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Available online https://www.interesjournals.org/basic-clinical-studies.html
DOI: http:/dx.doi.org/10.14303/irjps.2020.005

Full Length Research Paper

Ethnomedicinal plants used by tribal community of district pulwama with special references to tehsil Tral, Jammu and Kashmir – India

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Abstract

Pulwama district, Jammu and Kashmir is one among the most botanized area of North India. In spite of it different medicinal plants had been used by tribal community of the area for curing different sufferings and disorders. The purpose of the present study is to see the sights and document the medicinal plants used against various ailments by the tribal community of Tral area of district Pulwama. During the survey from April to October 2018, 20 different medicinal plant species belonging to same number of genera and 11 different families were found to be used as operative remedies. The present study exposed that either whole plant or some plant parts are used to cure diverse ailments. It was also detected that bulk of plant species are used to treat more than one disease. The data related like scientific, native and family names of these selected medicinal plants along with their parts used, mode of management and ethno medicinal uses are presented in this paper.

Keywords: Survey of medicinal plants; Traditional Knowledge; Ethno medicine; Tral; Pulwama.

INTRODUCTION

Recent repetition of herbal medicine along with the ever-intensifying threats to biodiversity and the growing bio- piracy controversies have demanded for an urgent certification of the traditional use of medicinal plants. Thus, a survey was carried out in the far-flung area of Kashmir Himalaya to record the out dated health care medicines practiced by tribal community.

Ethnobotany is the oldest field of plant sciences that deals with the relationship among plants and humans. It is the relationship between a given culture and its environment and in specific the plant world (Aumeeruddy and Ethnobotany,1999). Ethnobotanists focus to essay, describe and explain relationships between cultures and uses of plants and plant parts, focusing primarily on how plants are managed, perceived and used through human cultures. Ethno-medicine is a branch of medical anthropology that deals with the study of traditional medicines, whose information and practices was verbally transferred over the periods. The data released by the World Health Organization (WHO), showed that ethno medicine has preserved its acceptance in all regions of the emerging world and its use is rapidly escalating in the commercial countries. In recent years, we can notice a worldwide trend in the outdated system of medicines and ethnobotanical understandings have become progressively valuable in the growth of healthcare system in various parts of the whole world (Ahmed et al., 2007). Thus, Ethno medicine is playing significant role in human health care since time immemorial. This Ethno medicine practice of health care is based on trust and skill of the traditional people. There has been an improved demand of herbal remedy in the world wide trade because of significant properties like economical, more operative, definitely available and less side effects. Due to these properties, people living in countries such as India (83%), Indonesia (88%), Myanmar (85%), Nepal (75%) and Srilanka (65%) have strong convection in this field (Kar and Barthakur, 2008). As per WHO,76%- 80% of the people in emerging countries still trust on local medicinal plants to fulfil their primary health demand (World Health Organization, 2002-2005). Ethno-medicine has preserved its popularity in all most all areas of the world and its use is quickly growing in the commercial countries like China, India, Nigeria, Ghana and Zambia (World Health organization, 2003). Ethnobotanical surveys are considered most dependable methodologies to drug finding (Fabricant and Farnsworth et al., 2001).

Keeping the medical wealth of plant species in consideration, many studies have been carried out from time to time to certify the use of ethno medicinal evidence from various districts of Jammu and Kashmir, India (Abdul Rashid et al., 2008; Dar et al., 1984; Iqbal Chak et al., 2009; Kapahi et al., 1993; Khan et al., 2004; Malik et al., 2011; Tantray et al., 2009). But the examination of literature shows that no orderly study of locally available plants from ethno-medicinal point of view has been approved out in the area of examination. Therefore, in the current study, an effort has been made to demonstrate some medicinal plants used by the tribal community of tehsil Tral of district Pulwama, Jammu and Kashmir India used for curing several disorders. The present data contains significant records of important medicinal plants for the opening time. Besides this the present data contains information regarding status of plant, habitat distribution, conservation status, plant part used and ethno medical values.

MATERIALS AND METHODS

Study area

Pulwama district in Kashmir valley is recognized for its impassable, diverse medicinal herbs and herbal products all over the Kashmir valley. It is located centrally in the south Kashmir about 33 kms from summer capital city Srinagar and is considered a favorite resting place to venture tourists because of its pleasant climate, clean water bodies, perfumed flowers, wonderful canopy of trees, massive mountains, delightful fruits and other natural sceneries. Due to famous saffron cultivation mostly in khrew lands of Pampore, Kakapora, Pulwama is famous all over the world. Among all the five blocks, Tral is one located in Pulwama district. It is a beautiful historic town located on the eastern side of Jhelum river,11kms from Jammu Srinagar national highway awantipora. Tral is about 55kms from Srinagar city center Lal Chowk. The area is surrounded by huge mountains. The lap of these mountains is dwelling place for majority of tribal communities. The upper hills shared their borders with famous state Dachigam national park. The block has 86 villages and there are total 17432 houses in it. The climate is chiefly dry and temperate. The spring is enjoyable due to good percentage of flowering. The average temperature of the area is between 20- 29□. Besides this the upper hills of Tral area has good percentage of medicinal plants. Due to increased bio- piracy the rate of these important medicinal plants is declining continuously.

METHODOLOGY

To initiate the survey, a field trip was carried out to different hilly areas of tehsil Tral from April to October 2018. Appropriate methodology was used to achieve proper information about the location, status and medicinal use of various plants from the tribal community of the area (Croom et al., 1983; Jain et al., 1967). The information concerning the medicinal uses of these plants, views of the tribal people about use of plants in common ailments were pen down through questionnaire and note down in the record book. In addition to local names, information about location, status, altitudinal range, plant parts used, preparation, form of usage and other important properties were also collected. Methods used to paper the traditional information included introduction, discussions with local knowledgeable persons, herbal therapists called Tribals (Gujjar's and Bakkerwals). Among all the people local herbal healers (Hakims) were mostly consulted for getting proper information during the survey. During this survey a total of about 29 informers were consulted who were between the ages of 41-70 years. The mode of communication with these informants was Urdu and Kashmiri language being easily understandable in tribal community. The information collected was rechecked and confirmed by group discussions with key informants (Hakims) and familiar persons in order to document correct information. The collection of these plants was done during flowering and fruiting stages to make the identification and habitat recognition easy at their natural habitats along with the help of knowledgeable persons among tribal community. The collected plant material was photographed. The tools used for the collection of these plants were trowel, scissor, blade, digger, pots, pruning cutters and polythene bags. The collected plants and plant parts were dried up, pressed, conserved and mounted on herbarium sheets by following a proper herbarium technique.

STATISTICAL ANALYSIS

The data obtained were statistically analyzed to check the authenticity of the results.

RESULTS

The present study focuses on medicinal importance of some plant species used by tribal community of tehsil Tral. After completion of survey, the data achieved is assembled in (Table-1) in which all the plant species are organized in alphabetic order. A total of 20 plant species belonging to same number of genera and 12 different families have been counted. As mentioned above these plant species had been used by tribal community to treat various health related ailments like skin infections, headache, digestion related problems, liver problems, wound healing, piles, sun burns, respiratory disorders, bad dour, abdominal pain, anemia, fever, muscle pain, mouth ulcers, ring worms, stomach disorders, constipation, warts, measles, cough, cold, asthma, kidney disorders, jaundice, scurvy, eye sight, cancer, flatulence, dandruff, obesity, depression, high blood pressure, cholera, cholesterol level, hair growth, swelling, gout, wounds, chest congestion, inflammation, sore throat, cuts, vomiting, mosquito repellents, excessive bleeding, hemorrhoids etc. The easy and most common methods used for preparation of the home remedies from these plants' species are decoction, powder, extract fresh juice and paste. Exterior applications are showed for disorders such as cuts, wounds, joint pain, warts, skin infections, muscle

pain, sun burns and lesions, hair loss, dandruff, headache and fever. Sometimes specific parts of plants are chewed for treating oral infections, gums, bad dour and teeth. Besides this root and leaf extracts in the form of paste are normally used as dressing materials for external wounds. All the 20 plant species of 12 families studied, are belonging to herbs. Out of these plant families, Asteraceae and Lamiaceae are represented by highest number of species (5 species each) followed by Solonaceae and polygonaceae (2 species each) and Apiaceae, Scrophulariaceae, Euphorbiaceae, Amaranthaceae, Cannabinaceae Brassicaceae (1 species each Figure: 1).

Among all the plant parts used by the tribal community, leaves contribute major portion in medicine (50%) followed by seed, root, rhizome, fruit, flower (20%, 12%, 3%, 7%, 3% respectively as shown in Figure 2).However, in some plant

Table 1. List of collected medicinal plants and plant parts used by tribal community of tehsil Tral for different disorders.

S. No	Botanical name.	Local name.	Family.	Part/s used.	Habitat.	Ethno- Medicinal Uses	Mode of Direction.
1	*Rheum emodi.*	Pambchalan	Polygonaceae	Rhizome, roots	Herb	Wound `healing, anti-oxidant, appendicitis	The powdered paste of roots shows quick healing of wounds. Furic acid obtained from *Rheum emodi* is used for treating appendicitis.
2	*Cannabis sativa*	Bhang	Cannabinaceae	Seeds, leaves	Herb	Depression, delirium, cholera, dandruff, cancer	Dried leaves are crushed and used to Smoke with the help of pipe called Hookah in local language of Kashmir for treatment of depression. Extracts obtained from leaves are used to cure Cholera and dandruff. Seeds in the form of paste is used as remedy for tumours and ulcers.
3	*Artemisia absimthium*	Tathwan	Asteraceae	Leaves	Herb	Diabetes, worm's obesity	Extracts of leaves are used to improve intestinal worms, obesity and diabetes.
4	*Datura stramonium*	Datur	Solanaceae	Seeds, leaves, petals.	Herb	Asthma, hair growth, body pain, anaesthesia.	The oil obtained from seeds is used as a stimulant for hair growth and to treat baldness. The smoke inhaled after burning leaves treats asthma. Dandruff is minimized by applying leaf extract.
5	*Celosia argentia*	Mawal	Amaranthaceae	Seeds	Herb	Fever, Jaundice, Diarrhoea.	Decoction of leaves with sugar is used to cure disorders like fever, jaundice and diarrhoea.
6	*Capsella bursapastoris*	Kralmond	Brassicaceae	Leaves	Herb	Scurvy, bleeding, chronic-diarrhoea, gastrointestinal	Raw or cooked leaves are used to treat nose bleeding, chronic diarrhoea, scurvy. Continuous bleeding after child birth is also cured by taking decoction of leaves.

7	*Euphorbia helioscopia*	Gur sochal	Euphorbiaceae	Whole plant	Herb	Factures constipation, Headache.	Warts are treated externally by taking small quantity of sap. Leaf decoctions are also used to treat disorders like worms, constipation and indigestion.
8	*Cotula anthemoids*	Thol Bobul	Asteraceae	Whole plant	Herb	Headache, constipation	Decoction of root lets are used to treat constipation. Extract of hole plant is used to wrap fractured parts. Head ach and nasal congestion is treated by using steam after boiling the plant in water.
9	*Foeniculm vulgare*	Badiyaan	Apiaceae	Seed	Herb	Kidney disorder, cough, cold, digestion.	Raw seeds along with some sweetener are eaten to improve digestion and eye sight. Grinded seeds on pouring in boiling water are used to get relief from cold, cough and kidney related disorders.
10	*Nepata cateria*	Gand soi	Lamiaceae	Leaves	Herb	Gout swelling, headache.	Headache and gout swelling is reduced by applying paste of grinded leaves.
11	*Prunella vulgaris*	Kal wiyuth	Lamiaceae	Flowers	Herb	Wound healing, haemorrhoids.	Wound healing is promoted by applying paste of fresh leaves. Bleeding haemorrhoids is also Cure by applying poultice of whole plant.
12	*Saussurea costus*	Kouth	Asteraceae	Rhizome	Herb	Cough, asthma and joint pain.	Joint pain is revealed by applying crushed leaves on affected area.
13	*Solanum nigrum*	Kambai	Solanaceae	Leaves/Fruits	Herb	Mouth ulcers, ring worms, burns and skin disorders.	Chewed leaves are kept in mouth to heal mouth ulcers. Mashed green berries are Used to cure ring worms. To get relief from burns and skin disorders, crushed leaf paste is directly applied on affected area.
14	*Marrubium valgure*	Tropad	Lamiaceae	Leaves	Herb	Indigestion, constipation, cough and cold	Leaf extract along with honey is taken to treat constipation, Indigestion, cough and cold.

15	*Rumex nepalensis*	Abhuj	Polygonaceae	Leaves and roots.	Herb	Abdominal pain, stomach pain, headache and wounds.	Stomach and abdominal pains are treated by simply drinking decoction of root. Young leaves and shoots are used as vegetables. Leaf sap is used externally to cure headache. The extract of crushed leaves is applied as dressing on wounds.
16	*Taraxacum officinal*	Hundh	Asteraceae	leaves, roots, dandelion.	Herb	Liver problems, mosquito repellent, anemia.	The decoction of dandelion root is used to treat liver bile problems. The milky latex obtained from dandelion is used as mosquito repellent. Decoction of leaves is taken by ladies after child birth.
17	*Salvia moorcroftiana*	Shuler	Lamiaceae	Leaves	Herb	Swelling, wounds, cuts and	Leaves are boiled in water to cure inflammation and swelling of throat and mouth. Wounds and cuts are cured by applying fresh leaves externally.
18	*Mentha longifolia*	Jungli pudneh	Lamiaceae	Leaves	Herb	Breath odour, indigestion, Body pain and respiratory	Crushed leaves mixed with salt are eaten to reduce bad smells of breath odour and body pain. Leaves on boiling in water and adding some sugar are used to relive stomach cramps and in digestion.
19	*Anthemis cotula*	Phak Ghass	Asteraceae	Whole Plant	Herb	Piles, sun burns, skin infection.	Extract of whole plant is used For treatment of piles. Plant Paste is used externally for treatment of sun burns. Aerial parts of plant are boiled and water is used for bathing to cure skin infection.
20	*Picrorhiza Kurroa*	Kutki	Scrophulariaceae	Rhizome, root.	Herb	Digestive problems, liver problems, wound healing	Rhizome along with water in solution form is used to cure digestive problems. Poultice is made to treat healing.

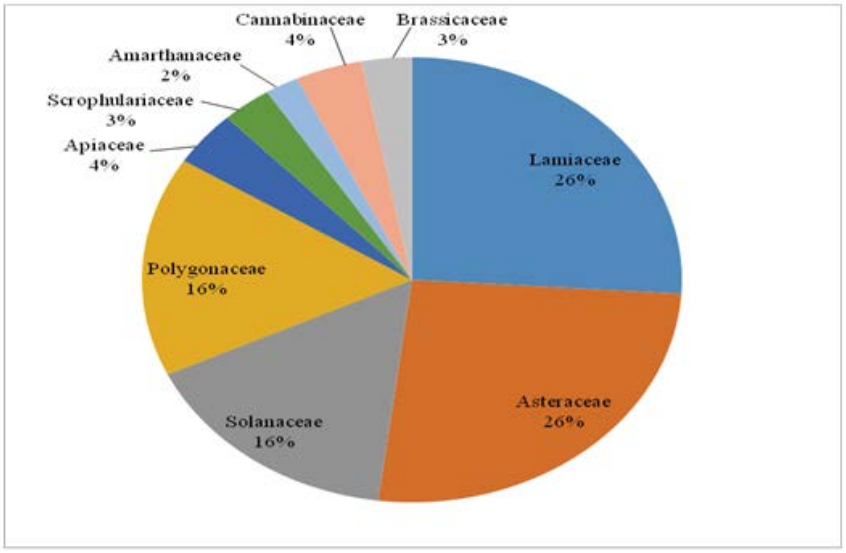

Figure 1: Occurrence of plant families in study area (%).

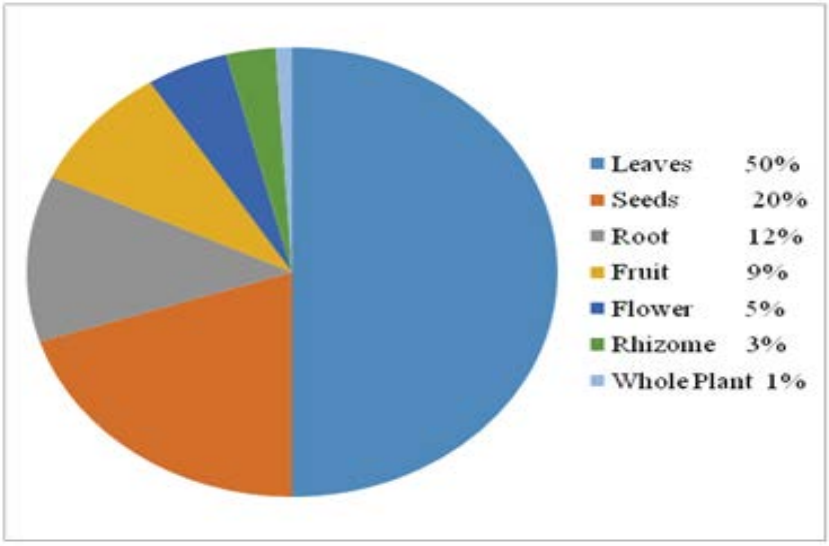

Figure 2: Contribution of different plant pats exploited by tribal community of the study area (%).

species, whole plant was used for treatment purpose like *Anthemis cotula* and in some other plant species, more than one part was used like *Taraxacum officinal*, *Datura stramonium, Solanum nigrum* etc. Majority of health-related problems was cured by using more than one plant species. All the medicinal plant species were collected from their respective wild sources. The survey showed that the selected study area is rich in remedial plants beneficial to cure various health related problems. However, due to increasing rate of bio -piracy, majority of these valuable plant species are near to qualify the category of threatened species. Therefore, an immediate concern is needed for their conservation.

DISCUSSION

Various studies on medicinal plants of Jammu and Kashmir have shown that tribal communities prefer traditional medicine due to their low cost and least side effects and also due to part of their life and culture on which our results are based (Croom et al.,1983; Yousuf and Verma et al., 2012). The selected traditional plant species described in the current study were cross checked with diverse obtainable literature and it was found that many of the plant species were recognized earlier by various workers from various districts of Jammu and Kashmir (Lone and Bhardwaj, 2013; Rajoriya et al., 2016; Jan and Khare et al., 2015). From these earlier studies on traditional medicinal plant species, related results were acquired from south Kashmir Himalayas where the tribal community and some rural people were found talented of curing several health related disorders such as

headache, mouth ulcers, spots, eye dilation, pain, dandruff, high blood pressure, asthma, back pain, high fever, cough, constipation and various skin related infections with the help of these traditional medicinal plant species (Khanday and Singh, 2017). Other districts of Jammu and Kashmir like Bandipora used traditional medicinal plant species through various modes of direction for treating various health related disorders which are also mentioned in results of our present study. In Rajouri and Poonch districts of Jammu and Kashmir, India near about 100 medicinal plant species used in curing 40 non communicable disorders with 138 home remedies reported from tribal community i.e. Bakkerwals and Gujjar and it was also reported that most of these traditional medicinal plant species were harvested for leaves and other aerial parts of plant. Most of these remedies was used for human disorders and herbs were playing major role in field of medicine and decoction was common method of remedy preparation which also powerfully support our results. (Shah et al., 2015). Bangus valley of Kashmir Himalaya, India also witnessed the use of traditional medicinal plants by tribal community for curing various health related disorders (Ishtiyak and Hussain, 2017). (Table 1) shows the representation of some important traditional medicinal plant species which so far have not been described in the available literature. As per the ethno medicinal point of view is concerned the present information is recording the systematic study of traditional medicinal plant species of the area first time. It has also been observed that most of the traditional medicinal plants described in the present work were variously used for curing numerous human related disorders when cross checked with the already available literature.

CONCLUSION

Allopathic medicine, being costly and having various side effects, the use of traditional medicinal plants against various health related disorders perform a powerful and significant role in primary health disorders of tribal community of the study area. As per the survey trip conducted the study area is totally rich in having diversity of important medicinal plants. But due to increased bio-piracy, over grazing, increasing deforestation, increased agricultural demand, changing life style of tribal community as well as lack of knowledge regarding medicinal herb is in the process of degeneration. Keeping the various degrading factors in view, an early need arises for study and certifies the present available information in full description for a broader approval in upcoming future. More and more research, conservation must be given high priority regarding the important medicinal study areas so that the present as well as coming generation gets benefits from these valuable medicinal plant herbs of the study area.

ACKNOWLEDGMENT

Authors are highly thankful to herbal practioners and tribal community of tehsil Tral area of district Pulwama for spending their precious time on sharing valuable traditional information on different herbal medicinal plant species.

REFRENCES

Aumeeruddy Y (1999). Ethnobotany Linkages with Conservation and Development: in Proceeding of first training workshop on Ethnobotany and its applications to conservation NARC, Islamabad. 152-157.

Ahmed SS (2007). Medicinal wild plants from Lahore Islamabad Motor way (M-2), Pakistan. Pak J Bot. 39: 355-375.

Abdul R, Anand VK, Serwer J (2008). Less known wild edible plants used by Gujjar's tribe of District Rajouri, J&K State. International Journal of Botany. 4: 219-224.

Croom EM (1983). Documenting and evaluating herbal remedies. Econ Bot. 37:13-27.

Dar, GH, Veer J, Kachroo P, Buth GM (1984). Ethno botany of Kashmir. 1, J Econ Tax Bot. 5: 668.

Fabricant, DS, Farnsworth NR (2000). Plants used in traditional medicine for drug discovery. Environmental health perspectives (Supplementary), 109: 69-75.

Iqbal C, Agarwal RK, Khan AM (2009). Ethno medicinal study of important plants used in the treatment of hair & boils in District Pulwama of Kashmir. Ann. For. 17: 101-107.

Ishtiyak P, Hussain SA (2017). Traditional use of medicinal plants among tribal communities of Bangus valley,

Kashmir Himalaya, India. Studies on Ethno-Medicine. 11: 318-331.

Jain, SK (1967). Ethno-botany its scope and study. Ind Musc Bull. 2: 3943.

Jan RA, Khare N (2015). Ethno pharmacological Uses of Plants among Tribal and Rural Folks of Shopian Forest Area of Kashmir. Int, J Sci. Res. 4: 232-234.

Kar A, Barthakur SK (2008). Medicinal Plants used against dysentery, diarrhea and cholera by the tribes of erstwhile Kameng district of Arunachal Pradesh, Natural Product Radiance.7: 176-181.

Kapahi BK, Srivastava TN, Sain YK (1993). Traditional medicinal plants of Gurez (Kashmir)-An ethno botanical study. Ancient Science of life. 13: 119-124.

Khanday ZH, Singh S (2017). Indigenous knowledge of medicinal plants used by tribals and rural people of south Kashmir Himalayas. Int, j Curr. Res. 9: 55469-55471.

Khan ZS, Khuroo AA, Dar GH (2004). Ethno botanical survey of Uri, Kashmir Himalaya. Indian j tradit Knowle. 3: 351-357.

Kumar M, Yashpaul, Anand VK (2009). An Ethno Botanical study of medicinal plants used by the locals in Kishtwar, J&K, India. Ethno botanical leaflets.13:1280-56.

Lone PA, Bhardwaj AK (2013). Traditional herbal based disease treatment in some rural areas of Bandipora district of Jammu and Kashmir, India. Asian, J Pharm, Clin. Res. 6: 162-171.

Malik AR, Siddique MA, Sofi PA, Butola JS (201)1. Ethno medicinal Practices and Conservation Status of Medicinal Plants of North Kashmir Himalayas. Res. J Med Plant. 5: 515-530.

Rajoriya CM, Choudhary RG, Shah IA, Rawat, RS, Jat BL (2016). Ethnomedicinal Survey of North Kashmir with Special Reference to Bandipora. Int, J Res. Appl. Sci, Eng, Tech. 4: 95-106.

Shah A, Bharati KA, Ahmad J, Sharma MP (2015). New ethno medicinal claims from Gujjar and Bakerwal tribes of Rajouri and Poonch districts of Jammu and Kashmir, India. Journal of Ethno pharmacology. 166: 119-128.

Singh V (1995). Herbal remedies in traditional medicines of the local valley in Kashmir Himalayas, India, round progress in medicinal plants. Ethno Med Pharmacol. 1:63-71.

Tantray MA, Tariq KA, Mir MM, Bhat MA, Shawl AS (2009). Ethno botanical survey of Shopian, Kashmir (J&K), India. Asian j trad, med. 4: 1-6.

WHO (2002-2005) World Health Organization traditional medicine strategy.

World Health organization (2003). Traditional medicine fact sheet. 134.

Yousuf J, Verma RK, Dar H (2012). Traditional plant-based therapy among rural communities some villages of Baramulla district (Jammu and Kashmir), Journal of Phytology. 4: 46-49.