

A REVIEW ON THERAPEUTIC USES OF FLOWERS AS DEPICTED IN CLASSICAL TEXTS OF AYURVEDA AND SIDDHA

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Abstract: An attempt has been made to present the therapeutic uses of flowers that are used in Ayurveda and Siddha system of Medicine. Separate chapters have been dedicated to flowers in the ancient texts like *Bhavaprakasha Nighantu*. Likewise *Siddha Vaidya* has described the therapeutic utility of medicinal flowers. It is interesting to note that out of 38 medicinal flowers tabulated, about 25 flowers have some similar indications in Ayurveda and Siddha system of medicine. In some instances, the properties of the flower may differ from the properties of other parts of the plant, for example, *Arka* {*Calotropis gigantea* (Linn.) R. Br.} *Pushpa* (flower) is *madhura* (sweet in taste) *tikta* (bitter) and is used as *Kustagna*, *Krimigna* (anthelmintic) whereas *Arka ksheera* (latex) is *tikta* (Bitter) and hot in potency. Similarly, *Nirgundi* (*Vitex negundo* Linn.) is a tree, whose other parts have *ushna veerya* (hot in potency). However, the *pushpa* is *sheeta veerya* (cold potency). Some special properties have been attributed to certain flowers like anti cancerous property is possessed by *Vinca rosea* (*Sadapushpi*) flower. *Punica granatum* L. (*Dadima*), flower has styptic properties, hence used in the form of juice for epistaxis (condition characterized by bleeding through the nostrils (*Rakta pitta*), similarly *Justicia adhatoda* L. (*Vasa*) flowers have *Kashaya* (astringent) *Kasahara* (antitussive) properties. The most popular flower buds of Lavanga {*Syzygium aromaticum* (L.) Merr. & Perry} (forms the clove, which has been used as a spice as well the clove oil being used in dental problems. The most popular narcotic "Papaverine" is obtained from the flowers of *Ahiphena* (*Papaver somniferum* L.) Thus, flowers have got a distinct place in the plant kingdom as well in the field of Ayurveda and Siddha system of Medicine. Thus, the present review of medicinal flowers not only provides recognition to this knowledge, but also helps in its conservation *vis-a-vis* providing pharmacological leads for the betterment of human society.

Keywords: Ayurveda, Medicinal Flowers, Therapeutic utility, Ayurveda, Siddha, Review, Traditional Medicine.

Introduction

Flowers are an integral part of our lives and are associated with the most poignant moments of human experiences like celebrations or grieving. (Roberts, 2000). They are used not just for their aesthetic sense but also for nutritive and medicinal properties also. Literature survey reveals that there are few research and review papers related to flowers like "Health & Nutrition and their use as ornamentals (Sharma Yashaswini 2011). Introduction to *Pushpa Ayurveda* (Varadhan, 1985) and Flower Power (Anagha B. Kothadia, 2011). Though there are numerous review articles about the medicinal plants, only few research papers have focused on particular parts of the medicinal plants.

Research papers published hitherto have emphasized on pharmacological activities of medicinal flowers and curative aspects concerning

the modern medical system. However, there are few papers focusing on the therapeutic value of flowers in Ayurveda and Siddha medical systems.

Usually, the parts used for medicinal purposes are roots, fruits stem bark, Rhizomes, seeds, flowers in the decreasing order. For instance, the search in the *Ayurvedic* Formulary of India reveals 1477 incidences for Root, 399 incidences of fruit, 481 instances of stem bark, 373 instances of seed and 42 instances of flowers. Many of the indigenous plants with "flowers" as medicinally useful part, have still remained underexploited, due to lack of awareness of their potential uses. Hence the present study intends to portray the significance of medicinal flowers in curing ailments.

Out of the total 4, 22,000 flowering plants reported from the world, more than 50,000 plants are used for medicinal purposes. In India, more than

43% of the total flowering plants are reported to be of medicinal importance (Sanjay *et al.*, 2006). Utilization of plants for medicinal purposes in India has been documented in ancient Indian literature. Extensive information is available about flowers from the Indian literature like *Vrukshayurveda*. In Indian traditional systems of Medicine *Ayurveda* and *Siddha* system (prevalent mostly in South India), flowers are used in the treatment of various ailments.

India has a very rich flora with nearly 17,500 flowering plants which constitutes 12% of the recorded world flora. This rich and diverse resource of plant wealth includes a large number of medicinal plants which are exclusively used in the indigenous system of medicine like *Ayurveda* and *Siddha*. Nearly 2500 species are used as medicinal herbs by the various ethnic tribes and rural folk to manage their daily ailments (Trivedi, 2007).

Flowers are directly eaten as petals or made as juice decoction, tincture or mixing them with some other ingredients and then administered. Different formulations of flowers are used as Juice, Powder, Syrup, *Arka* (Distilled extract), scents, soups etc. (Anagha B. Kothadia, 2011). Popular flower vegetable includes cauliflower, expensive spices like saffron, cloves are also derived from flowers. *Dhataki* (*Woodfordia fruticosa* L. KurzL. Kurz) flower mentioned in *Ayurveda* is used as a fermenting agent in the preparation of medicinal galenicals. Bee-processed flower nectar also known as honey is often named based on the flowers. Flowers are the sexual reproductive parts of the plants. The medicinally useful part may be entire (Whole) or inflorescence as in *Kumbhi* (*Careya arborea* Roxb.), only petals as in *Shatapatra* (*Rosa centifolia* Linn.), stigmas and upper portion of the styles as in *Saffron* (*Crocus sativus* Linn.) to mention a few.

The kingdom of flowers is very vast. In general, flowers can be categorized into four main classes depending on the purpose for which they are grown i.e. Ornamental flowers, Commercial flowers, Medicinal flowers and Kitchen/Vegetable flowers (Varadhan, 1985).

Historical background

Pushpa Ayurveda is a special branch of *Ayurveda* which was developed primarily by Jain priests (Parameshwaran, 2001). The first text dealing with the details of using flowers in the treatment of particular diseases appears in the 9th century text called *Kalyana Karakam* written by *Ugraditya Acharya*. Jain doctors have preferred

Pushpa Ayurveda which makes use of 18,000 types of flowers. One of the stanzas of the *Rig Veda* says that “one who knows about *pushpas* or flowers will be blessed with prosperity, riches and good fortune”.

The *Vedas* (Primary Indian Scriptures) considered flowers as part of the primordial impulse that marked the advent of life on earth. *Brahma*, known as the creator, according to Hindu mythology, is also called ‘*pushpa sambhavan*’, or ‘one born of flowers’. *Brahma* is described as one who was born out of the lotus that grew out of *Maha Vishnu* (one of the Hindu trinity) (Varadhan, 1985). Separate chapters have been dedicated to flowers in the ancient texts like *Bhavaprakasha Nighantu* (Bhavamishra, 2004). Likewise *Siddha Vaidya* has described the therapeutic utility of medicinal flowers (Venmathian, 1993).

Siddha - This system is believed to be developed by the *Siddhars*s, the ancient supernatural spiritual saints of India. The name *Siddha*, owes its origin to medicinal ideas and practices of a class of Tamil sages called the *Siddhar*. *Siddha* system of medicine is popular in the regions of Tamil Nadu and is widely used by *Siddha* doctors. In this system flowers are known as *Malar*”, its property is blooming & withering, which are used for number of diseases/ailments in human system as medicine, which are easily available at low cost, comparatively safe and are culturally acceptable (Venmathian, 1993).

Methodology

Ancient *Ayurvedic* literature like *Charaka Samhitha* (Agnivesha, 2002), *Sushruta Samhita* (Srikantha murthy, 2000), *Ayurvedic treatise* like *Bhavaprakasha Nighantu* (Bhavamishra, 2004), *Raja Nighantu* books like *Vrukshayurveda* (Nagesh Rao, 1998), *Medicinal plants of India, Tamilnadu* (S.N.Y., 2000), *Siddha vaidya* (dealing with *Siddha* medicine) (Venmathian, 1993), were used for compilation of literature and medicinal uses of flowers were screened. The standard translations of these books were referred and authenticated by experts like Taxonomist, Pharmacognosist Dravyaguna experts. Medicinal uses of flowers with conspicuous mention in both *Ayurveda* and *Siddha*, which are unambiguous with contemporary identification in the modern botanical literature, were selected for compilation.

Flowers have been described extensively in detail in *Ayurveda*. They are called as *Pushpa*, *Kusuma*, *Sumana*, *Suma* in Sanskrit. Well blossomed

flowers have been christened as *Vikasita pushpa* (blossomed), *Prapulla pushpa* and well differentiated from the flower buds which are described as *Mudrithapushpa*, *Suptapushpa*, *Sankuchita pushpa*. The inflorescence is called as *Guccha*, *Kusumocchaya*.

Appearance, Taste, Size, Aroma and Action:

Based on the appearance of the inflorescence, they are described as *Gucchapushpaka*, *Gucchapushpi*: huddled together (*Dhataki*-*Woodfordia fruticosa* L. Kurz.), *Kharamanjari*: rough (*Apamarga* -*Achyranthus aspera* Linn.), *Bahumanjari*: many flowers (*Tulasi* -*Ocimum sanctum* L.)

Kesara (Stamens):

Based on the *Kesara* (Stamens), they are described as *Raktakesara*: red stamens (*paribhadra*-*Erythrina variegata*.), *Sugandha kesara*: Fragrant (*Rakta shigru* -*Moringa oleifera* Lamk.), *Kumkuma kesara* (*Saffron-Crocus sativus* Linn.) is supposed to be the *kesaravaram* (Superior most) among others (Nagesh Rao, 1998).

Colour of the flower

Based on the **Colour of the flower**, they are described as *Shukla pushpa*: white (*Nagadanti-Croton roxburghii* Balak.), *Tamra pushpa*: copper coloured {*Patali*-*Stereospermum chelonoides* (L.) DC.}, *Swarnapushpa*: Golden coloured (*Aragwadha* -*Cassia fistula* Linn.), *Neela pushpa* (*Neelini-Indigofera tinctoria* L.), *Krishna kusuma*: black (*Karaveera* -*Nerium indicum* Mill.), *Chitra pushpika*: {*Drona pushpi* -*Leucas aspera* (Willd.) Link.}

Based on the **Taste**, they are described as *Tikta pushpa*: bitter as seen in (*Pata* -*Cissampelos paeriara* Linn.), *Guda pushpa*: sweet as jaggery {*Madhuka* -*Madhuca longifolia* (Koen.) Mac. Bride var. *latifolia* (Roxb.) chev.}

Based on the **Size**, they are described as *Bala pushpa*: Juvenile (*Yuthika*-*Jasminum officinale* L.), *Sthoola Pushpa*: big (*Jhandu-Tagetes erecta* L.), *Vakrapushpa*: unsymmetrical {*Agasthya* -*Sesbania grandiflora* (Linn.) Poir.}, *Pindi pushpa*: bunches of flowers {*Ashoka* -*Saraca asoca* (Roxb.) de Wilde}

Based on the **Aroma**, they are described as *Teekshna pushpa*: Strong odorous {*Lavanga-Syzygium aromaticum* (L.) Merr & P. }, *Gandha pushpa*: fragrant (*Ketaki dwaya*-*Pandanus odoratissimus* L.f.

Based on its **Action**, they are described as *Madya pushpa*: which induces fermentation (*Dhataki*-*Woodfordia fruticosa* L. Kurz.), *Ranga pushpa*: which imparts colour (*Neelini-Indigofera tinctoria* L.), *Shakapushpa*: used as vegetable {*Kareera-Capparis deciduas* (Frossk.) Edgew.

Based on the **Seasonal availability**, those which flowers are available in spring: *Vasantha pushpa* {*Kadamba-Neolamarckia cadamba* (Roxb.) Bosser.}, in rainy season: *Varshapushpa* {*Mahabala*-*Sida rhombifolia* (L.) Mast. in evenings: *Sandhya pushpa* {*Jathi* -*Jasminum sambac* (Linn.) Ait.}

Based on **Similarity**: They are named as *Chandrapushpa*: similar to moon (*Kasaghni-Solanum virginianum* L. (= *Solanum xanthocarpum* Schrad & Wendl.), *Chatra pushpa*: similar to umbrella {*Tilaka*-*Wendlandia heynei* (Roem. & Schult.) Santapau & Merchant}, *Vajrapushpa*-Flowers are bright as vajra (diamond) (*Shatapushpa* -*Foeniculum vulgare* Gaertn.), *Mallikapushpa* -Flowers are similar to Jasmine {*Kutaja-Holarrhaena pubescens* (Buch.-Ham.) Wall. *Lodhrapushpa* -Flowers resemble *Lodhra* flowers {*Madhuka-Madhuca longifolia* (Koen.) Macbr.}, *Dadimapushpa*- Flowers resemble pomegranate flowers (*Rohitaka-Aphanamixis polystachya* (Wall.) Parker), (Nagesh Rao, 1998).

Perusal of the ancient Ayurvedic classical literature reveals that flowers are used in various contexts for treating major and minor ailments. *Vaghbata*, quotes the therapeutic utility of flowers of *Priyangu* (*Callicarpa macrophylla*), *Dhataki* {*Woodfordia fruticosa* (L.) Kurz}, *Lodhra* (*Symplocos racemosus* Roxb.), *Padma* (*Nelumbo nucifera* Gaertn.), *Nandivruksha* (*Ficus retusa* auct. non L.) etc. in the context of the group of drugs labelled as "*Priyangu ambastadi gana*" which are used for the treatment of diarrhea, to heal fractures, treat ulcers etc. He even cites flowers like *Kumuda* (*Nymphaea alba*), *Utpala* etc for the purpose of anointing the face (*Mukha lepa* or facial) (Vaghbata, 1998).

Flowers are also employed for the purpose of *Dhuma* (Fumigation) like *Agaru* (*Aquilaria agallocha* Roxb.), *Usheera* (*Vetiveria zizanioides*), *Madhuka* {*Madhuca longifolia* (L.) Macbride}, *Kumkuma* (*Crocus sativus* L.). Correspondingly, flowers like *Kovidara* (*Bauhinia purpurea* L.), *Kashmarya* (*Gmelina arborea*), *Shalmali Pushpa* (*Bombax malabaricum* DC.), *Kashaya* of

Nagapushpa, *Padmaka* (*Prunus cerasoides* D. Don) are used as *raktapittahara* (controls haemorrhage) (Agnivesha 2002).

Vision related - Some flowers have special attributes like *Agastya pushpa* {*Sesbania grandiflora* (L.) Poir.} in *Nakthandyatha* (Night blindness) (Sushruta, 2000). Lavanga flowers {*Syzygium aromaticum* (L.) Merr. & Perry} are described as “*Chakshushya*” (Beneficial to the eyes) *Kusumbha* flowers are stated to be “*Drusti Prasadaka*” *Moringa Oleifera* (*Shigru*) flowers are depicted as “*Drusti Pathya*” (Wholesome food for the eyes). (Bhavamishra, 2004).

Hair related - *Bhringaraja* {*Eclipta alba* (L.) L.} flowers help in imparting dark colour to the hair while *Japa* (*Hibiscus esculentus*) flowers facilitate the hair growth (*Keshavivardhaka*) by its remedial action on “*Indralupta* (*Alopecia*). *Ketaki* flowers remove the foul smell by spreading its aroma, hence labelled as “*Keshadaurgandhya nashana*”.

Correspondingly, *Paribhadra* (*Erythrina variegata* L.) is indicated in “Ear disorders (*Karna vyadhi*) *Muchukunda* (*Pterospermum acerifolium* Willd.) in “Headache” (*Shirapeedanashaka*) (Bhavamishra, 2004).

Gynecological related- Few flowers like *Dhataki* {*Woodfordia fruticosa* (L.) Kurz} have been attributed with special actions like “*Garbhashthapani*” (Which helps in stabilizing the growth of foetus). Some of the flowers have exceptional action on particular system like *Shalmali pushpa* (*Bombax malabarica*) is “*Pradara nashaka* (Reduces menorrhagia). Likewise, an array of medicinal flowers like *Kumuda* (*Nymphaea alba* L.), *Kamala* (*Nelumbo nucifera* Gaertn.) *Utpala* (*Nymphaea stellata* Willd.), *Srngataka* (*Trapa natans*), *Kaseruka* (*Scirpus grossus*) are indicated in the prevention and management of miscarriage. In contrary, *Jayanthi Pushpa* {*Sesbania sesban* (L.) Merr.} is used for “antifertility” effect (*Garbha nirodhartha*) (Bhavamishra, 2004).

Controlling haemorrhage -Some special properties have been attributed to certain flowers like *Dadima* (*Punica granatum* L.) has styptic properties, hence used in the form of juice for *Rakta pitta* (epistaxis) (condition characterized by bleeding with nostrils). Mango flowers (*Magnifera indica* L.) *Kamala* (*Nelumbo nucifera* Gaertn.) *Kovidara* (*Bauhinia purpurea* Linn.) also possess *Raktapittahara* actions. *Nagakesara* (*Mesua ferera* auct non L.) has special action in *Raktarshas* and *Raktatisaara* (Bleeding piles and bloody diarrhea) (Bhavamishra, 2004).

Wound healing - *Jati* flowers (*Myristica fragrans* Houtt.) *Champaka* flowers (*Michelia champaka* Linn.), *Arka* {*Calotropis procera* (Aiton) R.Br.}, *Kumkuma* (*Crocus sativus* L.) possess wound healing (*vrana ropaka*) properties whereas *Dhattura* is specially mentioned as

“*Vranartinuth*” (Reduces the pain in the wound).

Bakula Pushpa (*Mimusops elengi* L.) is specially indicated in “*Krimidanta*” (Dental caries). Similarly *Vasa* (*Adathoda zeylanica* Medic.) flowers have *Kashaya* (astringent) *Kasahara* (antitussive) properties (Bhavamishra, 2004).

Details of flowers used in *Ayurveda* and *Siddha* system Medicine has been shown in Table-1.

Different flowers which has been used for major common ailments have been high lighted in the form of numbers in Table -2.

Discussions

Here an attempt has been made to present the therapeutic uses of flowers that are used in *Ayurveda* and *Siddha* system of Medicine. Separate chapters have been dedicated to flowers in the ancient texts like *Bhavaprakasha Nighantu* (Bhavamishra, 2004) medicinal flowers have been described highlighting its importance. Likewise *Siddha* Vaidya has described the therapeutic utility of 67 medicinal flowers (Venmathian, 1993). It is interesting to note that out of 38 medicinal flowers tabulated, about 25 flowers have some similar indications in *Ayurveda* and *Siddha* system of medicine. Generally, flowers in terms of their pharmacological properties are mostly similar to the other parts of the main plant (Srikantha murthy, 2000), but much milder in nature and hence they have special uses in medical systems. In some instances, the properties of the flower may differ from the properties of other parts of the plant, for example, *Arka* {*Calotropis gigantea* (Linn.) R. Br.} *Pushpa* is *madhura* (sweet in taste) *tikta* (bitter) *laghu* (light) *vrushya* (aphrodisiac) *deepana* (digestive stimulant) *pachana* (aids in digestion) and is used as *kustagna* (curing skin ailments), *krimigna* (anthelmintic), in *kasa* (Cough) *shwasa* (Dyspnea) whereas *Arka* *ksheera* (latex) is *tikta* (Bitter) and *lavana* (salty), *ushna* (hot in potency) *snigdha* (moist) and causes *virechana* (purgation), hence, it is useful in *udara* (ascities), *Kusta* (skin disorders) (Bhavamishra, 2004). (repeated, pls omit). Flowers like *Champaka* (*Michelia Champaka* L.) *Nagakesara* (*Mesua ferrea* auct non. L.) *Patala*

Table 1. Details of flowers used in various systems of Indian Medicine. (* indicates similar uses both in Ayurveda and Siddha)

Sl. No	Botanical Name	Sanskrit/ Regional Names	Flower Description and Chemical Constituents	Ayurveda Uses	Siddha Uses
1	<i>Abutilon indicum</i> (L.) Sweet Family: Malvaceae	Sanskrit: Athibala Tamil: Thutthi Kannada: Srimudregida Hindi: Kakadee	Flowers yellow and Solitary (S.N.Y., 2000). Luteolin, chrysoeriol, luteolin 7-O- β -glucopyranoside, chrysoeriol 7-O- β -glucopyranoside, apigenin 7-O- β -glucopyranoside, quercetin 3-O- β -glucopyranoside, Quercetin 3-o- a-glycopyranoside (Matlawska I, 2002).	Disorders of Nervous system, pain due to vata, internal injury of chest (S.N.Y., 2000).	Piles, ulcers, cough, skin diseases, leucorrhoea, jaundice, aphrodisiac (S.N.Y., 2000).
2	<i>Adhatoda zeylanica</i> Medic. Family: Acanthaceae	Sanskrit: Vaasa Tamil: Adatodaipoo Kannada: Aadumuttadagida Hindi: Adoosa	Flowers large, white with red or yellow spot at throat. Vascinine, colouring matter contains luteolin, quercetin, kaempferol, <i>alpha</i> -amyrin and <i>alpha</i> -sitosterol (S.N.Y., 2000).	Bronchial asthma* , haemorrhage, wasting diseases, fever, delirium, skin diseasepiles, vomiting (S.N.Y., 2000).	Eye diseases, cough* , dyspnoea, fever, tuberculosis, diseases of kapham (S.N.Y., 2000).
3	<i>Albizia lebbek</i> (L.) Willd. Family: Mimosaceae	Sanskrit: Shirisha Tamil: Usilampoo Kannada: Baage mara Hindi: Shiris	Flowers pale yellow / greenish yellow in globose heads Flowers give sweet smelling oil, triterpenoids, saponin labbekanin D and four saponin glycosides, lebbekanins D, F, G and H & chinocystic acid (S.N.Y., 2000).	Skin disease erysipelas, wounds, cough, dyspnoea, antidote for snake bite, food and other poisonings* (S.N.Y., 2000).	Stomatitis, thirst, poisoning* , diseases of kapham, leucorrhoea, venereal diseases, bleeding piles, diarrhoea, dental diseases, leprosy (S.N.Y., 2000).
4	<i>Anethum graveolens</i> L. Family: Apiaceae	Sanskrit: Shatapushpa Tamil: Satakuppai poo Kannada: Sabbasige hoovu Hindi: Sowa	Flowers large, pale yellow in compound umbels (S.N.Y., 2000).	Lactagogue, hemiplegia, earache, indigestion* , heart weakness.	Head ache, earache, carminative, Wheezing, vomiting, indigestion* , diseases of vatam (S.N.Y., 2000).
5	<i>Anthocephalous cadamba</i> (Roxb.) Miq. Family: Rubiaceae	Sanskrit: Kadamba Tamil: Vella kadambu Kannada: Kadamba Hindi: Kadamb	Flowers are rounded Crown, bears drooping branches and yellow flowers in globose heads.	It induces lactation.	Used in arthritis
6	<i>Bauhinia purpurea</i> L. Family: Caesalpiniaceae	Sanskrit: Rakta pushpa Kovidara Tamil: Mandari Kannada: Basavanapada Hindi: Knairwal	Flowers deep pink, on terminal and axillary corymbose racemes. Flower contains anthocyanins, astragalol, essential oil, isoquercetin, pelargonidin-3-glycoside, quercetin (Mamatha Rao, 2008).	Useful in cough, glandular swellings, goiter* , gout, haemorrhage, skin disease, scrofula, menorrhagia, piles, urinary disorders and wounds (Mamatha Rao, 2008).	Cooling and laxative, useful in bleeding piles, cough, scrofula* , stomach ache and ulcer (Mamatha Rao, 2008).
7	<i>Cassia alata</i> L. Family: Caesalpiniaceae	Sanskrit: Dadrugghna Tamil: Seenai agathipoo Kannada: Doddathangadi Hindi: Daadmurdan	Flowers large, yellow (S.N.Y., 2000).	Skin disorders* . Strong decoctions good for eczema, herpes and a lotion for ringworm, extracts used internally in cases of bronchitis purgative* .	Skin disorders, purgative* (S.N.Y., 2000).
8	<i>Cassia auriculata</i> L. Family: Caesalpiniaceae	Sanskrit: Avartaki Tamil: Avaraipoo Kannada: Avarae Hindi: Lobia	Flowers yellow, in corymbs, Flowers contain <i>alpha</i> -Sitosterol & Kaempferol (S.N.Y., 2000).	Poly urea* , skin diseases, worm infestation, diarrhoea, Ophthalmic disorders, haemorrhage (S.N.Y.,2000).	Eye diseases, genital disorders, Diabetes mellitus* , thirst, haematuria, (S.N.Y., 2000).
9	<i>Cassia fistula</i> L. Family: Caesalpiniaceae	Sanskrit: Aragvadhha Tamil: Konnarai poo Kannada: Kakkemara Hindi: Amalthaas	Flowers yellow in long drooping racemes. aurantiamide acetate, <i>alpha</i> -Sitosterol and its <i>alpha</i> -D -glucoside (S.N.Y., 2000).	Skin disease* , fever, cardiac diseases, jaundice, polyurea, urticaria (S.N.Y., 2000).	Skin diseases* , constipation, indigestion and earache.

Table 1. Details of flowers used in various systems of Indian Medicine. (* indicates similar uses both in Ayurveda and Siddha) *Continued.*

10	<i>Chrysanthemum indicum</i> L. Family: Asteraceae	Sanskrit: Bahupatrika sevanti Tamil: Shev Vandipoo Kannada: Shavanthige Hindi: Guladaavudi	Flowers yellow, on distillation they yield dl-camphor, azulene and <i>alpha</i> -3 carene, sesquiterpene ketodiol, indiculmenone, sesquiterpene lacone, chrysanthimin, vitamin-A (S.N.Y., 2000).	Juice or infusion of flowers is employed in vertigo, fever, headache, ophthalmia, xerophthalmia, hypertension, furunculosis and phlegm. Paste of flowers is applied on furunculosis, impetigo etc.	Amenorrhea, digestive disorders, fever, headache, laxative, stimulant, tonic (S.N.Y., 2000).
11	<i>Citrus aurantium</i> L. Family: Rutaceae	Sanskrit: Jambir Tamil: Kichhalipoo Kannada: Haerrali Hindi: Khatta	Flowers white in small axillary cymes, strongly sweet-scented. Fresh flowers yield oil of neroli Bigarade, flowers Orange (Anonymous, 1966).	It is Pittahara, Vatahara, improves appetite* , aqueous extract is a stimulant and refreshing drink usually employed in fever, inflammation, nervous and in hysterical conditions (Anonymous, 1966).	Vomiting, anti spasmodic, anodyne, dropsy, stomach disorder, cooling, digestive disorders* (S.N.Y., 2000).
12	<i>Cocos nucifera</i> L. Family: Arecaceae	Sanskrit: Narikela Tamil: Theangaipoo Kannada: Thengina kayi Hindi: Naariyal	Flowers unisexual (S.N.Y., 2000), inflorescence spadix with a hard oblong longitudinally splitting spathe enclosing many yellow or yellowish fibrous drupes	Urinary disorders* , thirst, gastritis, diseases of pitta, fever, poly urea, leucorrhoea, haemorrhage (S.N.Y., 2000).	Skin diseases, eczema, dysuria* , dysentery, eye diseases, menorrhagia leucoderma
13	<i>Crocus sativus</i> L. Family: Iridaceae	Sanskrit: Kumkuma Tamil: Kungumapoo Kannada: Kumkuma kesari Hindi: Kesar	Flowers solitary or clustered, narrowly sessile, stamens 3 eared, basifixed blue, scented, appearing with leaves, throat of perianth bearded, anthers yellow. Flowers contain safranul, isophorene, glucoside, corcin, crocetin, picro-crocin lycopene, α carotene, β carotene and zeaxanthin	Dried stigmas are useful in bronchitis, anaemia, asthma, leucorrhoea, coughs, sexual debility, nephropathy and skin diseases (Ashok Sheth, Vol.II, 2005).	Eye diseases, indigestion, expel dead foetus, easy delivery, duodenal ulcers, head ache.
14	<i>Datura metel</i> L. (<i>D.fastuosa</i> L.) Family: Solanaceae	Sanskrit: Dhattura Tamil: Ummattam Kannada: Ummathigida Hindi: Kaladhatura	Flowers large, solitary, short pedicelled, purplish outside and white inside. Flowers contain hyoscine, scopolamine, atropine, meteo iodine, norhyoscyamine, hyoscyamine (Ashok Sheth, Vol.II, 2005).	Eye diseases, scorpion-sting poisoning, psychosis, epilepsy, fever, delirium, burning sensation, dyspnoea* , skin disease, boils, dysuria, dog bite, poisoning (S.N.Y., 2000).	Earache, medicated fumigation in asthma, wounds, ulcers, abscess, guinea worm diseases, skin diseases, skin disease eczema, dyspnoea* , cough, fever, diarrhoea (
15	<i>Eriodendron pentandra</i> (L.) Kurz. Family: Bombacaceae	Sanskrit: -Dhaba Tamil: Ilavupoo Kannada: Booruga Hindi: Safed- sirmul	Flowers rose or dark red with large flowers.	Menorrhagia, fever, urinary disorders, diarrhea, diseases of pitta, dysentery, gout, haemorrhage, abdominal disorders* , stomach diseases, poisoning.	Flowers mixed with cow's milk is used to increase the sperm count, flower decoction used to relieve constipation* (Venmathian, 1993).
16	<i>Erythrina variegata</i> L. Family: Fabaceae	Sanskrit: Paribhadra Tamil: Kalyana moorukumpoo Kannada: Kaaduhaalivaana Hindi: Pangra	Flowers in large, coral red in dense racemes, contain erythratine, ferulic and caffeic acids, rutin, quercetin (S.N.Y., 2000).	Flowers useful in biliousness and ear troubles (Kirtikar, 1993).	Antidote to poisoning, vomiting, abdominal disorders, fever, stomatitis, dysentery, worm infestation, arthritis, eye diseases, diabetes, sterility (
17	<i>Hibiscus mutabilis</i> L. Family: Malvaceae	Sanskrit: Padmcharini Tamil: Cemparattai Kannada: Bettada thaavare Hindi: Guliyajaiava	Flowers white/pink. Flowers contain quercimeritrin, meatrinn and cyanin (S.N.Y., 2000).	Respiratory disorders, Expectorant, Antidote to poisons and Anodyne. Recommended for persistent coughs, Menorrhagia, Dysuria, Urinary calculi, abdominal & Pulmonary disorders, complaints* (S.N.Y., 2000).	Poly urea, diarrhoea, leucorrhoea, dysuria, coryza* , sterility and aphrodisiac (S.N.Y., 2000).

Table 1. Details of flowers used in various systems of Indian Medicine. (* indicates similar uses both in Ayurveda and Siddha) *Continued.*

18	<i>Hibiscus rosa-sinensis</i> L. Family: Malvaceae	Sanskrit: Japa Tamil: Shembaraththai Kannada: Dasavalahoo Hindi: Java	Flowers red, yellow or white contain anthocyanin pigment, cyanidin diglucoside (S.N.Y., 2000).	Diarrhoea, piles, hemorrhage, hair fall, menorrhagia* , contraceptive (S.N.Y., 2000).	Leucorrhoea, menorrhagia* , dysuria, hypertension, cough, diseases of pitta (S.N.Y., 2000).
19	<i>Hybanthus enneaspermus</i> (L.) F. V. Muell. (<i>Ionodium suffruticosum</i> (L.) Ging.) Family: Violaceae	Sanskrit: Sthalakamala/ Purusharatna Tamil: Orikazh tamarai Kannada: Orilalthamarai Hindi: Ratanpurus	Flowers pink, solitary, axillary, spurred, pedicels long (S.N.Y., 2000).	Used in urinary disorders, urinary calculi, respiratory disorders, Cough etc (S.N.Y., 2000).	Orithazhthamarai choornam is - 2 to 4 grams twice a day with milk for Megham diseases (S.T.D. in female), libido, improve the quality of semen, Galactagogue. Water extract- of plant with roots to wash the eyes in the conditions like itching in the eyes, pain, conjunctivitis.
20	<i>Jasminium sambac</i> (L.) Ait. Family: Oleaceae	Sanskrit: Mallika Tamil: Ireevattipoo Kannada: Gundu mallige Hindi: Mugra	Flowers white, solitary or in cymes, fragrant. Flowers yield essential oil consisting of triterpenes, sesquiterpenes, linalol, cis-caryophyllene, indole, cis-3-hexenyl benzoate and methyl anthranilate	Diseases of nervous systems, haemorrhage eye diseases, skin diseases, poisoning, wounds and diseases of pitta (S.N.Y., 2000).	Useful in foetid smell in ear and nose, eye diseases, vomiting in hypertension (S.N.Y., 2000).
21	<i>Madhuca longifolia</i> (Koen.) Macbr. (= <i>Bassia longifolia</i> Koen.) Family: Sapotaceae	Sanskrit: Madhuka Tamil: Kattuelupai Kannada: Kaadu ippe gida Hindi: Madhuka	Flowers pale yellow and fleshy appearing in dense clusters near the ends of branches, corolla tubular, fleshy, pale yellow, aromatic and caduceus. Flowers contain glucose, invert sugar, cellulose, albuminosides (Ashok Sheth, Vol.III, 2005).	Sprue, oedema, skin disease, polyurea, diarrhoea, fever* , gout, wasting diseases (S.N.Y., 2000). Useful in sexual debility, strangury, haemoptysis in children (Ashok Sheth, 2005).	Fever* , thirst, poisoning, eczema, ulcers, aphrodisiac (S.N.Y., 2000).
22	<i>Mesua nagassarium</i> (Burm.f.) Kosterm (<i>M.ferrea</i> auct non. L.) Family: Clusiaceae	Sanskrit: Nagakesar Tamil: Shirunagapoo Kannada: Nagakesari Hindi: Naagakesar	Flowers white, fragrant, axillary or terminal, solitary or in pairs, stamens very numerous, golden yellow, much shorter than the petals. Flowers contain essential oil, mesuol, mesuone, palmitosrearo-olein, dipalmito-olein, stearo diolein, palmito-diolein, linoleodiolein and triolein..	Throat disorders, urinary complaints, poisoning, nausea, vomiting, skin diseases, erysipelas, thirst, piles (S.N.Y., 2000).	Leucorrhoea, cough, diarrhoea, indigestion, intermittent fever, dysentery (S.N.Y., 2000).
23	<i>Michelia champaca</i> L. Family: Magnoliaceae	Sanskrit: Champaka Tamil: Sempuga/Sempakam Kannada: Sampige Hindi: Champa/ Campaka	Flowers yellowish to orange, very fragrant, solitary and axillary. Flowers contain Palmitic acid, oleic acid, carbonyl acid and volatile oil (Ashok Sheth, Vol.III, 2005).	Useful in dyspepsia, nausea* , vitiated conditions of Vata and Pitta, burning sensation, haemoptysis, pruritis, skin diseases, skin disease, wounds and ulcers, anorexia, colic flatulence, helminthiasis, vertigo, gout, cough, bronchitis, strangury and malarial fever	Decoction of flower is used in fever, vomiting* and Leucorrhoea (Venmathian, 1993).
24	<i>Mimusops elengi</i> L. Family: Sapotaceae	Sanskrit: Bakula Tamil: Mahila, Magilam Kannada: Pagade mara Hindi: Baku	Flowers white in axillary clusters, fragrant, star shaped. Flowers contain volatile oil, D-mannitol, β -sitosterol quercitol, ursolicacid, lupeol, dihydroquercetin, quercetin, The fatty oil comprised capric, lauric, myristic, palmitic, stearic, arachidic, Oleic & linoleic acids (Bharat, 2007)	Dental diseases* , burning sensation, thirst, skin diseases, uterine disorders, cardiac & eye diseases, fever, and aphrodisiac (S.N.Y., 2000).	Eye & dental diseases*, cooling, astringent, tonic (S.N.Y., 2000).

Table 1. Details of flowers used in various systems of Indian Medicine. (* indicates similar uses both in Ayurveda and Siddha) *Continued.*

25	<i>Nelumbo nucifera</i> Gaertn. Family: Nelumbonaceae	Sanskrit: Padma kamala Tamil: Tamarae Kannada: Tavarae hoovu Hindi: Kamal ambuj	Flowers white or pink, solitary, large, Flowers contain lupeol, <i>alpha</i> - amyrin, lysine, <i>alpha</i> -sitostrol, n- triacontanol, aminoacids (S.N.Y., 2000).	Thirst* , burning sensation, boils sterility, skin diseases, diarrhoea, menorrhagia, bleeding piles (S.N.Y., 2000).	Diseases of pittam, fever, thirst* , diarrhea, bleeding, piles, cardiac diseases, aphrodisiac (S.N.Y., 2000).
26	<i>Nymphaea alba</i> L. Family: Nymphaeaceae	Sanskrit: Kumuda Tamil: Neitharkizhangu, Neytal, Neytarkilanku Kannada: - bilitthavare Hindi: -	Flowers are solitary white, Nyphalin- a glycoside, Numyphaeine- an alkaloid are obtained, Nymphaein-present in all parts of the plant except in seeds(Anonymous, 1966).	Used as a sedative, An infusion of flowers is Diaphoretic* and used in diarrhoea (Anonymous, 1966).	Flower decoction useful to reduce heat* in the body, cardioprotective, reduces cough (Venmathian, 1993).
27	<i>Pandanus fascicul</i> <i>aris</i> Lam. (<i>P.odoratissimus</i> L.f.) Family: Pandanaceae	Sanskrit: Ketaki Tamil: Kamakatkatalam Kannada: Kedage Hindi: Kevarah	Flowers covered by spathes Male flowers in cylindric spikes, white, fragrant, female flowers solitary (S.N.Y., 2000). Flowers contain kevda oil, which is methyl ether of phenylethyl alcohol, d-linalool, phenyl ethylacetate, citral, phenyl ethylalcohol, ester of phthalic acid, fatty acids and stearoptene (Ashok Sheth, 2005).	Rheumatism, headache,anorexia, indigestion, constipation, polyurea, skin diseases, (S.N.Y., 2000).	Amenorrhoea, dropsy, head ache, earache, pox, diseases of pittam (S.N.Y., 2000).
28	<i>Phyllanthus</i> <i>amarus</i> Schum. & Thonn. (<i>P.niryri</i> auct. non L.) Family: Euphorbiaceae	Sanskrit: Bhummyamalagi Tamil: Kila nelli Kannada: Nelanelli Hindi: Bhooyiaamlee	Flowers solitary, axillary, male flowers with minute disc glands (S.N.Y., 2000).	Jaundice* , diarrhoea, dysentery, intermittent fever, ulcers, wounds (Orient longmann, vol.4, 1995).	Jaundice* .
29	<i>Pistia stratoites</i> . Linn. Family: Araceae	Sanskrit: Jalakumbhi Tamil: Aakaasa taamarai Kannada: Aakaasha thaamare Hindi: Jalkhumbi	Flowers minute, sessile on a spidax. Contain vicenin, lucenin, cyaniding, 3- glucoside, vitamins A, B and C (S.N.Y., 2000).	Used in fever, pittaja and raktaja* disorders	Haemorrhoids* , dysentery, refrigerant, demulcent, diuretic.
30	<i>Pongamia pinnata</i> (L.) Pierre. Family: Fabaceae	Sanskrit: Karanja Tamil: Punganpoo Kannada: Hongemara Hindi: Girimala karanj	Flowers lilac or white tinged with pink, fragrant, in axillary racemes, contain karanjin, kanjone, Pongaglabrone, kaemperol, quercetin, pongone, kanguin,ā- sitosterol glucoside, neoglabrin, glabrosaponin	Flowers are useful to quench thirst in diabetes and for alleviating vata and kapha (Ashok Sheth, Vol.IV, 2005).	Glandular swellings, eczema, ear diseases, vataja diseases, abdominal disorders, snakebite, venereal diseases (S.N.Y., 2000).
31	<i>Rosa centifolia</i> L. Family: Rosaceae	Sanskrit: Saumyagandha Tamil: Paninippu Erasha Kannada: Gulabhi huvu Hindi: Gulab	Usually pink, very double on long slender pedicels, calyx tube globose, ovoid, the mouth contracted, lobes 4-5, imbricate, petals many, stamens many, inserted on the mouth of the calyx tube. Tannin, Vitamin A, B and C, fatty oil and organic acids, pigments lycopene, rubixanthin, zeaxanthin, xanthophylls, taraxanthin, oleum rosi, oil, gallic acid, essential oil, Flavonoids and pectin	Flowers are used in vitiated conditions of Vata and Pitta, inflammations, cough, asthma, bronchitis, wounds, ulcers, halitosis, dyspepsia, flatulence, colic, skin diseases, cardiac debility, fever constipation, toxiemia, erysipelas, piles and general weakness (Ashok Sheth, Vol.IV, 2005).	Used to cure bloody stools, Leucorrhoea, juice is used to reduce heat in the body, headache; dried flowers are used the form of decoction which is given to pregnant ladies as diuretic, flower oil is used for ear pain, petals good for stomach cleaning (Venmathian, 1993).

Table 1. Details of flowers used in various systems of Indian Medicine. (* indicates similar uses both in Ayurveda and Siddha) *Continued.*

32	<i>Saraca asoca</i> (Roxb.) de Wide (<i>S.indica</i> auct. Non L.) Family: Caesalpiniaceae	Sanskrit: Asoka Tamil: Asokam Kannada: Asokada Hindi: Asok	Flowers orange or orange -yellow in dense corymbs, very fragrant (Ashok Sheth, Vol.IV, 2005). Anthocyanins, <i>alpha</i> -sitosterol, quercetin, leucocyanidin, gallic acid, kaempferol (S.N.Y., 2000).	Uterine tonic, used in vitiated condition of Pitta, syphilis, cervical, adenitis, hyperdipsia, burning sensation, hemorrhoids, dysentery and scabies. The dried flowers are used in diabetes and haemorrhagic dysentery* AS 2005	Flower buds soaked in cold water for 1-2 hours and that water (2-4 spoons) is health promotive. Dried powdered flowers (10gm) mixed with 1tumbler of water is given for bloody stools* (Venmathian, 1993).
33	<i>Sesbania grandiflora</i> (L.) Poir. Family: Fabaceae	Sanskrit: Agastyā Tamil: Agati/Attikkirai Kannada: Agase Hindi: huwvu, Hathya/Agast/Basna/ Hadga	Flowers 6-10 cm long with showy, fleshy white, pink or yellow petals, Vitamin B and C, protein (Ashok Sheth, Vol.IV, 2005).	Juice of the flowers in eyes for night blindness and is used for intermittent fevers, leucorrhoea, gout, strangury, flowers are cooling, bitter, astringent, acrid and antipyretic	Juice is used for eye diseases/pain, cold, good for pitta and ushna and cools down the body, its curry is rich in calcium strengthens the bone (Venmathian, 1993).
34	<i>Spilanthes clava</i> DC. Family: Asteraceae	Sanskrit: Akarakarabha Tamil: Karavadaipo Kannada: Sanna vana mugali Hindi: -Akarakara	Heads conical, in terminal and axillary panicles. Florets pale yellow to White, achenes obovate to trigonous, ciliate. Dry flowers contain spilanthal, polysaccharide (S.N.Y., 2000).	Pungent, Stimulant, and Sialogogue*. relieve tooth ache and affections of Throat and gums and paralysis of the Tongue. Stammering in children.	Pungent flowers are chewed for relief in throat infection, carminative, paralysis of the tongue, also used in stammering* of the children (S.N.Y., 2000).
35	<i>Stereospermum Chelonoides</i> (L.f.) DC. Family: Bignoniaceae	Sanskrit: Patala Tamil: Paadari, Kannada: - Paadiri mara Hindi: Paral	Flowers purplish yellow, Fragrant, in large, lax panicles (S.N.Y., 2000). Flowers contain albumin, mucilage, sugar and resin (Ashok Sheth, Vol.IV, 2005).	Hiccup, vomiting, oedema, burning sensation, wounds, hyperacidity, thirst, dyspnoea (S.N.Y., 2000).	Diabetes mellitus, fever, leucorrhoea, eczema, ulcers, diseases of kapham and vatam (S.N.Y., 2000).
36	<i>Tamarindus indica</i> L. Family: Caesalpiniaceae	Sanskrit: Aamlika Tamil: Puli Kannada: Hunisehoo Hindi: Aamli, Aamlica	Flowers small yellowish with pink streaks in short racemes, contains hordenine, <i>alpha</i> -carotene, calcium, iron, riboflavin, phosphorus, thiamine, niacin, ascorbic acid (S.N.Y., 2000).	Hyperacidity* , pain, antibilious, appetizer, cooling, leucorrhoea, oedema, diseases of kapha and pitta, infusion is useful in conjunctivitis	Ulcers* , dropsy, anaemia, paste in bleeding piles (S.N.Y., 2000).
37	<i>Tectona grandis</i> L.f. Family: Verbenaceae	Sanskrit: Saka Tamil: Thekku Kannada: Tega Hindi: Segun	Flowers small, sweet-scented, many white in terminal panicles (S.N.Y., 2000).	Flowers are useful in vitiated conditions of pitta and kapha, burning sensation, skin diseases* , strangury and diabetes	Diseases of pittam, inflammatory swellings, dyspepsia, skin diseases* , ulcers, worm infestations (S.N.Y., 2000).
38	<i>Thespesia populnea</i> (L.) Sol. ex Corr. Family: Malvaceae	Sanskrit: Parisha Tamil: Poovarasi Kannada: Hoovarasi Hindi: Paaras bhooda	Flowers yellow with purple base, solitary, contain gossypol, kaempferol, rutin, flavonoids, glycosides, tamarixetin 7-o B D glucoside & Kaempferol 7-O- <i>alpha</i> -D-rutinoside (S.N.Y., 2000).	It is shukraprada, Induces kapha and reduces itching* (Ashok Sheth, Vol.IV, 2005).	Leucorrhoea, stomachache, vitiligo, skin disorders* , depurative, tonic and inflammatory.

(*stereospermum suaveolens*) are used for purification of water and also for adding fragrance to the water (Mangalagowri .V.Rao 2007).

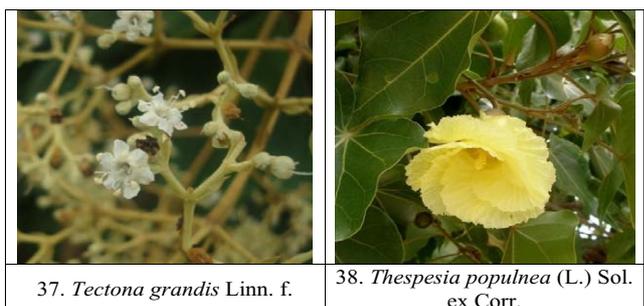
This review highlights therapeutic utility of medicinal flowers of 38 species belonging to 26 families. Like other parts of plants, some of the flowers in Ayurvedic system of medicine have got its own importance in curing or in giving relief from some of the ailments. Some special properties have been attributed to certain flowers like *Dadima* (*Punica granatum* L.) which has styptic properties, hence used in the form of juice for (*Rakta pitta*) epitaxis (condition characterized by bleeding with nostrils), *Vasa* (*Adhathoda zeylanica* Medic.)

flowers have *Kashaya* (astringent) *Kasahara* (antitussive) properties. Most popular flower buds of *Lavanga* {*Syzygium aromaticum* (L.) Merrill & perry} forms the cloves, which has been used as a spice as well as the clove oil being used in dental problems. The most popular narcotic “Papaverine” is obtained from the flowers of *Ahiphena* (*Papaver somniferum* L.) (). Likewise, the narcotic substances like bhang, ganja are also obtained from the leaves & flowering tops of *Bhang* (*Cannabis sativa*). It is observed that out of 38 flowering plants mentioned in the present paper related to *Ayurvedic* system of medicine, 14 flowers find mention in skin diseases, 14 for fever, 10 for respiratory diseases, 7 for

		
1. <i>Abutilon indicum</i> (L.) Sweet	2. <i>Adhatoda zeylanica</i> Medic.	3. <i>Albizia lebbeck</i> (L.) Willd.
		
4. <i>Anethum graveolens</i> Linn.	5. <i>Anthocephalus cadamba</i> (Roxb.) Miq.	6. <i>Bauhinia purpurea</i> Linn.
		
7. <i>Cassia alata</i> Linn.	8. <i>Cassia auriculata</i> Linn.	9. <i>Cassia fistula</i> Linn.
		
10. <i>Chrysanthemum indicum</i> Linn.	11. <i>Citrus aurantium</i> Linn.	12. <i>Cocos nucifera</i> Linn.

		
13. <i>Crocus sativus</i> Linn.	14. <i>Datura metal</i> Linn.	15. <i>Eriodendron pentandrum</i> (Linn.) Kurz.
		
16. <i>Erythrina variegata</i> Linn.	17. <i>Hibiscus mutabilis</i> Linn.	18. <i>Hibiscus rosa-sinensis</i> Linn.
		
19. <i>Hybanthus enneaspermus</i> (L.) F. V. Muell.	20. <i>Jasminum sambac</i> (L.) Ait.	21. <i>Madhuca longifolia</i> (Koen.) Mac Bride
		
22. <i>Mesua nagassarium</i> (Burm.f.) Koster.	23. <i>Michelia champaca</i> Linn.	24. <i>Mimusops elangi</i> Linn.

25. *Nelumbo nucifera* Gaertn.26. *Nymphaea alba* Linn.27. *Pandanus fascicularis*
Lam.28. *Phyllanthus amarus* Schum.
& Thonn.29. *Pistia stratiotes*. Linn.30. *Pongamia pinnata* (L.)
Pierre31. *Rosa centifolia* Linn.32. *Saraca asoca* (Roxb.)
deWilde33. *Sesbania grandiflora* (L.)
Poir.34. *Spilanthes clava* DC.35. *Stereospermum Chelonoides*
(Linn.f.) DC.36. *Tamarindus indicus* Linn.

37. *Tectona grandis* Linn. f.38. *Thespesia populnea* (L.) Sol. ex Corr.**Table 2.** Details of flowers used for major ailments in numbers

S. No.	Name of the ailment/disease	Ayurveda (38)*	Siddha (38)**
1	Skin diseases	14	11
2	Fever	14	8
3	Respiratory diseases	10	10
4	Diabetes	7	3
5	Gynecology	7	11
6	Abdominal/digestive disorders/	4	9
7	Urinary disorders	3	1
8	Jaundice	2	2
9	Aphrodisiac	2	2
10	Dental diseases	1	1
11	Stammering	1	1

*= Number of flowers used in Ayurvedic system of medicine out of 38 plants.
 **= Number of flowers used in Siddha system of medicine out of 38 plants.

diabetes, 7 for gynecological ailments, 5 for bleeding hemorrhoids (piles), 4 for Gastrointestinal disorders, 3 for urinary disorders. In *Siddha* system of medicine, out of 38 plants, 11 are used for skin diseases, 8 for fever, 10 for respiratory disorders, 3 for diabetes, 11 for gynecological ailments, 4 for hemorrhoids (piles), 9 for Gastrointestinal disorders, 1 for urinary complaints.

The present review study accounts for 38 species, both wild and cultivated, 34 genus and comprising of 26 families for different ailments. Among them 15 are trees, 11 herbs and 11 shrub species.

Conclusion

Considering the importance of flowers, its chemical composition and its indication in various ailments, a need was felt to collect its medicinal uses. Hence, an attempt has been made to highlight the medicinal uses of flowers, as mentioned in *Ayurvedic* classics and *Siddha* system of medicine. Thus, the present review of medicinal flowers not only provides recognition to this knowledge but will also help in its conservation vis-a-vis providing pharmacological leads for the betterment of human society.

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References

1. **Agnivesa**, *Charaka Samhitha*, Translation by R. K. Sharma & Sri. Bhagwan Dash, 3rd edition, Varanasi, Chowkamba Sanskrit Series Office, **2002**.
2. **Anagha B. Kothadia**. Flower Power, *Heritage Amruth*, 7(2): 47-49, **2011**.
3. **Anonymous**, *Wealth of India*, Raw Materials, Vol. 3, New Delhi, CSIR **1992**.
4. **Anonymous**, *Wealth of India*, Raw Materials, Vol. VII, New Delhi, CSIR, page no.662, **1966**.
5. **Anonymous**, *Indian Medicinal Plants*-a compendium of 500 species, Vol.4, Orient Longmann Pvt. Ltd., Hyderabad, **1995**.
6. **Ashok Sheth**, *The Herbs of Ayurveda*, Vol. I-IV, Ashok K. Sheth, "Alankar", 1157, Near, Meghani Circle, Bhavanagar-364001, Gujarat, India, **2005**.
7. **Bahadur, R., Gupta G.N., and Nigam, M.C.** Gas chromatography of the oil of *Anthocephalus cadamba* Miq., *Perfum Kosmet*, 47:198-200, **1966**.
8. **Bharat Gami**. Evaluation of Pharmacognostic and Antihemorrhoidal properties of *Mimusops elengi* Linn., Ph.D. Thesis, Veer Narmad South Gujarat University, **2007**.
9. **Bhavamishra**. *Bhavaprakasa Nighantu*, Chaukhambha Bharati Academy, **2004**.
10. **Elumalai, A., Nikhitha Mathangi, Adarsh Didala, Raju Kasarla, Yetcharla Venkatesh**. A Review on *Ceiba pentandra* and its medicinal features, *Asian J. Pharm. Tech.* 2(3): 83-86, **2012**.
11. **Kaimal, T.N.B., Lakshminarayana Gollamudi**. Fatty acid compositions of lipids isolated from different parts of *Ceiba pentandra*, *Sterculia foetida* and *Hydnocarpus wightiana*, *Phytochemistry*, 9(10):2225-29, **1970**.
12. **Khare C.P.** *Indian Medicinal Plants*, An illustrated Dictionary, Springer science (India) Pvt. Ltd., **2007**.
13. **Kirtikar K.R. and Basu B.D.** *Indian Medicinal Plants*, Vol. I-II, Lalit Mohan Basu, #49, Leader Road, Allahabad, India, **1999**.
14. **Mamatha Rao**. *Legumes in India: Applications in food, medicine and Industry*, New Delhi, Ane Books India publishers, pp. 301-303, **2008**.

15. **Mangalagowri .V. Rao.** *Text book of Syasthavrtta*, 1st edition. Varanasi, Chaukhambha Orientalia, pp. 249, **2007**.
16. **Matlawska I, Sikorska M.** *Acta Pol Pharm.* 59(3):227-29, **2002**.
17. **Matthew, K.M.** The flora of the Tamil Nadu Carnatic, Vol.1, The Ranipet Herbarium, St. Joseph's college, Tiruchirappalli, India, **1983**.
18. **Nagesh Rao M.S., Vrukshaayurveda**, 1st Edition, Ayurveda Research and Development Centre, Dr.M.S.Nagesh Rao Memorial, **188**, Salmaru, Karkala-574104, Udipi district, Karnataka, 51-63, **1998**.
19. **Parameshwaran K., Flower therapy**, Delhi, Govt. of India, <http://pib.nic.in/feature/feyr2001/fnov2001/f061120011.html>, **2001**.
20. **Ramachandran S., Rajinikanth, B., Rajasekharan, A., Manisenthil kumar, KT.** Evaluation of Anti-inflammatory and analgesic potential of methanolic extract of *Tectona grandis* flowers. *Asian Pacific Journal of Tropical Biomedicine* 1(2):115-58, **2011**.
21. **Roberts M.J., Edible and Medicinal Flowers**, Introduction Page.VI, Spearhead Publications, #99, Garfield Road, Claremont-7708, United States of America, **2000**.
22. **Sanjay Kr Uniyal, KN Singh, Pankaj Jamwal and Brij Lal.** *Traditional use of medicinal plants among the tribal communities of Chhota Bhangal- Western Himalaya. Journal of Ethnobiology and Ethnomedicine* 2:14-21, **2006**.
23. **Satyender K. Yadav.** Isolation and characterization of chemical compounds from flowers of *Cassia alata*, *Der Pharma Chemica*, 5(5):59-62, **2013**.
24. **Sharma Yashaswini, Hedge R.V., Venugopal C.K.** *Health & Nutrition from ornamentals, International Journal of Research in Ayurveda & Pharmacy*, 2(2):375-82 **2011**.
25. **Sharma, B.D., Karthikeyan, S. and Singh, N.P.** *Flora of Maharashtra State, monocotyledons.* Calcutta, India, Botanical Survey of India, **1996**.
26. **Singh, N.P., and Karthikeyan, S.** *Flora of Maharashtra State, Dicotyledons, Vol.I*, Calcutta, India. Botanical Survey of India, **2000**.
27. **Singh, N.P., Laxminarayana, P., Karthikeyan, S., and Prasanna, P.V.** *Flora of Maharashtra State, Dicotyledons, Vol.2*, Calcutta, India Botanical Survey of India. **2000**.
28. **Sushrutha, Sushrutha Samhitha** (English commentary by Srikantha Murthy K.R.), Vol.1, Sutrasthana, chapter-46, shloka-282, Page 415, Varanasi, Chaukhambha Orientalia, **2000**.
29. **Trivedi P.C.** *Ethnomedicinal Plants of India*, Jaipur. Aavishkar Publishers, pp.275, **2007**.
30. **Vagbhata.** *Astanga Hridayam*, Sutra Sthana, 22/20, page no.301, Varanasi, Chaukhambha Orientalia, 8th edition, **1998**.
31. **Valeriaradulescu, Maria lidia popescu, Dianacarina Ilie.** Chemical composition of the volatile oil from different plant parts of *Anethum graveolens* L. (Umbelliferae) Cultivated in Romania. *Farmacia* 58(5):594-600, **2010**.
32. **Varadhan, K.P.: Introduction to Pushpa Ayurveda, Ancient science of Life** 4(3):153-57 **1985**.
33. **Venmathian G.P., Siddha Vaidhya** (A Medical Book of Modern Kannada), 1st edition, India, Page no. 422, 424, 427, 429, 433, Rani -chennamma Prakashana, # 1, Anjeneya temple street, Ulsoor, Bangalore - 560008, **1999**.
34. **Yoganarasimhan S.N., Medicinal Plants of India: Tamil Nadu**, Dr. S. N. Yoganarasimhan, # 74/K, 17 A cross, 8th main, 4th stage, 4th block, Basaveswara Nagar, Bangalore - 560079, India, pg10, 22, 30, 45, 111, 129, 150, 184, 216, 268, 269, 296, 302, 336, 353, 356, 373, 395, Vol. 2, **2000**.

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