

ATTITUDE OF PEOPLE TOWARDS USE OF MEDICINAL PLANTS IN DISTRICT BANDIPORA OF KASHMIR VALLEY

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ABSTRACT

Jammu and Kashmir state is divided into 22 districts. Kashmir and Jammu division consists of 10 districts each whereas Ladakh division consists of 2 districts. Bandipora district located on the banks of Wular Lake was chosen for the study. Plants have been traditionally used for hundreds of years throughout world as a source of medicine. Forest resources have played the most significant role in the economy of the state of Jammu and Kashmir. In this paper, we examine the attitude of people towards the use of medicinal plants in district Bandipora of Kashmir valley using a well designed and validated questionnaire to collect the information from a sample of 400 people selected with the help of stratified random sampling technique. The results obtained from our study using standard statistical tools reveals that people under study show positive attitude towards the use of medicinal plants. Further, it is noticed that due to less expenditure and lack of medical facility they are encouraged by elders of the locality to use medicinal plants. It is concluded from our study that there is an urgent need of giving mass awareness on importance of forests and medicinal plants to the people of Kashmir valley. Finally, suggestions were given which definitely help in conservation of the fast eroding precious medicinal plants of the Kashmir valley of Jammu and Kashmir State.

Keywords: Bandipora, Attitude, Medicinal plants, Forests, Kashmir Valley, Statistics.

1. INTRODUCTION

The Jammu and Kashmir state has the total geographical area of 2,22,236 sq km and out of this area 1,20,849 sq km (54.4%) is under the occupation of Pakistan and China. It is reported that 22,230 sq km of land were under forest in the undivided state of Jammu and Kashmir. In this paper, we chose the study area Indian Administered Kashmir which consists of three divisions i.e., Jammu division, Kashmir division and Ladakh division. Kashmir and Jammu divisions consists of 10 districts each whereas Ladakh division consists of 2 districts. In Kashmir valley out of 10 districts Bandipora district located on the banks of Wular Lake, one of the largest freshwater lakes in Asia was chosen for the present study. The district has three tehsils, viz. Gurez, Sonawari and Bandipora. In 2011 census, Bandipora had population of 392,232 of which male and female were 207,680 and 184,552 respectively. We chose this district for our study as the area is rich in medicinal plants and people encourage to use traditional method of treatment for different ailments. Plants have been traditionally used for hundreds of years throughout globe as a source of medicine. Medicinal plants are a valuable natural resource and regarded as potentially safe drugs. They have been playing an important role in alleviating human sufferings by contributing herbal medicines in the primary health care systems of rural and remote areas where more than 70% of the population depends on folklore and traditional systems of medicines. Man since pre-historic times has always made use of plants to alleviate sufferings and diseases affecting humans and their domestic animals. A study (Shreestha & Dhillion, 2003) reveals that 80% of the world population rely on traditional healthcare system. The system of ethno-medicine is safe, therefore, it is encouraged and is low cost therapy for treating various ailments. The reason for the popularity of medicinal plants is due to the high cost and side effects of allopathic medicines. The present study in view of the various studies conducted earlier in the Kashmir valley (e.g., Ara 1992, Nawchoo 1995, Kaul 1997, Bhat 2012, Geelani et al 2017) was conducted in Bandipora district a well known region for the growth of medicinal plants with an aim to know the attitude of people towards use of medicinal plants. Treatment using medicinal plants is less costly as compared to modern medical treatment so poor people especially people living in rural areas prefer this treatment. The various studies conducted in Kashmir valley reveal that people of Kashmir valley show positive attitude towards the use of medicinal plants for the treatment of various diseases (Geelani, et al 2017). Amrik Singh Sudan and Harmeet Kour (2016), Parvaiz et al (2016) in their studies show that there is a need to carry out research on the topic awareness among people on the traditional use of medicinal plants in Kashmir valley. In this paper, an attempt has been made with an objective to assess the use and attitude of people of District Bandipora of Kashmir valley. In the light of the previous literature (Amrik Singh Sudan and Harmeet Kour 2016; Parvaiz et al 2016, Geelani et al, 2017), the plants used as medicine in Kashmir valley are presented with botanical name, local name, family, parts used and uses as under:

List of plants used as ethano-medicine in Kashmir valley

S. No.	Taxon Name	Local Name	Family	Part Used	Ethanomedicine Uses
1	<i>Aconitum heterophyllum</i>	Paewakh	Ranunculaceae	Root	Antidote for snake bites
2	<i>Achillea millefolium</i>	Berguer, Pahal gassesh	Asteraceae	Rhizome, Leaves	Headache, Cough, Tooth ache
3	<i>Arnebia benthamii</i>	KahZaban	Boraginaceae	Rhizome	Common Cold, Cough, Fever, Blood purifier
4	<i>Acorus calamus</i>	Via-gander	Acoraceae	Rhizome	Stomachic, Diarrhea, Cough, Swellings, Joint pain
5	<i>Coriandrum sativum</i>	Danival	Apiaceae	Seeds	Hair fall
6	<i>Artemisia absinthium</i>	Tethwan	Asteraceae	Leaves	Obesity, Diabetes, Liver infection
7	<i>Cotula anthemoids</i>	Bobul	Asteraceae	Roots	Constipation
8	<i>Taraxacum officinale</i>	Hand	Asteraceae	Roots	Back pain, Common cold, Chest infection
9	<i>Trigonella foenum-graecum</i>	Meth	Fabaceae	Seeds	Back Pain
10	<i>Arisaema jacquemontiana</i>	Hapatmakei		Rhizome	Muscular strength and Skin infections
11	<i>Cannabis sativa</i>	Bhang	Cannabaceae	Leaves, seeds and stem	ear-ache, blood purifier, scabies and piles
12	<i>Cuscuta reflexa</i> [4,10]	Kukliporte	Cuscutaceae	Whole Plant	Joint pains, Wound healing
13	<i>Berberis lyceum</i>	Kawdach	Berberidaceae	Roots, Fresh fruit	Falling of Hairs. Indigestion, Constipation
14	<i>Euphorbia helioscopia</i> [40,22,23]	Gurisocho, Gandibooti	Euphorbiaceae	Seeds, roots and latex	Abdominal cramps, cholera and eruptions
15	<i>Euphorbia wallichia</i>	Guri-dud/ Harbi	Euphorbiaceae	Stem, leaves, latex	Skin diseases and Asthma
16	<i>Iris kashmiriana</i>	Mazarmund	Ridaceae	Whole plant	Joint disease

17	<i>Dioscoreadeltoidea</i>	Kraeth	Discoreaceae	Leaf	Ophthalmic infections, Urinary infections
18	<i>Laveterakashmeriana</i>	Sozposh	Malvaceae	Flower	Mumps, Skin irritation in pregnant women
19	<i>Malvasylvestris</i> [4,10,28]	Sotal	Malvaceae	seeds	Cough, Fever, Eye sight
20	<i>Papaver somniferum</i> [4,10,33]	Kashkhas	Papaveraceae	Fruit	Dry Cough, Diarrhea
21	<i>Datura stramonium</i> [4,29,30]	Datur	Solanaceae	Seeds	Rheumatism, Frost bite, Toothache, Tonic
22	<i>Urticadioca</i>	Soi	Urticaceae	Leaves and Roots	Rheumatism
23	<i>Viscum album</i>	Aal	Loranthaceae	Whole plant	Laxative and Fractures
24	<i>Ficuscarica</i>	Anjeer	Moraceae	Stem, milky latex, fruit pulp	Birthrate control Insect bite and Warts
25	<i>Pinusroxburghii</i>	Chad	Pinaceae	Seeds and gums	General weakness after child birth
26	<i>Rosa webbiana</i>	Gulab	Rosaceae	Flowers	Cough and Colds.
27	<i>Atropaacumniata</i>	Chellalubbar	Solanaceae	Roots and leaves	Cough. and Antispasmodic
28	<i>Berginialigulata</i>	Zakhmihayat	Saxifraceae	Leaves and roots	Intestine complaints and Stomach ulcers
29	<i>Viola odorata</i>	Bunufsha	Violaceae	Leaves, seeds and flowers	Respiratory problems
30	<i>Nasturtium officinale</i>	Kulhak	Brasicaceae	Leaf	Stomachic
31	<i>Hyoscyamusniger</i>	Bazarbang	Solanaceae	Seed	Tooth ache
32	<i>Prunellavulgaris</i>	kulwauth	Lamiaceae	flower	Headache, Fever, Muscular pain
33	<i>Salix wallichiana</i>	Danthiveer	Salicaceae	Leaves	Fever, Head ache, Genral body pain
34	<i>Saussureacostus</i>	Kuth	Asteraceae	Rhizome	Joint pain, Back pain, sole Ulcers, Dysentery, Fever, Urinary problems
35	<i>Stellaria media</i>	Losdhi	Caryophyllaceae	Seed	Skin infection, Allergy

36	<i>Viburnum grandiflorum</i>	kulmanch	Caprifoliaceae	Seed	Typhoid, Whooping cough
37	<i>Vitisvinifera</i>	Daech	Vitaceae	Leaves	Skin rashes, Sores, Eruptions
38	<i>Zizyphusmauritiana</i>		Rhamnaceae	Leaves	Skin rashes
39	<i>Cynodondactylon</i>	Daraunm	Poaceae	Whole plant	Common cold
40	<i>Corydalis govianiana</i>	Sangi-harb	Fumariaceae	leaves	Respiratory disorders, Chest infections, Asthama
41	<i>Aconitum voilacium</i>		Ranunculaceae	Root	Antidote for snake bites
42	<i>Androsacerotundifolia</i>	Uzmposh	Primulaceae	Rhizome	Cataract
43	<i>Anemone obtusiloba</i>	Srub	Ranunculaceae	Seeds	Rheumatism
44	<i>Aquilegia fragrans</i>	Daduejaid	Ranunculaceae	Flowers	Indigestion
45	<i>Arctiumlappa</i>	Phughood	Asteraceae	Leaves, root	Skin disease, Boils , Body pain
46	<i>Asparagus officinalis</i>	Parglas	Liliaceae	whole plant, roots	Toothache, Rheumatism, Female infertility
47	<i>Cardamine impatiens</i>	Pahal-laish	Brassicaceae	Whole plant	Asthma, Hay fever
48	<i>Cichoriumintybus</i>	Kazal-Handh	Asteraceae	Root	Rheumatism Sore throat jaundice
49	<i>Fumariaindica</i>	Pugsley, Shahtaur	Fumariaceae	Whole plant	Dyspepsia , Rheumatism
50	<i>Impatiens glandulifera</i>	Trul	Balsaminaceae	Leaves	Skin burn, Joint pain
51	<i>Lamium album</i>	Poshkar	Lamiaceae	Whole plant, leaves flowers	Cough, Metrorrhagia,
52	<i>Nepetaraphanorhiza</i>	Vangogil	Lamiaceae	Whole plant, leaves	Dysentry, Toothache
53	<i>Oxalis corniculata</i>	Tsok-tsen	Oxalidaceae	Whole plant, leaves	Toothache, Convulsions, Bloodpurification, Diarrhoea
54	<i>Rheum emodi</i>	Pambechalan	Polygonaceae	Leaves	Rheumatic pain, Wounds, Dislocated joints, Boils

55	<i>Rubiaccordifolia</i>	Rubes	Rubiaceae	Roots	Stomachache, Jaundice
56	<i>Sambucuswightiana</i>	Hapatfal	Caprifoliaceae	Root, leaves	Chest congestion, Boils
57	<i>Seneciograkiliflorus</i>	Mongol	Asteraceae	Leaves, flowers	Dermatitis, Stomachache
58	<i>Verbascum Thapsus</i>	Wantamook	Scrophulariaceae	Flowers	Cough , Pneumonia
59	<i>Angelica glauca</i>	Choorā	Apiaceae	Root	Vomiting
60	<i>Ajugabracteosa</i>	Kauri booti	Lamiaceae	Stem, leaves	Ulcer, Colic and Jaundice
61	<i>Gentianakurroo</i>	Desibangara	Gentianaceae	Root	Stomachache and Urinary infections
62	<i>Artemisia absinthium</i>	Tethwan	Astraceae	Whole plant	Chronic fever, Gout
63	<i>Gallium aparine</i>	Loothar	Rubiaceae	Leaves	Jaundice, Antiseptic
64	<i>Geumelatum</i>	Shoonkar	Rosaceae	Root	Astringent, Dysentery and Diarrhoea
65	<i>Gnaphalium affine</i>	Janglidodal	Asteraceae	Leaves	Antiperiodic, Antitussive expectorant and Febrifuge
66	<i>Hackelia uncinatum</i>	Neelaan	Boraginaceae	Flowers	Expectorant, Healing wounds, Treating tumors
67	<i>Indigoferaheterantha</i>	Jandi	Leguminosae	Leaves	Internal body disorders
68	<i>Tussilagofarfara</i>	Bann Hulla	Asteraceae	Leaves	Astringent, Emollient, Expectorant, Stimulant and Tonic
69	<i>Betulautilis</i>	Bhuz	Betulaceae	bark	Antiseptic
70	<i>Rhodiolahimalensis</i>	Dandjari	Crassulaceae	bark	Infection of teeth
71	<i>Juniperuscommunis</i>	Bithur	Crassulaceae	Leaves	Rheumatism,
72	<i>Glycyrrhiza glabra</i>	Shanger	Fabaceae	Root	Cough, Hepatitis
73	<i>Morinalongifolia</i>	Kim	Dipsacaceae	Roots	Insecticide
74	<i>Juglansregia</i>	Doan kul	Juglandaceae	Leaf , Bark	Tooth infection, scrofula, Rickets and leucorrhoea
75	<i>Phytolaccaacinoso</i>	Brand	Phytolaccaceae	Root	Narcotic effect, Sedative
76	<i>Abiespindrow</i>	Sal	Pinaceae	bark	Rheumatism

77	<i>Cedrusdeodara</i>	Divdar	Pinaceae	Stem, Bark	Skin rashes and External ulcers
78	<i>Punicagranatum</i>	Daankul	Punicaceae	Seed	Jaundice and Anaemia
79	<i>Sambucuswightiana</i>	Kown	Sambucaceae	roots, leaves and berries	Diuretic, Purgative
80	<i>Picrorhizakurrooa</i>	Kour	Scrophulariaceae	Roots, Rhizome	Fever, Appetizer
81	<i>Podophyllumhexandrum</i>	Banwangun	Berberidaceae	leaves and roots	Skin diseases, Gastric problems
82	<i>Amaranthus caudatus</i>	Leesa	Amaranthaceae	Whole plant	Expectorant, Fever
83	<i>Cydonia oblonga Mill</i>	Bumchuont	Rosaceae	Seed, Fruit, Flower	Constipation, Birth problems, Jaundice, Blood purifier, General body weakness, Asthma

2. MATERIALS AND METHODS

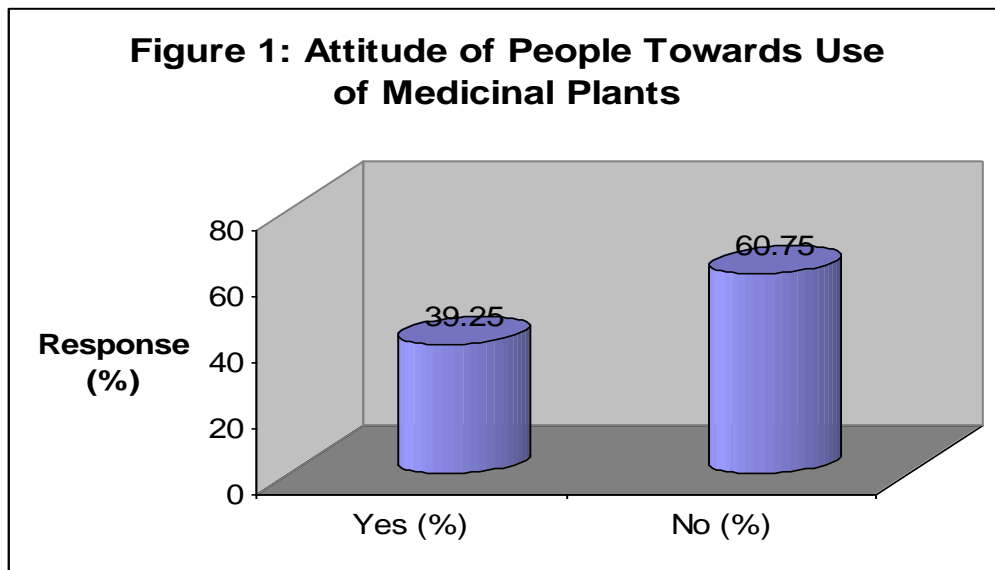
A well-designed questionnaire was used to collect the information from a sample of 400 people selected randomly from district Bandipora of Kashmir valley using stratified random. The respondents were explained the purpose of the study to get their consent. The questionnaire was designed to assess the attitude of people towards the use of medicinal plants during illness. Methods used to document the traditional knowledge included interviews and discussions with local knowledgeable persons of the area, herbal healers called “Bhoris” and Tribals (Gujjars and Bakerwals). The data collected from the study population was tabulated and analyzed statistically.

3. RESULTS AND DISCUSSION

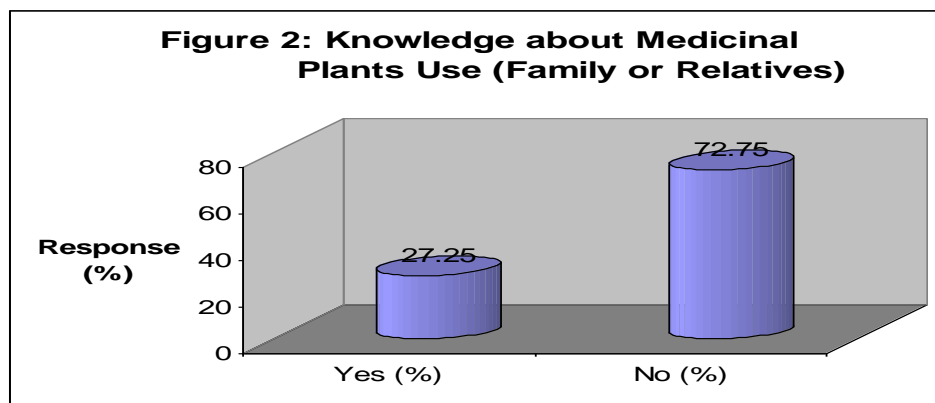
Treatment for the various ailments based on traditional plant medicines is considered the oldest form of healthcare known to mankind on this earth. Life and diseases go together, where there is a life, diseases are bound to exist. In the recent years, there is a resurgence of public interest in medicinal plants and their role in primary health care (Haq, 1983). Alternative medicine using herbal mixtures is becoming more popular as these are believed to be safer and natural. However, it is noticed that there still exists an immense gap between the local traditional knowledge and modern medical sciences. According to WHO, about three quarters of the world

population relies upon traditional medicines made from herbs for their health care. At a global level use of traditional medicine is increasingly and becoming essential part of the medicinal curriculum. Thus there is a huge potential of medicinal plants in health care not only in remote areas of developing countries but also in the industrialized world. During our survey of Bandipora district, we observe as under:

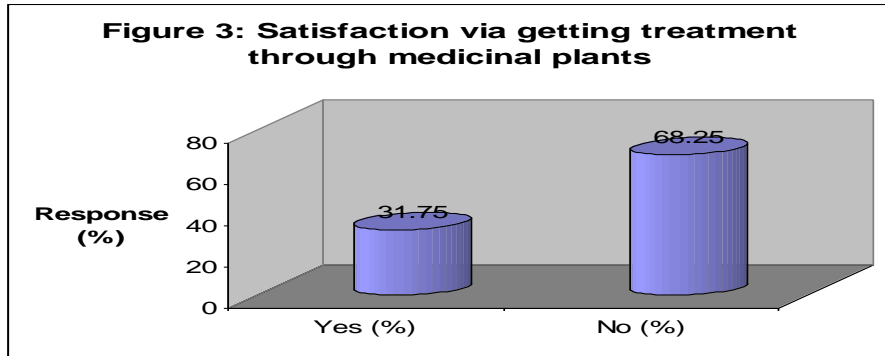
The data presented in Figure 1 reveals that 39.25% respondents revealed that they use medicinal plants for the treatment of different ailments.



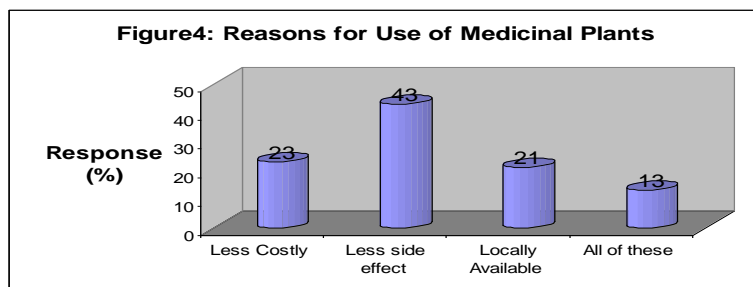
The data shown in Figure 2, reveals that 27.25% of respondents told that they have knowledge via any family member or relative about the use and benefits of using medicinal plants for the treatment of various diseases.



The data shown in Figure 3, reveals that 31.75% of respondents told that they are satisfied by getting treatment of various diseases using medicinal plants. The respondents believe that medicinal plants are not harmful for the health and are less expensive.

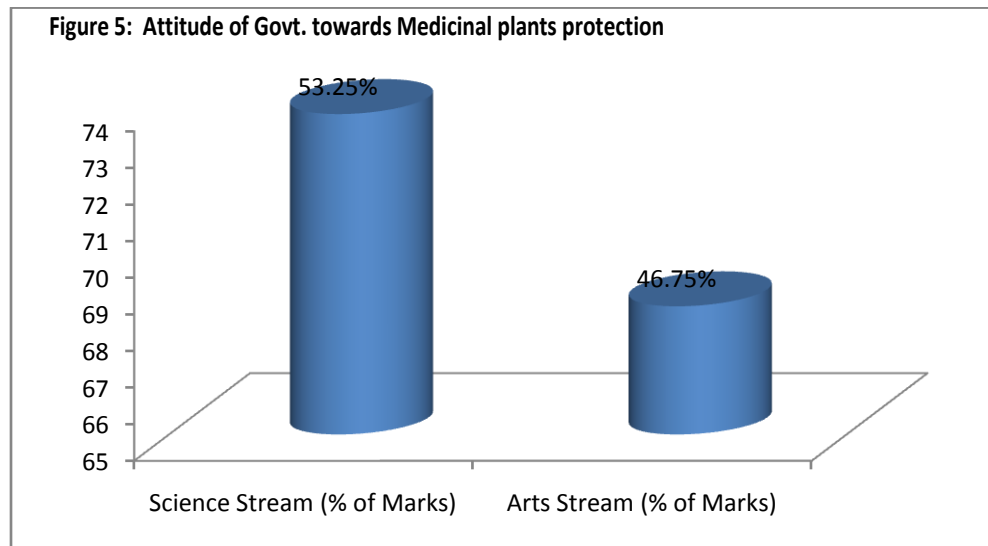


The data presented in Figure 4, reveals that majority of the respondents (43%) report that they are using medicinal plants for the treatment of various ailments as they have less side effects, followed 23% respondents who believe that they are less costly (23%) and 21% respondents are in the opinion that they are easily locally available.



The data shown in Figure 5, reveals that 53.25% of the respondents are in the opinion that Govt is taking adequate care for the protection of medicinal plants but 46.75 of respondents are not satisfied with the efforts of

Government taken for the protection of medicinal plants. They report that illegal encroachment to forest areas and shrinkage of forest land in the name of economic development is the main problem.



4. CONCLUSION

The studies conducted showed that use of herbal medicine showed increasing trend. Keeping in view the high cost and side effects of allopathic medicine, the use of medicinal plants against different ailments plays a significant role in meeting the primary health care needs of the rural communities of Bandipora district. This district is fairly rich not only in medicinal plant species but has also deeply rooted traditional knowledge of these medicinal plants among the people. An immensely valuable database could be the outcome of this knowledge which in turn could provide a baseline information for the commercial exploitation of bioresources. Besides, the information could prove a fruitful source for pharmacologists, phytochemists, botanists and to those interested in the development of alternative therapies. Utilization of indigenous drug resources will increase the local industry on one hand and minimize the expenditure incurred on the purchase of foreign drugs on the other. In present study women showed positive attitude towards the use of medicinal plants. During survey herbal healers called “Bhoris” and Tribals (Gujjars and Bakerwals) were also consulted to get the useful information related to our topic. Research and conservation efforts should be focused on these resources of the area so that in future the coming generation could benefit from these precious plants that are a real gift to mankind. Besides, an understanding of the market potential of medicinal plants could provide rural farmers with the incentive for the cultivation of high demand species.



(Field survey, Bandipora 2017-18)

SUGGESTION(S)

- (i) The cultivation of medicinal plants should be encouraged in district Bandipora district of Kashmir valley
- (ii) Local people, teachers, religious leaders must be involved in awareness program
- (iii) Traditional healers using medicinal plants should be encouraged which will help in conservation of the precious medicinal plants of district Bandipora of Kashmir valley.

REFERENCES

1. Amrik Singh Sudan and Harmeet Kour, Role of Medicinal Plants In Jammu and Kashmir State, International Journal of Higher Education Research & Development, Volume 01, Issue 05, October 2016.
2. Ara, S. and Naqshi, A. R., Ethnobotanical Studies in Gurez valley, Journal of Economic and Taxonomic Botany, 17(3), 185, (1992).
3. Bhat, T. A., Nigam, G. and Majaz, M., Study of Some medicinal plants of the Shopian District, Kashmir (India) with emphasis on their traditional use by Gujjar and Bakerwal tribes, Asian Journal of Pharmaceutical and Clinical Research, 5(2), 94-98, (2012).
4. Cochran WG (1977). Sampling Techniques, 3rd edition. New York: John Wiley & Sons.

5. Haq, I., Medicinal Plants-Report of Committee on Economic and Therapeutic importance of Medicinal Plants, Ministry of Health. Government of Pakistan. Hamdard Foundation Press; 1–13, (1983).
6. Kaul, M. K., Medicinal plants of Kashmir and Ladakh (Temperate and Cold Arid Himalaya), Indus Publishing Company, New Delhi, (1997).
7. Nawchoo, I. A. and Kachroo, P., Flora of Pulwama (Kashmir). Bishen Singh and Mahendra Pal Singh, Dehradun, (1995). Development Research Center, 14-18, (1998).
8. Parvaiz Ahmad Lone, Ajay Kumar Bhardwaj, Fayaz Ahmed Bahar and Kunwar Wajahat Shah, A rare study on indigenous uses of medicinal plant home-made remedies for the treatment of chilblains in Bandipora, Kashmir, India, *Annals of Phytomedicine* 5(1): 135-141, 2016
9. Shreestha P.M. and Dhillion S.S. (2003): Medicinal plant diversity and use in the highlands of Dolakha district, Nepal, *J.Ethnopharmacol*, 86(1), pp. 81-96.
10. Syed Naseem Zaffar Gilani¹, Bilal Ahmad Bhat, Fareed Ahmad Rafiqi, Shayesta Rahi, Nusrat, Samira Khan and Intizar Ahmad (2017): Awareness among university students on forests and traditional use of medicinal plants in kashmir valley: A sample survey, *International Journal of Innovative Research and Review*, Vol. 5 (2), pp.11-27