkoti	0.5	1345	30^0 25’	79^0 25’
4.	Bnangyul	1	2162	30^0 29’	79^0 42’
5.	Chormi	1.5	2080	30^0 29’	79^0 40’
6.	Chinka	1.5	1100	30^0 37’	79^0 19’
7.	Srikot	1.5	1292	30^0 24’	79^0 25’
8.	Bemaru	6	1680	30^0 47’	79^0 31’
9.	Urgam	10	2025	30^0 28’	79^0 40’
10.	Gahar	1.5	2160	30^0 28’	79^0 42’

Table 2: Showed different types of common diseases and numbers of Vaidyas specialized in particular cases.

Diseases	No. of vaidyas
Skin disease (Boils & ulcers, Makraau and Byochi)	3
Chronic gastric	1
Common disorders expert (cough, cold, fever, stomach ache)	3
Diabetes	2
Epilepsy	1
Leucorrhoea	3
Jaundice	2
Kasara specialist (stomach-ache due to costiveness in children)	2
Mental Sickness	1
Pneumonia	2
Respiratory disease (Asthma)	1
Rheumatism	1
Snake bite	3
Sterility in men and women	1
Urinary trouble	1
Jaundice disease in children (dizziness and unconscious)	2

Table 3: Shown some of the medicinal plants used by traditional Vaidya in Badrinath Valley of Uttarakhand.

S.No.	Vernacular name	Botanical Name	Family	Uses	Part used
1.	Atis	*Cuscuta reflexa*	Ranunculaceae	External wound, rheumatism, fever, stomach-ache	Root
2.	Akhrot	*Juglans regia*	Juglandaceae	Heart burn, skin diseases	Fruit, nut
3.	Amrud	*Psidium guajava*	Myrtaceae	Rheumatism, tridosha, cholera	Fruit, leaves
4.	Ashwagandha	*Withania somnifera*	Solanaceae	Menstrual disorders, painful swelling	Root, leaves
5.	Apamarga	*Achyranthes bidentata*	Amaranthaceae	Asthma, cough	Whole plant, seed
6.	Aonla	*Emblica officinalis*	Euphorbiaceae	Nasal hemorrhage, scurvy, ophthalmic, jaundice	Fruit, leave, bark
7.	Bhojpatra/bhuj	*Betula utilis*	Betulaceae	Bark ash in gastric troubles	Lisa from shoot, bark
8.	Bada nibu/jamir	*Citrus medica*	Rutaceae	Constipation, Tumor, asthma, cough, nausea	Root, buds, fruit, peel oil
9.	Bhimal	*Grewia oppositifolia*	Tiliaceae	Dandruff, hair fall	Root, leaves, stem, bark
10.	Brahmi	*Centila asiatica*	Umbelliferae	Headache	Leaves
11.	Vajradanti	*Barleria prionitis*	Acanthaceae	Gum related problem/ toothache	Leave, tender, branches
12.	Choru/gandrayan	*Angelica glauca*	Apiaceae	Gastritis, stomach disorders	Root
13.	Gugal	*Boswellia serrata*	Burseraceae	Leucorrhoea	Flowers, leaves
14.	Kaner	*Nerium indicum*	Apocynaceae	Leprosy, asthma, pain in joints	Root, bark, flowers
15.	Kutki/kadwi	*Picrorrhiza currooa*	Scrophulariaceae	Pyrexia, abdominal pain, fever	Root, rhizomes
16.	Lajjawanti	*Mimosa pudica*	Mimosaceae	Burning, weak digestion	Leaves, root
17.	Neem	*Azadirachta indica*	Meliaceae	Leprosy, blood complaints, snakebite	Bark, leaves
18.	Pudina	*Mentha arvensis*	Lamiaceae	Stomach-ache, weak digestion	Whole plant
19.	Pipal	*Ficus religiosa*	Moraceae	Vomiting, burned part, leucorrhoea	Leaves, fruit
20.	Papaya	*Carica papaya*	Caricaceae	Jaundice	Fruit
21.	Reetha	*Sapindus mukorossi*	Mimosaceae	Unconsciousness	Ritha fog
22.	Sarpagandha	*Rauwolfia serpentina*	Apocynaceae	Tridosha, mental disorders, opacity	Root, leaves

23.	Satavari	*Asparagus racemosus*	Asparagaceae	Diarrhoea, leucorrhoea	Root
24.	Tulsi	*Ocimum sanctum*	Lamiaceae	Chest pain, cough & cold	Leaves
25.	Van tulsi	*Origanum vulgare*	Lamiaceae	Cough & cold	Leaves
26.	Vanhaldi	*Hedychium spicatum*	Zingiberaceae	Ghetu (cattle disease)	Root

In Uttarakhand majority of traditional health care practitioners were herbal healers *(vaidyas)*, they were accessible in the remote rural areas and were useful to the community in absence of modern health services. In upper Alaknanda valley, 29 *vaidyas* were found during the study. Results of collected information are given below. On the basis of extensive interview with 29 traditional health care practitioners *(vaidyas)* in the upper Alaknanda valley, it was found that 4 *vaidyas* were in age group of 30-45 years, 15 in age group of 46-60 years and remaining 10 were in age group of 61-85 years. Younger generation did not consider this as a carrier building profession; subsequently this profession is declining.

Table 4: Shows the age group of Vaidyas.

S.N.	Age of Vaidyas	No. of Vaidyas
1.	30-45	4
2.	46-60	15
3.	61-85	10

CONCLUSION

The indigenous knowledge Vaidya system is gradually decreasing day by day because it is a laborious work and not properly paid. Another cause of decreasing Vaidya system is prevalence of modern English medicine and awareness among the educated mass. These day most of the people knows some of the common medicine for first aids. In the past because of remoteness, inaccessibility of road network and communication, native people solely dependent on Vaidya. Now a days in most of the villages having mobile phone facilities and accessible to towns and medicine store, so they first prefer for the English medicines. Another causes of decline indigenous Vaidya system is decline rate of Medicinal plants & herbs near to village habitat and migration of it towards far away to villages, more over in Vaidya system there are many restrictions for patients who used this traditional medicine in regards to their normal diets. It has to strictly followed, otherwise the herbal medicine do not work. The Vaidyas are not getting proper remuneration for their work, which discourage among the young generation. Modern education, easy approach to medical staff and service of 108 ambulance during emergencies, very long time taking for cure with the traditional medicines discourage modern and elite people for the traditional health system.

REFERENCES

1. WHO Traditional medicine. Fact sheet, 2003; 134.
2. http://www.who.int/mediacentre/factsheets/fs134/print/html.
3. RHO archive Harmful traditional health practices, 2005.
4. http//www.rho.org/html/hthps_overview.html.
5. Bodeker G. Traditional medicine use and health worker training in a refugee setting at the Thai-Burma Border. Medplant Network News, 2004; 4(4): 1-3.
6. Ajibade, L.T., P.O. fatoba, U.A. raheem & B.A. Odunuga Ethanomedicine and primary health care Ilorin, Nigeria. Indian Journal of traditional knowledge, 2005; 4(2): 150-158.
7. Devanesen D. Traditional aboriginal medicine: better science, policy and services for health development, september 2000; 11-13.
8. Awaji isand, Japan. Organized by WHO, Centre for health development, Kobe, Japan, 2000.
9. Hppt://www.nt.gov.au/health/comm_health/abhealth_strategy/Traditional %20aboriginal%20 medicine% 20 Japan % 20paper.pdf.
10. BUchwald D., Beals J. & Manson S.M> Use of traditional health practices among native American in a primary care setting. Med Care, 2000 Dec; 38(12): 1191.9.
11. Uman, L. The rapid appraisal of a Knowledge system: the health system of Gaurani Indian in Bolivia. Knowledge and Development monitor. www.nuffic.nl/ciran/ikdm/5-3/article/guarani.html, 1997.
12. Venkatesh, V. Medicinal plants scenario in India (Banglore, India: Foundation for Revitalization of local health tradition, 2002.
13. Tripathi Hema, M.K. manadape & O.N. Kunzru Traditional wisdom of rural people about primary health care of children. Indian Journal of Traditional Knowledge, 2004; 3(3): 314-324.
14. Sankar, Deepa. The Role of Traditional and Alternative Health System. (http://leindia.org/dis_deepa_38.pdf.
15. Vadavathy S. Validating selected tharapies to integrate traditional medicine in primary health care. Medplant Network News, 2004; 4(4): 11-14.
16. Sahu S K, Social dimensions of health of tribals in India- a case study of Oraons of Orissa, in: Tribal health: Socio-cultural Dimensions, ed B Chaudhury, (Inter-India Publications, Journal of traditional Knowledge, 5(2): 217-219.

17. Holland, B.K. Prospecting for drugs in ancient texts Nature, 1994; 369: 702.
18. In providing health care Option: Evidence from Kerala. http//leindia.org/dis_deepa_38.pdf.
19. Priyadarshan, S.S. Herbal veterinary medicine in an ancient Sanskrit work-The Garuda Purana, Ethnobotany, 1991; 3: 83-83.
20. Rajan, S. and M. sethuraman Traditional veterinary practices in rural area of Dindigul district, Tamilnadu, India. Indigenous knowledge and development monitor, 1997.
21. http:/www. nuffic. Ni / ciran / ikdm / 5-3 / articles/ veterinary. html.
22. Kala,C.P., Medicinal Plants of Indian Trans-Himalaya. Bishen Singh & Mahendra Pal Singh, Dehradun, India, 2002; V+200.
23. Maikhuri, R.K.,Sunil Nautiyal, K.S.Rao and R.L.Semwal Indigenous Knowledge of Medicinal Plants and Wild Edibles among three tribal sub-communities of central Himalayas, India. Indigenous Knowledge and Development Monitor, 2000; 8(2): 7-13.
24. Kala, C.P. Revitalizing traditional herbal therapy by exploring medicinal plants: a case study of Uttarakhand State in India. http:/www.ed.psu.edu/icik/2004/proceedings/section 3-kala-withpics.pdf, 2004.
25. Samal P.K. and P.P. Dhyani Gender in management of Indigenous Knowledge: reflection from Indian Central Himalaya. Current Science, 2006; 91(1): 104-108.
26. Samal, P.K., Anubha Shah, S.C.Tiwari & D.K.Agrawal Indigenous health practices and their linkages with bioresource conservation and socio-economic development in Central Himalayan region of India. Indian Journal of Traditional Knowledge, 2004; 3(1): 12-26.
27. Udgaonkar, S., "The Recording of Traditional Knowledge: Will It Prevent Bio-Privacy?"Current Science, 2002; 82(4): 413-19.