

Utilization of Psychomedicinal Plants in Udhampur District of Jammu and Kashmir

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ABSTRACT

Psychomedicinal plants have been enormously used for traditional and commercial necessities in the Udhampur District of Jammu and Kashmir. The distinct household remedies were made and used for the treatment of neurological disorders and mental ailments such as anxiety, dementia, depression, epilepsy, headache, insomnia, improving cognition power, intelligence, migraine and snakebite. Since ancient times, these plants are being used in worshipping supernatural powers, marriages, prayers, exorcism, rituals and funerals. Sorcery practices like necromancy and voodoo, use some selected psychomedicinal plants for expelling the ghost influence out of an affected person and getting rid of negative energies by chanting mantras. In this communication, the authors collected information on different psychomedicinal plants used traditionally by the local people in Udhampur district, Jammu and Kashmir. An intensive and extensive field survey was conducted in 2021-2022, exploring such psychomedicinal plants. The tribal people, shepherds, medicinal practitioners, vaidyas, old folks and also other local residents provided useful information. This information was verified with the help of relevant literature. Collected plant species were correctly recognized and authenticated by regional herbaria. A total of 43 plant species from 40 distinct genera and 33 different families were identified. For each plant species, its scientific name, family, vernacular name, habit, part used and medicinal uses were described. The percentage of herbs were 60 per cent, shrubs were 14 per cent and trees were 26 per cent. Poaceae was the dominant family with five plant species. Entire natural resources and relevant indigenous knowledge are valuable and should be secured for the native people of this region where they don't have modern facilities for healthcare. Community knowledge should be raised through various awareness programmes about mental health issues. Further, phytochemical and pharmacological analysis needs to be done to examine the bioactive compounds responsible for treating neuro-disorders.

Keywords: Ethnobotany, Neuro-disorders, Mental health, Medicinal plants

THE word 'medicine' in Greek means 'cure or heal'. The medicinal plants used to treat the ailments of the psyche of living beings are known as psychomedicinal plants. In India, since the Vedic age period, psychomedicinal plants are used to cure the ailments of the mind through traditional medicinal practitioners, such as Hakims and Vaidyas, who used medicinal herbs for the treatment of mental illnesses. These herbs are also used for performing traditional

ceremonies, exorcisms, sorcery practices, hymns, making amulets, rituals, religious rites *etc.* (Badoni, 1987; Tiwari *et al.*, 2010; Anthwal *et al.*, 2010; Negi, 2010; Sardiana and Dinata, 2010; Mohanty *et al.*, 2011; Mathur and Joshi, 2013; Kandari *et al.*, 2014; Sharma *et al.*, 2014 and Bamin and Gajurel, 2015).

Jammu and Kashmir has peculiar topography and is wealthy in vegetation, peculiar traditions and customs.

It is famous for its aesthetic beauty and natural charms throughout the globe. Its high snow-covered mountains and dense forests attract tourists. A lot of work has been done on ethnobotany and ethnomedicine in Jammu and Kashmir (Aggarwal and Kotwal, 2009; Bhellum and Singh, 2012; Rashid, 2013; Bhardwaj *et al.*, 2019 and Pant and Wani, 2020) but studies on psychomedicinal plants were few numbered. District Udhampur, placed in the Jammu is hilly terrain and a vegetational-rich region comprising of different altitudinal zones *i.e.*, tropical, subtropical, temperate and alpine zones. The local residents of the district are still relying on their traditional medical knowledge and religious practices to get rid of mental health-related problems due to the remoteness of the area from modern healthcare facilities. Dangwal *et al.*, 2021 provided

ethnomedicinal uses of 27 plants used traditionally for curing mental illnesses in the Udhampur district.

The documentation of such valuable traditional knowledge is important because of its gradual disappearance from our society. In this communication, an effort has been made to gather information on distinct uses of psychomedicinal plants in Udhampur district of Jammu and Kashmir. Plants utilized directly as medicine and those used in religious and spiritual practices were documented in this study.

STUDY AREA

The research was carried out in the district Udhampur of Jammu and Kashmir. The Shivalik range of the Himalayas encompasses the Udhampur district, which

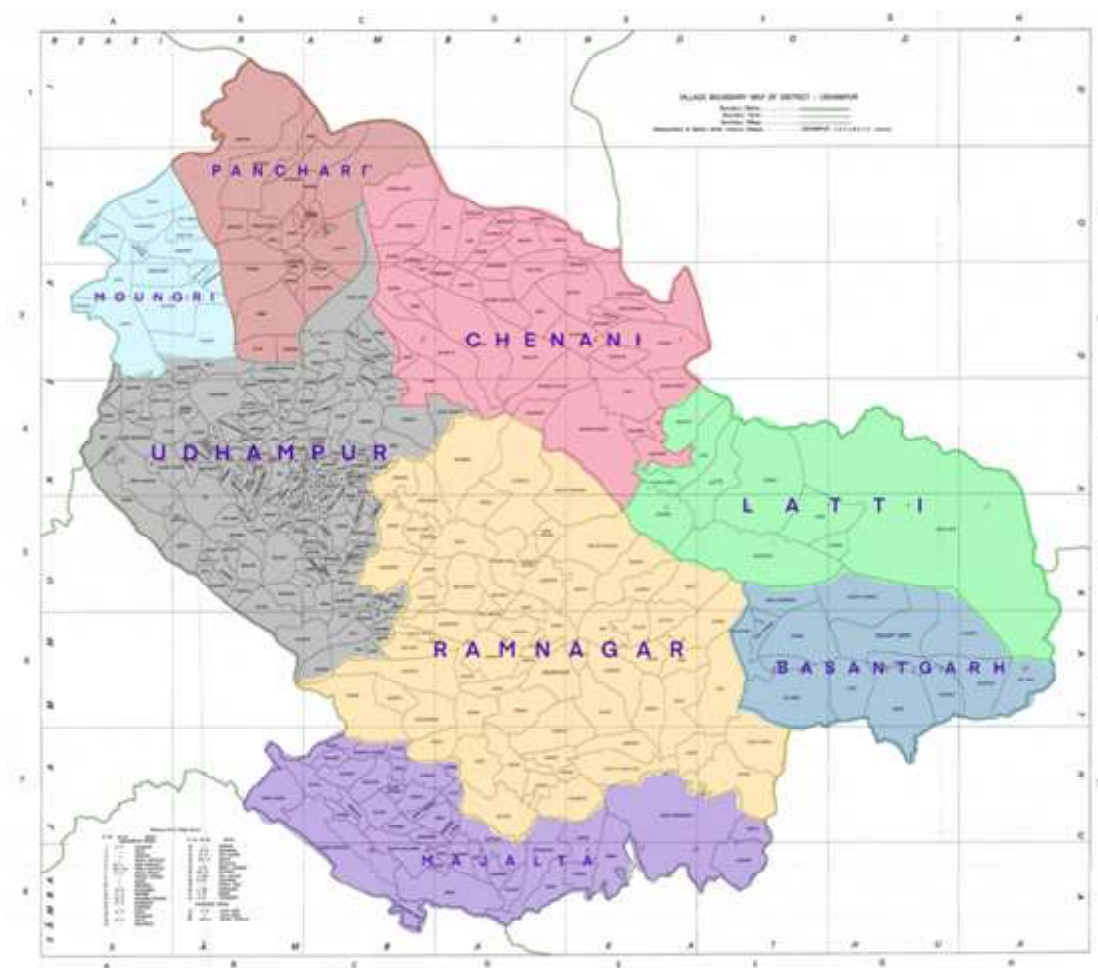


Fig. 1 : Map showing the tehsils of Udhampur district, Jammu and Kashmir (<https://udhampur.nic.in/map-of-district>)

is primarily mountainous. It is situated in the state of Jammu and Kashmir South-eastern region and is bordered by the districts of Rajouri in the West, Anantnag in the North, Doda in the North-East, Kathua in the South-East and Jammu in the South-West. (Murtaza *et al.*, 2019). Geographical coordinates range between 32°34' N to 39° 30' N latitudes and 74°16' E to 75°38' longitudes and encompasses an area of 4,550 square kilometres. Its altitude range varies between 600 to 3000 meters above sea level. During the winter, the district's upper reaches are blanketed in snow and temperature vary between 0° C to 35° C in the snowfall zone. In summer hot and humid weather, temperature ranges from 23° C to 42° C. Administratively the district is divided into 4 subdivisions, 8 tehsils, 17 blocks and 357 settlements. The distinct sampling sites included Basant Garh, Chowki, Beernoo, Dalsar, Dhiari, Dudu, Jandrore, Nalla Malion and Kutwalt (<https://udhampur.nic.in/map-of-district>).

METHODOLOGY

The present work has been done by making several visits to the study area during the time period of a year, *i.e.*, from 2021 to 2022. An intensive and extensive field survey was conducted and meetings with indigenous people of different villages were carried out during different seasons and months. The present communication is mainly concentrated on interviews and discussions with well-knowledgeable local people, Vaidyas, Hakims, shepherds, local inhabitants, aged peoples, nomadic, religious people, peasants and housewives with respect to medicinal plants used traditionally to cure mental illnesses or that used for religious rituals and sorcery practices. The point count method was used during the survey; time data was collected by direct count, dead specimens and some photographic records had been collected. The collected information on medicinal plants includes botanical names, families, vernacular names, habits, plant parts used and their medicinal uses. The relevant floras, like 'The Flora of Jammu and Kashmir' (Singh *et al.*, 2002), 'Flora of the District Garhwal, North West Himalaya' (Gaur, 1999), 'The Flora of British India' (Hooker, 1897), *etc.*, were consulted for verification.

RESULTS AND DISCUSSION

A total of 43 psychomedicinal plant species belonging to 40 genera and 33 families had been identified, out of which 31 species were dicotyledons and 12 monocotyledons. These species are enlisted alphabetically in (Table 1, 2 and 3) along with relevant information like botanical name, family common name, part used, uses, *etc.*. The most dominant family was Poaceae (monocotyledon) having 5 plant species, followed by Moraceae (dicotyledon) and Rosaceae (dicotyledon) with 3 plant species each. Other most dominant families were Acoraceae (2), Alliaceae (2) and Asteraceae (2). Least dominant plant families were Amaranthaceae, Acanthaceae, Asparagaceae, Apiaceae, Berberidaceae, Betulaceae, Nyctaginaceae, Bombacaceae, Cannabaceae, Zingiberaceae, Convolvulaceae, Phyllanthaceae, Geraniaceae, Euphorbiaceae, Musaceae, Solanaceae, Lamiaceae, Piperaceae, Santalaceae, Pedaliaceae, Urticaceae, Scrophulariaceae, Fabaceae, Verbenaceae, Rutaceae and Rhamnaceae. Among the total recorded species, 43 shrubs (60%), 19 were trees (26%) and 11 were herbs (14%) (Fig. 4). In (Fig. 5) the local priest performing exorcism in various steps by activating psychomedicinal plants to get rid off negative energies from ghostly effected humans body. Psychomedicinal plants were used in the treatment of epilepsy, anorexia, headache, hypertension, dementia and depression. Employment of these plants were also observed in practicing religious rites and rituals, worshipping supernatural powers, sorcery, exorcism, *etc.*. Local people believe in 'mantra' and 'tantra' practices to ward off evil eyes, expel ghost influence and sway away negative energy. They have faith in these religious and spiritual rituals to treat various mental health-related problems (Table 1,2,3). The method of preparation documented were *i.e.*, dried rhizome, decoction, paste, juice and dried powder. The common plant parts used were rhizome, bulb, tuber, bark, root, stem, leaves, flower, flower bud, fruit, seed and whole plant. (Table 1,2 and 3).

TABLE 1
List of herbs used as psychomedicinal plants in Udhampur district

Botanical Name	Family	Common Name	Parts Used	Uses
<i>Acorus calamus</i> L.	Acoraceae	Barian, Sweet Flag	Rhizome	180 gm of dried rhizome powder mixed with 2 to 3 teaspoons of honey is highly effective to cure epilepsy and anxiety.
<i>Achyranthes aspera</i> L.	Amaranthaceae	Puthkanda, Prickles Chaff	Root, Stem, Seed	Decoction of root is given to cattle to treat anorexia. The stem is used in exorcism. The dried powder of seeds is used for inhalation to cure headaches and migraine.
<i>Allium cepa</i> L.	Alliaceae	Pyaz, Onion	Bulb, Seeds	Decoction of bulb mixed with seeds of <i>Coriandrum sativum</i> helps to improve intelligence. Seeds are used to prepare tea for curing insomnia.
<i>Allium sativum</i> L.	Alliaceae	Thom, Garlic	Bulb	Decoction of bulbs and leaves is used to cure hysteria and epilepsy.
<i>Arisaema flavum</i> (Forsk.) Schott.	Araceae	Saap-Kukdi, Yellow Cobra Lily	Tuber	Paste of tuber is used in the preparation of medicine for snake bite.
<i>Asparagus racemosus</i> Willd.	Asparagaceae	Sainsmaya, Shatavar	Whole plant	The entire plant is used to remove negative energies through sorcery and hymn practices.
<i>Centella asiatica</i> (Urb L.)	Apiaceae	Brahmi, Indian Penny Wort	Leaves	Decoction of leaves is used to improve cognition power and relieve anxiety. The paste of fresh leaves is applied to the forehead to get rid of headache.
<i>Bambusa arundinacea</i> Willd.	Poaceae	Chmathi, Thorny Bamboo	Root, Stem	Decoction of root is taken orally, releases kidney stones. The stem is used in funeral rites.
<i>Boerhavia diffusa</i> L.	Nyctaginaceae	Itt-sitt, Hog-Weed	Whole plant, Root	The entire plant is utilized for sorcery and ritual practices.
<i>Cannabis sativa</i> L.	Cannabaceae	Pang, True Hemp	Leaves	Decoction of leaves is used for the ailment of epilepsy, sleep disorders depression and anxiety.
<i>Curcuma longa</i> L.	Zingiberaceae	Aldhar, Turmeric	Rhizome	Rhizome powder is used in religious, rituals and skin care.
<i>Cuscuta reflexa</i> Roxb.	Convolvulaceae	Aandal, Dodder	Whole plant	Exorcism, sorcery and rituals involve the usage of this plant.

Botanical Name	Family	Common Name	Parts Used	Uses
<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Khabbal, Bermuda Grass	Whole plant	The whole plant is used for worshipping of Lord Ganesha and a clump of the shoot is used in the pooja ceremony.
<i>Geranium wallichianum</i> D. Don ex Sweet.	Geraniaceae	Laljari, Robert Geranium	Roots	Roots are used for exorcism.
<i>Hordeum vulgare</i> L.	Poaceae	Jou, Barley	Seed	Seeds are used for worship of supernatural powers.
<i>Musa paradisiaca</i> L.	Musaceae	Kela, Banana	Leaves, Fruit	The leaves are generally used to cure insanity. Leaves are generally used to drive away evil spirits (ghosts) from the houses. Fruit is directly used as remedy to remove hypertension.
<i>Nicotiana tabacum</i> L.	Solanaceae	Tmbaku, Wild Tobacco	Leaves	Tobacco leaves are smoked in sorcery practices.
<i>Oryza sativa</i> L.	Poaceae	Dhaan, Paddy	Seeds	During exorcism practice, rice grains mixed with urad dal are revolved over the head of the possessed person and then thrown in all four directions.
<i>Ocimum tenuiflorum</i> L.	Lamiaceae	Tulsi, Holy Basil	Whole plant, Leaves	The whole plant is used daily for morning Hindu prayers. Leaves are directly used in several religious ceremonies.
<i>Piper nigrum</i> L.	Piperaceae	Mirchi, Black pepper	Seeds	Heat the seeds, make a powder and mix with 1-2 teaspoons of honey, take it orally for dementia and sweetness of voice.
<i>Sesamum orientale</i> L.	Pedaliaceae	Till, Sesame	Seed oil	Seed oil is widely used in worshipping super natural powers.
<i>Tagetes erecta</i> L.	Asteraceae	Gutti, Marigold	Flower	It is used for offering the prayer to the local God for happiness and inner mental peace.
<i>Triticum aestivum</i> L.	Poaceae	Gehun, Wheat	Seeds	Grains are used in exorcism & sorcery practices.
<i>Urtica dioica</i> L.	Urticaceae	Jujuli, Stinging Nettle	Twigs, leaves	Twigs are used in exorcism. Leaves are used for cooking to cure hypertension and joint pain.
<i>Verbascum thapsus</i> L.	Scrophulariaceae	Desitmaku, Cow's Lungwort	Leaves	The leaves are used by ritual performers as a cloud of smoke to drive away evil spirits (ghosts) from the houses.
<i>Vigna mungo</i> (L.) Hepper	Fabaceae	Urd, Black Gram	Seeds	Seeds were mixed with rice grains and revolved overhead seven times of affected person to drive away evil spirits.

TABLE 2
List of shrubs used as psycho-medicinal plants in Udhampur district

Botanical Name	Family	Common Name	Parts Used	Uses
<i>Adhatoda zeylanica</i> Medikus.	Acanthaceae	Brenker, Malabar Nut	Flower, Leaves	The leaves, heated and tied-on joints, fade away the pain. The honey is blended with dried powder of flower administered orally to treat epilepsy.
<i>Artemisia maritima</i> L.	Asteraceae	Moojin, Sea Wormwood	Whole plant	Plants are considered sacred and through religious practices used in insanity.
<i>Berberis lycium</i> Royle.	Berberidaceae	Kamblu, Barberry	Stem, Root	Rituals are performed with the stem. The root decoction is administered orally for the treatment of internal wounds.
<i>Rosa macrophylla</i> Lindl.	Rosaceae	Gulab, Wild Rose	Twigs, Flower	Twigs are directly used for exorcism. The flower is used for fragrance.
<i>Rosa brunonii</i> Lindl.	Rosaceae	Karir, Himalayan Musk Rose	Stem with leaves	Stem with leaves is used for exorcism. It is highly used in rituals.
<i>Vitex negundo</i> L.	Verbenaceae	Bana, Chinese Chaste Tree	Twigs	The twigs are used in exorcism practices.
<i>Ziziphus mauritiana</i> Lam.	Rhamnaceae	Ber, Jujube	Fruits	Fruits are directly eaten to relieve stress and anxiety. In marriages, bride and groom revolve around the plants seven times. Delicious rice cooked and mixed with pulses (klichdi) and cooked roti of wheat flour (Dhropd) is given to crows for happiness of local deity (kuldevta).

TABLE 3
List of trees used as psychomedicinal plants in Udhampur district

Botanical Name	Family	Common Name	Parts Used	Uses
<i>Betula utilis</i> D. Don	Betulaceae	Bhojpatra, Indian Birch	Bark	The bark is used as paper for writing religious texts and mantras and also used for making amulets for children to prevent evil energies.
<i>Bombax ceiba</i> L.	Bombacaceae	Simbal, Silk Cotton Tree	Bark & Flower bud	Bark decoction is orally taken to fight against fever. The bud of the flower and the calyx of not fully opened flowers are cooked and eaten as vegetable.
<i>Phyllanthus emblica</i> L.	Phyllanthaceae	Ambla, Indian Gooseberry	Fruit pulp	Fruit pulp is applied to the forehead to treat headaches and dizziness.
<i>Ficus religiosa</i> L.	Moraceae	Barh, Peepal	Leaves, Wood	Leaves and wood are used during worship of various supernatural powers to reduce its effect. It is considered a sacred plant.
<i>Ficus auriculata</i> Lour.	Moraceae	Trimbal, Elephant Ear Fig Tree	Whole plant, Leaves	The entire plant is used in religious rites. Leaves are directly used in rituals.
<i>Ficus benghalensis</i> L.	Moraceae	Borh, Banyan Tree	Whole plant	The whole plant is used for religious rituals and it is considered a sacred tree.
<i>Mallotus philippensis</i> (Lam.) Muell. Euphorbiaceae	Plu, Monkey Face Tree	Flower, Leaves	Flower, Leaves	Flowers are used for rituals and marriages. Leaves are directly used in marriage often during the "kanyadaan" ceremony.
<i>Prunus cerasoides</i> D. Don.	Rosaceae	Batarn, Himalayan Wild Cherry	Bark	An amulet is made from bark to prevent harm from bad energies.
<i>Santalum album</i> L.	Santalaceae	Chandan, East Indian Sandalwood	Wood	The wood is often used in rituals and marriages.
<i>Zanthoxylum armatum</i> DC.	Rutaceae	Timbru, Winged Prickly Ash	Wood	The wood is used for exorcism.

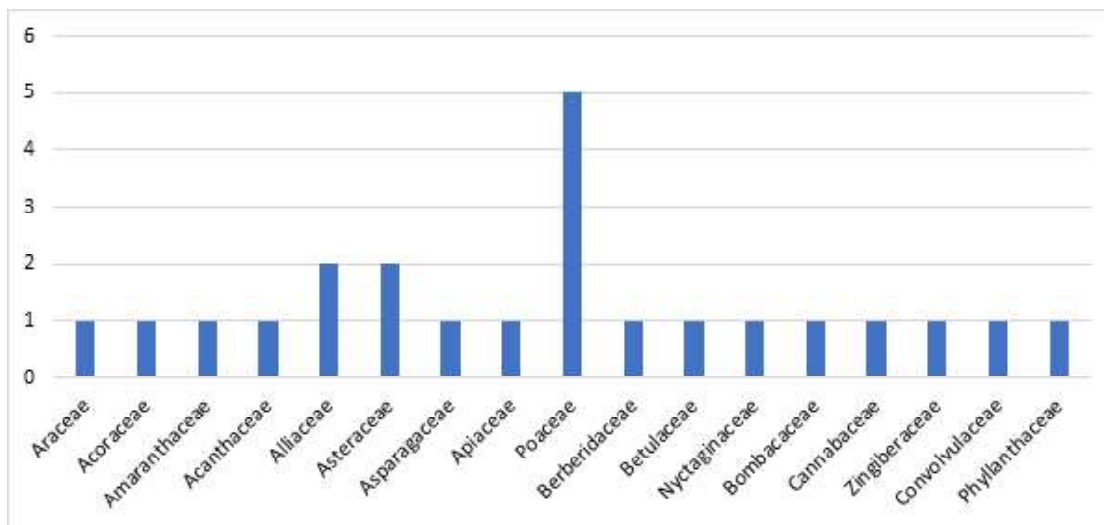


Fig. 2 : Graph chart showing the number of psychomedicinal plant species in each family

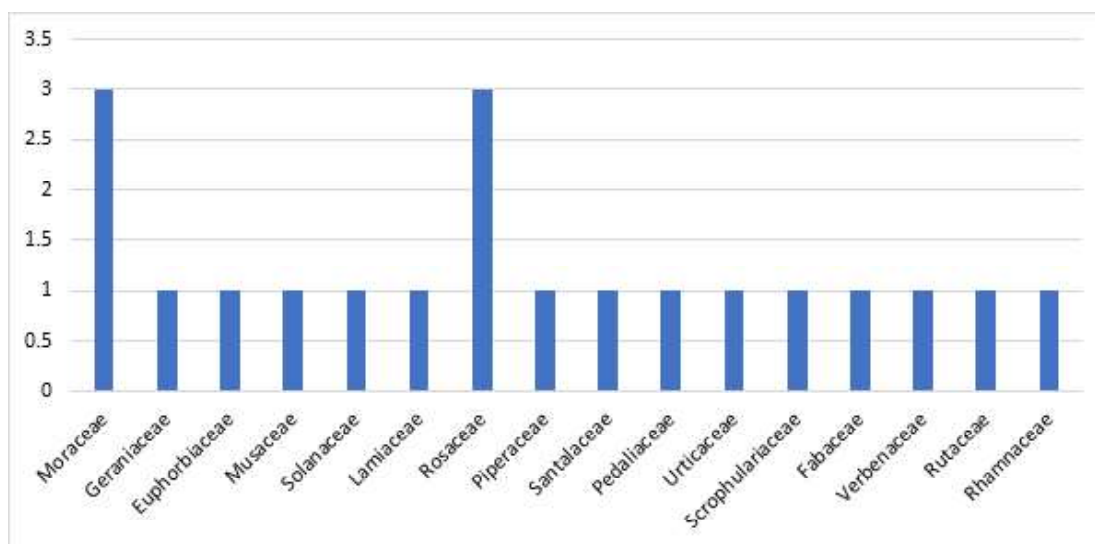


Fig. 3 : Graph chart showing the number of psychomedicinal plant species in each family

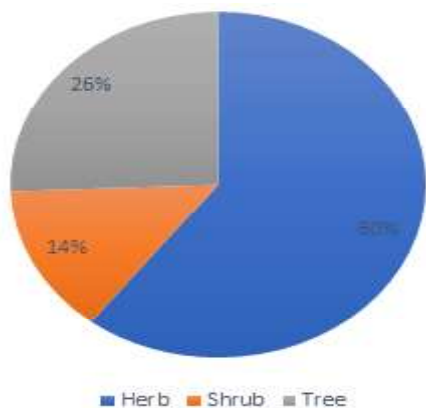


Fig. 4 : Pie chart showing the percentage of herbs, shrubs and trees

In the current research, the authors conclude that different psychomedicinal plants are traditionally used by Vaidyas, Hakims, tribes, shepherds, old age men and women for the purpose of treating different mental ailments in the study area. Necromancer and Voodooists used these psychomedicinal plants for treating various mental health problems through sorcery. Local inhabitants used these plants for worshipping supernatural powers and in various religious practices. These psychomedicinal plants have a huge scope for commercial purposes and may contribute to generating employment for local people.



Fig. 5 : Photographs show a priest performing exorcism using psychomedicinal plants

The traditional knowledge that is passed from generation to generation among the local inhabitants needs to be maintained, secured and protected. Further research on local informants is required to assess the traditional knowledge and its status among different generations. Community knowledge should be raised through various awareness programmes about mental health issues. Further, phytochemical and pharmacological analysis needs to be done to examine the bioactive compounds responsible for treating neuro-disorders.

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