International Journal of
Life Sciences
International Peer Reviewed Open Access Refereed Journal

Int. J. of Life Sciences, 2019; 7 (1): 123-132
ISSN:2320-7817(p) | 2320-964X(o)

Review Article Open Access

Effectiveness of herbs used in traditional pediatric practice –A review

NJQ Tharshanodayan*[1] and P Rohini[2]

[1]PG Scholar, Department of Gunapadam, Government Siddha Medical college, (The Tamilnadu Dr.M.G.R Medical university Chennai, Tamilnadu, India), Palayamkottai, Tirunelveli(627002),Tamilnadu, India.
[2]Medical Officer, District Siddha Hospital, Mannar, Srilanka.
*Corresponding author Email: njqtharshan@gmail.com | prohini165@gmail.com

Manuscript details:

Received : 10.01.2019
Accepted : 13.02.2019
Published : 31.03.2019

Editor: Dr. Arvind Chavhan

Cite this article as:
NJQ Tharshanodayan and P Rohini (2019) Effectiveness of herbs used in traditional pediatric practice –A review, *Int. J. of Life Sciences*, Volume 7(1): 123-132.

Available online on
http://www.ijlsci.in
ISSN: 2320-964X (Online)
ISSN: 2320-7817 (Print)

ABSTRACT

In *Siddha* system the growth & development and diseases of the children are explained in consonance with different stages. The extensive use of herbs on pediatric management in rural is socio-cultural barriers, the fact that traditional medicines have a wide acceptance. Aim is to identify the herbs that were used in traditional pediatric management and to evaluate effectiveness of specific herbs to combat common childhood diseases. In this review, some main *Siddha* text books and data were collected from older people to extract important information about traditional pediatric management. A total of 28 herbs were mostly be used in the disease management among children. Most of the plant used internally (57%) and while (32%) were used externally. Leaves (32%) were the most commonly used plant part forms in pediatric disease management, the least used plant life forms are Flower, Fruit peel, and whole plant (4%). According to taste Pungent (40%) were the most used plant action. *Clitoria ternata*. Linn, *Zingiber officinalae* Rosc, *Piper betel*, and *Piper nigrum* Linn, are used to treat more than one disease. Most of the plant (50%) were reported to be used for treating gastro intestinal disorders. Based on text book it has been proved that herbs used in this treatment possess significantly cure the disease in children. In spite of not knowing the effects of these herbs during ancient period, traditional practitioners used them in the preparation of home remedies. So, there is a need to enhance the usages of herbs.

Key words: Leaves, Pungent, *Clitoria ternata*. Linn, *Zingiber officinalae* Rosc, *Piper betel.*

INTRODUCTION

Siddha system is guiding us to lead a perfect living in this world, starting from as a fetus in mothers' uterus to the death (Gurusironmani,1992) Approximately 10 million children under 5 years of age were reported to

die annually throughout the world, mostly in developing countries (Patricia Nalumansi *et al.*, 2014) Today's children are the future citizens of a nation. To have a better nation, healthy citizens can contribute a lot. The health status of the children, their growth and development at different stages of life, the expected health issues during their childhood and its management, prevention of those obstacles, the way of living are all clearly described in *Siddha* system in a scientific approach (Ghai, 2005), (Kalyanasundaram, 2011).

The *Siddha* system is based on five elements, three vital forces, six tastes. They are called as *Aymperum boothangal*, *Muththathukkal* and *Aru suvaikal. Mann, Neer, Thee, Kaatru* and *Akayam* are the five elements. These five elements combined in different permutation and combination to form the Three vital forces *(Vali, Azhal and Iyam*) and Six tastes (Sweet, Sour, Astringent, Pungent, Bitter and Salt). These five are responsible for the formation of 96 *Thathuvankal* which are the basic phenomenon and principle of Siddha system of Medicine. The concept of "*Unavae Marunthu; Marunthae Unavu"* (Sundaram *et al.,* 2017). The main aim of *Siddhars* is "Prevention is better than cure" (Subramanian SV *et al.*, 1984). In *Siddha* system of medicine, the Growth & Development and diseases of the children are explained in consonance with different stages *(Paruvangal)* (Tom *et al*., 2004), (Viswanathan *et al.*, 1995). The scientific approach in those days with respect to *Paruvangal* is so common that these stages are mentioned in linguistic literatures like Meenakshi Pillai Tamil etc. (Das, 2005). The terminologies coined for each stages are so scientific that each one these are correlated exactly with the developmental milestones of the growing infants and children. Also, the probable health issues that a child can encounter at each stage are also described. The different stages for male children up to the age of five are *Kappu, Senkeerai, Thaalaattu, Sappani, Muththam, Varugai, Ambuli, Sirtril, Siruparai, Siruthaer.* For female children, the first seven stages as explained for male children are common and the last three stages are *Kalangu, Oonjal* and *Ammanai* (Sundaram *et al.,* 2017). Pediatric illnesses or the diseases of the children are classified into *Agakaarana noigal* due to intra uterine factors (develops congenitally) and *Purakaarana noigal* due to external factors (acquired) (Sundaram *et al.,* 2017). The diseases that affect the children are respiratory disorders, gastro intestinal disorders, skin disorders, neurological disorders, cerebral palsy, autism, muscular dystrophy, nutritional disorders, and metabolic disorders other common childhood disorders (Das, 2005). *Siddha* system of medicine is caring for the total well-being of the children as it also gives importance to socio cultural development by recommending certain games for children which is very helpful in developing the physical, mental and socio-cultural well-being. Thus the system paves the way for total and complete health well-being (Meenakshi Sundaram M *et al.,* 2017). used Medicinal plants and the use among traditional plant knowledge is abundant. The role of medicinal plants in the primary healthcare of the villagers has been reduced because of easier access to modern medicines and changes in their lifestyle. A similar condition was also observed within villages. Majority of the local people are illiterate especially in the rural areas of the district and the earning sources are only agriculture and livestock (Srithi *et al.,* 2009). The extensive use of traditional medicine in pediatric management with medicinal plants in rural is socio-cultural barriers, the fact that traditional medicines have a wide acceptance. There is need to document traditional knowledge on plant medicines used in disease management among the children in Jaffna peninsula. There is a need to prove the traditional pediatric management used by herbal home remedies. Which were actively used in nowadays are capable in curing pediatric diseases. Furthermore, prevention is an important issue in this young age group. The proper management of childhood diseases may help to reduce the chances of progression in adulthood. And, to make the availability of these herbal practice among traditional practitioners.

OBJECTIVE

To identify the herbs that were used in traditional pediatric management and to evaluate effectiveness of specific herbs to combat common childhood diseases and disorders.

METHODOLOGY

In this review, some main *Siddha* text books and data were collected from older people to extract important information about traditional pediatric management. And also data were collected from the journals through globally accepted websites. Each herbs were classified and compiled in tables. Results were obtained from the table analysis.

RESULT AND DISCUSSION

A total of 28 herbs were mostly be used in the disease management among children. Most of the plant used internally (57%), while (32%) were used externally and (11%) were used internally and externally (Figure 1). Leaves (32%) were the most commonly used plant part forms in pediatric disease management, followed by dry fruit (18%). The least used plant life forms are Flower, Fruit peel, Leave flesh, Stem, Tender leave and whole plant (4%) (Figure 2).

Table 1: Plants used in disease management among children (Murugesa Muthaliyar , 2013)

Botanical name name	Pharmacological Action	Medicinal Use
Coriandrum sativum	Stomachic Carminative Stimulant Diuretic	Body heat, Cold and fever, Psycatric diseases, Indigestion, Vomiting, Dryness of mouth, Wound
Sesamum indicum. **Linn**	Demulcent Laxative Nutritive Emollient	Mental stimulant, cooling the eyes, strengthening body, Tonic, Skin disorders, ENT disorders, Cough, Mental refresh
Ricinus communis**.Linn**	Laxative Emollient	Burning in body, Gastritis, Diarrhea, Improve skin colour and texture
Azadiracta indica. **Juss**	Stimulant Antiseptic Insecticide	Fever, Vatha disorders, Skin diseases, Tumors
Aloe vera	Tonic Alterative Purgative Emmenogogue	Rejuvenation, Skin diseases, Worms, Piles, Fistula, Gastritis, Burning micturition.
Anisochilus carnosus	Stimulant Diaphoretic Expectorant	Cough, Chickenpox, Ache and pain
Tinospora cordifolia	Alterative Antiperiodic Aphrodisiac Demulcent Hepatic Stimulant Stomachic Mild diuretic	Wound healing
Hibicus rosa-sinensis **Linn**	Laxative Aphrodisiac Emmenogogue Emollient Demulcent Refrigerant	Leucorrhoea, Anemia, Menorrhagia, Disorders in blood
Rungia repens **Nees**	Febrifuge	Boils, Eczema, Wound
Piper longum	Stimulant Carminative	Cough, Gastritis, Phlegm, Anemia, Tasteless, Abdominal distension, Headache, ENT Diseases, Verms
Clitoria ternatea **.Linn**	Cathartic Diuretic Demulcent	Leaves- Asthma, Oedema Root- Indigestion, Worms, Phlegm,Constipation

***Zizipus mauritiania*. Lam**	Emollient	Hemorrhoid, Dysentery, Abdominal pain, Skin Rashes, Sexual disorders
Mimosa paniculata	Digestive Febrifuge	Milky Diarrhea, Abdominal distension, Fever
***Acorus calamus* Linn**	Stimulant Stomachic Antiperiodic Carminative Nauseate Emetic Disinfectant Germicide	Wound healing, Animal bite, Gastritis, Halitosis, Ache and pain, Cough, Liver disorders, Elephantiasis, Edema,Worm infestation
***Ocimum sanctum*. Linn**	Stimulant Expectorant Diaphoretic	Psycatric disorders, Rhinitis, Fever, Ache and pain
***Solanum trilobatum*. Linn**	Stimulant Expectorant Tonic	Ear ache, Cough, Ascites, Ache and pain, Itching, Indigestion, Weakness
Melothira maderaspatana	Anti-inflammatory Astringent Anti-arthritic	Acid reflux, Amebiasis, Anorexia
***Justicia beddomei* (Clarke) Bennet**	Antispasmodic Expectorant Germicide Diuretic	Phlegm, Fever, Pain, Hypertension, Cough, Asthma, Vomiting, Hiccough, Scrotal hernia, Hoarseness of voice
***Zingiber officinalae* Rosc**	Carminative Stomachic Sialagogue Digestive Stimulant Rubefacient	Cough, Asthma, Vomiting, Indigestion, Diarrhea, Anorexia, Weakness
Piper betel	Stimulant Carminative Astringent Aphrodisiac Antiseptic Febrifuge	Phlegm, Psycatric disorders, Venom bite, Sinusitis, Indigestion, Hoarseness of voice, Abdominal pain, Abdominal distension.
***Centella asiatica* Linn**	Alterative Tonic Diuretic Stimulant Emmenogogue	Mouth ulcer, Diarrhea, Bloody dysentery, Fever, Asthma, Hoarseness of voice, Oedema of legs, Scrotal swelling, Lymph node enlargement, Diabetic wound, Swelling, Skin rashes, Thyroid swelling, Amenorrhea.
***Murraya koenigii* Linn**	Tonic Stomachic	Tastelessness, Abdominal pain due to dysentery, Chronic fever, Psycatric disorders.
***Phoenix sylvestris* Linn**	Diuretic Laxative	Bleeding disorders
***Piper nigrum* Linn**	Acrid Carminative	Cold and fever, Anemia, Phlegm, Diarrhea, Gastritis, Vatha,

	Antiperiodic Rubefacient Stimulant Resolvant Anti- vatha Anti-dote	Tasteless, Psycatric diseases, Piles, Cough, Earache, Jaundice, Hemiplegia, Indigestion.
***Piper cubeba.* Linn**	Stimulant Carminative Diuretic Expectorant	Loss of appetite, Gastritis, Thirst, Leucorrhoea
***Mangifera indica.* Linn**	Anthelmintic Astringent Demulcent Nutritive	Dysentery, Heat, Menorrhagia, Vermes
***Punica granatum.* Linn**	Astringent Stomachic	Dysentery, Vermes
***Carum copticum* Benth & Hook. f**	Stomachic Antispasmodic Carminative Antiseptic Stimulant Tonic Sialagogue	Cold and fever, Cough, Indigestion and diarrhea, Abdominal distension, Diarrhea, Gas in stomach, Dyspnea, Dental diseases

Plants used in disease management among children

Azadiracta indica. Juss – Seed oil

Aloe vera- Leave pulp

Acorus calamus Linn – Root

Anisochilus carnosus- Leave

Coriandrum sativum – Dry fruit

Sesamum indicum. Linn – Seed oil

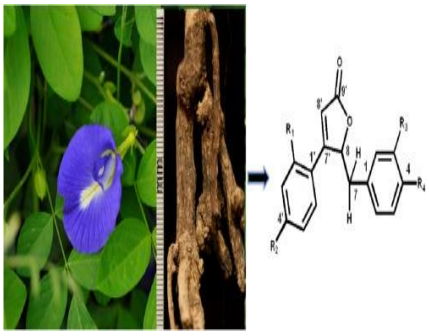
Ricinus communis.Linn– Seed oil

Tinospora cordifolia- Leave

Hibicus rosa-sinensis Linn– Flower

Rungia repens Nees– whole plant

Piper longum – Dry fruit



Clitoria ternatea .Linn- Leave & Root

Zizipus mauritiania. Lam– Leave & Gall

Pentatropis capensis– Leave and Stem

Ocimum sanctum. Linn– Leave

Solanum trilobatum. Linn- Leave

Melothira maderaspatana– Leave

Justicia beddomei(Clarke)

Zingiber officinalae Rosc– Rhizome

Piper betel- Leave & Stalk

Centella asiatica Linn– Leave stalk

Murraya koenigii Linn– Leave stalk

Phoenix dactylifera Linn – Tender leave

Piper nigrum Linn- Dry fruit

Piper cubeba. Linn – Dry fruit

Mangifera indica. Linn – Seed

Punica granatum. Linn – Fruit peel

Carum copticum -Dry fruit

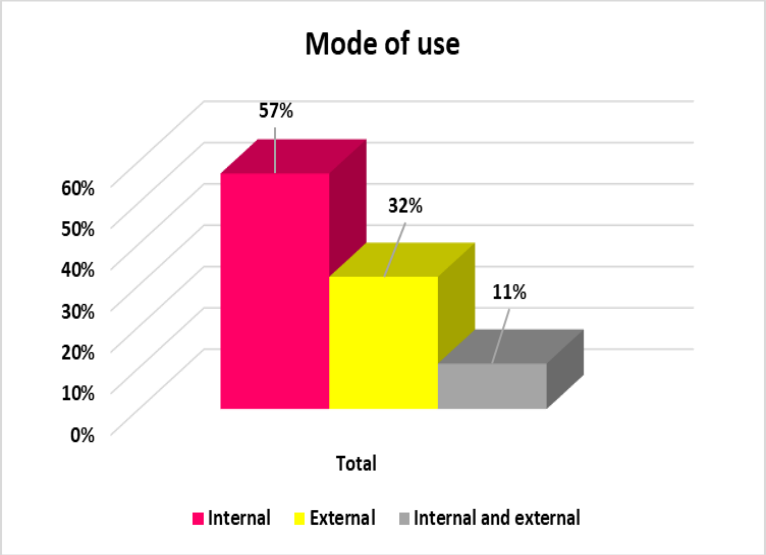


Figure 1: Mode of use(Murugesa Muthaliyar , 2013)

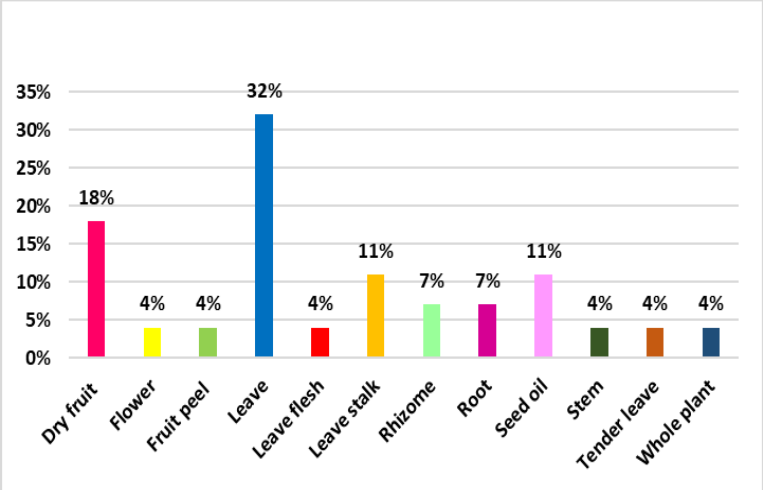


Figure 2: Plant part use forms (Murugesa Muthaliyar , 2013)

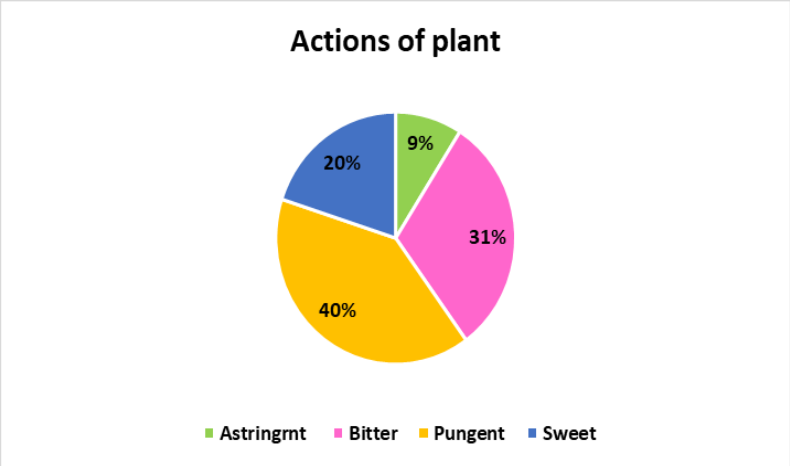


Figure 3: Distribution of actions (Murugesa Muthaliyar, 2013)

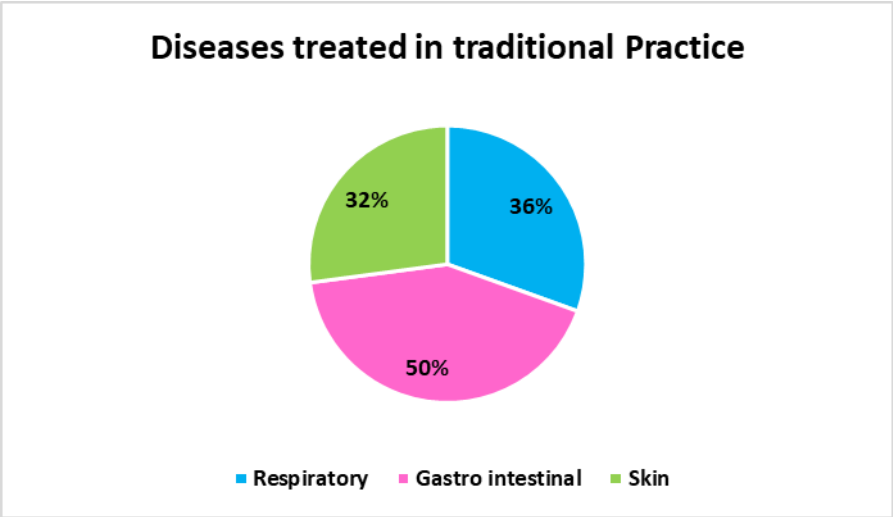


Figure 4: Distribution of diseases treated in traditional pediatric management

Pungent (40%) were the most used plant action, followed by Bitter (31%), Sweet (20%). The least used plant action was astringent 9% (Figure 3). Taste is one of five senses that we have. The Sweet taste builds tissues and calms nerves. Bitter taste detoxifies the tissues. The pungent taste stimulates the digestion and metabolism. Astringent absorbs water, tightens tissue and dried fat. According to result, taste of plants significantly cures the pediatric diseases.

Clitoria ternata. Linn, *Zingiber officinalae* Rosc, *Piper betel*, and *Piper nigrum* Linn, are used to treat more than one disease. Most of the plant (50%) were reported to be used for treating gastro intestinal disorders. The other diseases managed were respiratory diseases (36%) and skin disease (32%).

CONCLUSION

This review reveals that the main custodians of this knowledge are mostly mothers and traditional healers. Traditional practice constituted the respondents were the most knowledgeable about plants used in disease management among children. The mothers use traditional medicine to provide health care for themselves and their children (Patricia *et al.,* 2014). Traditional knowledge among the households were easily passed on orally to the mothers who are often care takers in these homes. This finding was in agreement with that of (Van der *et al.,* 2013). The mothers and grandparents are sending to go and pick these plants and also prepare the herbal medicine for the sick children. A similar pattern among the villages in developing countries has been documented (Geissler *et al.,* 2002). Based on text book it has been proved that herbs used in this treatment possess cure the disease in children. In spite of not knowing the effects of these ingredients during ancient period, traditional practitioners used them in the preparation of home remedies in the treatment of pediatric diseases. So, there is a need to enhance the usages of herbs cited in the classical literatures.

REFERENCES

Gurusironmani Pon (1992) Balavagadam. 2nd Edition. Chennai, Department of Indian Medicine and Homoeopathy, p.721.

Ghai OP (2005) Essential Pediatrics. 6th Edition. New Delhi: CBS Publishers & Distributors, p.768.

Kalyanasundaram TK (2011). Siddha Maruthuvam Vol. 7: Kuzhandai Maruthuvam. 1st Edition. Chennai, Tamil Valarchi Kazhakam, p.400.

Meenakshi Sundaram M *et al* (2017), Paediatric Management in Siddha System of Medicine, *International Journal of Advanced Ayurveda, Yoga, Unani, Siddha and Homeopathy* , Volume 6, Issue 1, pp. 370-377 ISSN: 2320 – 0251, Crossref: 10.23953/cloud.ijaayush.282.

Subramanian SV and Madhavan VR (1984). Heritage of Tamils: Siddha medicine, P.238.

Tom Lissauer and Graham Clayden. (2004) Illustrated Textbook of Paediatrics. 2nd Edition. London: Mosby International Limited, p.516.

Viswanathan, J *et al*1995), Textbook of Pediatrics. 3rd Edition. Madras, Orient Longman Ltd, p.867.

Krishna Das KV (2005), Clinical Medicine. 3rd Edition. New Delhi: Jaypee Brothers.

Srithi K *et al* (2009). Medicinal plant knowledge and its erosion among the Mien (Yao) in northern Thailand. J. Ethnopharmacol. 123, 335–342. doi: 10.1016/j.jep.2009.02.035

Patricia Nalumansi *et al* (2014), Medicinal Plants Used in Paediatric Health Care in Namungalwe Sub County, Iganga District, Uganda, *Nova Explore Publications Nova Journal of Medical and Biological Sciences,* Vol 2(3), March 2014: 1-14 PII: S2292793X1400010-2 www.novaexplore.com .

Kamatenesi MM *et al* (2005), Enthnopharmacological screenings of Vernonia amygdalina and Cleome gynandra traditionally used in child birth in Western Uganda.Edited by: Midwo JO, Yenesew Abiy, Derese Solomon 2005, 81-89, the proceeding of the 11th NAPRECA Symposium on natural products and drug discovery: 9-12 Antananarivo.

Van der Hoeven, *et al* (2013), Indigenous and traditional plants: South African parents' knowledge, perceptions and uses and their children's sensory acceptance, *Journal of Ethnobiology and Ethnomedicine*, 9:78.

Geissler PW, *et al* (2002), Medicinal plants used by Luo mothers and children in Bondo district, Kenya Journal of Ethnopharmacology, (83) 39-54.

Murugesa Muthaliyar KS (2013), Gunapaadam mooligai vakuppu, 9th edition, Indian medicine and Department of Homoeopathy, Chennai 106.