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Role of Siddha in Mental Health: A Review

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Abstract: Siddha is a comprehensive system that places equal emphasis on the body, mind, and spirit and strives to restore the innate harmony of the individual. The treatment in Siddha is aimed at restoring balance to the mind-body system. Diet and lifestyle play a major role not only in maintaining health but also in curing diseases in Siddha system of medicine. The maintenance of the three humours is considered health in Siddha aspects, and their vitiation leads to diseases. Mental health refers to our cognitive, behavioural, and emotional well-being; it is all about how we think, feel, and behave. It also helps determine how we handle stress, relate to others, and make choices. The term mental health does not merely mean the absence of psychiatric disease but the individual being happy and content with a sound mind. Mental health can affect daily life activities, relationships, and even physical health. Mental disorders are among the most common disorders worldwide. Global socioeconomic changes in recent years, including industrialization, rapid population growth, urbanisation, and immigration, have created a wide range of mental disorders in different societies. The present study evaluated the Astanga Yogam for mental health, its 96 principles, and some of the medicinal plants that help to have good mental health on the basis of Suvai.

Keywords: Siddha, Mental health, Mental illness, Astanga yogam

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Introduction

Mental health is more than the mere absence of mental disorders. Over all, health is defined as a complete state of physical, mental, and social well-being and the ability to go forward in a stressful

life with responsibilities and be able to make a contribution to the community. Mental health problems make the individual isolated from the community. WHO reported that the risks of mental

health problems are higher among the poor, especially those who are below the poverty line, unemployed individuals who have an inability to meet their daily needs, people with low education, alcohol consumption, drug abuse, victims of any violence, abused women, refugees, and migrants. A mental health issue is crucial to overall well-being. Unfortunately, mental health has not been given any importance compared with physical health; rather, it has been ignored and neglected. Mental health is fundamentally interconnected with physical health; for example, depression is a risk factor for cancer. So the WHO declared the year 2001 as a year of mental health, and they started the mental health Global Action Programme (mhGAP). Through that programme, they promoted the country's capacity with resources, raise awareness and disseminate social stigma, assign countries to develop comprehension and effective mental health, and finally build local capacity for public mental health research in poor countries (WHO, 2004). The National Institute of Mental Health (NIMH) reported that nearly one in five U.S. adults lives with mental illness. That is 52.9 million in 2020. Mental illness is broadly categorised into two categories: any mental illness (AMI) and serious mental illness (SMI). AMI is defined as a condition that may range from no impairment to mild, moderate, or even serious impairment, but might be a mental, behavioural, or emotional disorder. SMI results in serious functional impairment.

The Siddha system plays a role in improving the mental health of every individual. Siddha Medicine, is an ancient medicine that was founded by the Siddhars. It deals with physical and mental wellbeing (Uthamaraayan, 2010). Siddhars, shared their knowledge to promote physical and mental health with the help of plants, minerals, and some metals. They also recommend regularising their living patterns with the environment around them. According to Mooligai Gunapaadam, the plants are classified by their taste (*Suvai*), character (*Gunam*), and potency (*Veeriyam*) (Uthamaraayan, 2010). Efficacy (*Veeriyam*) is categorised into two types: *Veppe Veeriyam* (which

increases the core temperature of the body) and *Thatpa Veeriyam* (which decreases the core temperature of the body). In this review, it has been correlated with plants, and it is used on the mental illness based on the Siddha Principles and also the *Astanga Yogam* (8 stages to attain a higher level of spirituality) and 96 Principle (Shanmugavelu., 2014). This review article is intended to enumerate the concept of Siddha Principles to treat mental health disorders based on *Suvai*, *Gunam*, *Veeriyam*, and 96 principles (Uthamarayan, 2010). It correlated the treatment for mental disorders with the characteristics of the herbal plants. It is based on the objectives- (i) The characteristics of the herbal plants that are used for mental illness; and (ii) to elucidate the cause of mental illness based on the Siddha Principles.

This study was carried out based on the Siddha literature review. The sages and some of the Siddhars stated about mental health. The sage Agathiyar said that *Manamathu semmaiyaanal Manthiram Jebikka Vendam means* "whenever the mind is clean there is no need to pray," and *Manamathu semmaiyaanal Vaayuvai Uyartha Venda means* "whenever the mind is clean there is no need to raise oxygen". Whenever the mind is clean, there is power, which is more than the power of mantras (Shanmugavelu, 2014).

Sage Sundaranandar stated that when you govern your mind and consciousness under your control, you will attain the supernatural power of the Yogam (*Manam Kattinaal allo Yogam Kittum*) (Shanmugavelu, 2014).

Astanga Yogam and Mental Health:

Mental health is associated with *Astanga Yoga*. Siddha science is concomitant with the science of medicine and also the blessed theme of spiritualization, but that has been thoughtlessly ignored or rejected by the sceptic world. But luckily, the farsighted teachings of Siddha medicine naturally imply all the laws and disciplines of spiritualization (Shanmugavelu, 2014).

Astanga Yogam: The eightfold path of yoga

practise, consisting of eight kinds of steps or stages. It is enumerated as- *Iyamam*: restraint of the worldly appetite; *Niyamam* - Religious observance; *Aasanam* - Position or posture of the body; *Pranayaamam* - Breathing in a particular way; *Prathiyaakaram* - Restrain the senses; *Dhaaranai* - fixing the mind as member of the body; *Dhiyaanam* - Silent meditation; *Samaathi* - Silent contemplative worship (Shanmugavelu, 2014).

The sixth stage makes it clear that the improved mental health was achieved by following Iyamam from the first stage and adhering to the regularised sequential refinement from the first stage. So that it will help to commence the good mental health.

Veeriyam (Potency) and Pirivu (Post Absorption State):

Veeriyam: It is categorized into two types:

Vemmai: Hot

It equalizes the Vatha Humour, removes the Kabha Humour, removes the vertigo, dryness of the tongue, generalized tiredness, sweat, Inflammation, increases the digestive fire (Uthamaraayan, 2010)

Thanmai: Cool

Induces joyfulness, improves longevity of life, reduces *Rathapittham* (hypertension).

Post Absorption state:

When the food enters into the stomach the action of digestive fire start to separate the taste which is in that food. And it turns into Energy. It is categorized accordingly (*Inippu*) Sweet, (*Uppu*) Salt changes into Sweet (*Inippu*), (*Pulippu*) (Sour) changes into *Pulippu*, (*Kaippu*) (bitter), (*Kaarpu*) (Spice), (*Thuvorppu*) (Astringent) changes into *Kaarpu* (Spice) (Uthamaraayan, 2010).

Mental health and medicinal plants:

Statement of Valluvar and Sundarandar:

The Valluvar wrote great the book Thirukkural (*Ulagu Pothu Marai*). He states that whenever

there is good mental health it will produce the good productivity among the human kind.

Based on the Siddha medication the plants that are categorized under the *Suvai* (Taste), *Gunam* (Potency), and the *Veeriyam* or *Pirivu* (Post absorption State). Following are some of the Plants.

(i) Erukku:

Botanical Name: *Calotropis gigantea*

Taste: Sweet, Bitter

Potency : Hot (Ushnam)

Post Absorption State: Hot (Spice)

Therapeutic Preparation: Stem bark of *Erukku*, *Thippili* (*Piper longum*), *Milagu* (*Piper nigrum*). These are mixed well and made into Powder.

Indication: *Veri Noi* (Mania) and *Iyam* (Kabha humour) (Murugesu Mudaliyar, 2022)

The extract of *Calotropis gigantea* leaf showed antidepressant activity. The investigations of aqueous extract of *Calotropis gigantea* leaves (100 mg/kg and 200 mg/kg) in both Forced Swim Test (FST) and Tail Suspension Test (TST) models in rats showed *in vivo* antidepressant activity. In this study the results were obtained increased such as imipramine. So it is concluded that the aqueous extract of *Calotropis gigantea* leaves possessed the antidepressant activity (Rani *et al.*, 2020).

(ii) Vizha:

Botanical Name: *Limonia acidissima*

Taste: Astringent, Spicy

Potency: Spice (Hot)

Post Absorption state: Spice (*Kaarpu*)

Indication: Mania with incoherent speaking (Murugesu Mudaliyar, 2022).

The ethanol extract of the fruits of plant *Limonia acidissima* was evaluated for its anti-anxiety activity in swiss albino mice at dose 200 mg/kg and 400 mg/kg body weight. Anti-anxiety was assessed by using elevated plus maze (EPM) and light and dark model methods. The ethanolic

extract exhibit anxiolytic effect in experimental mice. So it supports the use of *Limonia acidissima* as anxiolytic agents. Further investigation should be made to elucidate the active constituent of responsible for the activity (Vaishali *et.al.*, 2021).

(iii) Elumichai:

Botanical Name: *Citrus limon*

Taste: Sour (Pulippu)

Potency : Veppam (Ushnam)

Post Absorption State; Spice (Hot)

Indication: It has to be taken as a Karpam. Indicated for *Manasorvu* (Depression state), *Veri* (Mania) and *Mayakkam* (Mental stupor) (Murugesha Mudaliyar, 2022).

The sedative, anxiolytic and antidepressant effects of essential oil (EO) of leaves from *Citrus limon*, which has been used as one of the most popular compounds in Brazilian traditional herbal medicine. The effects of EO were demonstrated by open-field, elevated-plus-maze, rota rod, pentobarbital-induced sleeping time, and forced swimming tests in mice. It is evidenced that sedative and anxiolytic effects of EO might involve an action on benzodiazepine-type receptors, and also an antidepressant effect where noradrenergic and serotonergic mechanisms will probably play a role (Gupta, 2017).

(iv) Ellu Nei: Gingelly Oil

Botanical Name: *Sesamum Indicum*

Taste : Inippu (Sweet)

Potency : Ushnam (Hot)

Post Absorption State: Kaarppu (Spicy)

Indication: Improves the Good mental health with Clean motives and Promotes the Cheerfulness (Murugesha Mudaliyar, 2022).

The active ingredients and optimal concentrations of sesame oil have its sedative effect. In particular, 2,5-dimethylpyrazine and 2-methoxy phenol significantly suppressed the stress-induced changes in the expression

of *DUSP1*, which are strong anti-stress agents. Our results suggest that these molecules may be powerful anti-stress agents (Takemoto *et al.*, 2022).

(v) Kaatu Elam:

Botanical Name : *Amomum subulatum*

Taste: Kaarpu (Spice), Thuvarppu (Astringent)

Post Absorption State: Kaarpu (Spice)

Indication: It is useful for Manial Attack (Murugesha Mudaliyar, 2022).

(vi) Kurosaani Omam:

Botanical Name: *Hyoscyamus niger*

Taste: Spice (Kaarpu)

Potency: Ushnam (Hot)

Post Absorption State: Kaarpu (Hot)

Indication: It is useful for the Initial stage of Mental Illness. Treated for the Confusion of Memory (Murugesha Mudaliyar, 2022).

(vii) Kadambu:

Botanical Name : *Anethocephalus cadamba*

Taste: Thuvarppu (Astringent)

Post Absorption State: Kaarpu (Spice)

Indication: The Decoction made by Stem bark will be given for the Depression state (Murugesha Mudaliyar, 2022).

ACE (*Anthocephalus cadamba*) showed significant increase in ketamine induced sleeping time. It also exhibited significant increase in latency to clonic convulsion, tonic extension and time of death in PTZ and INH models at all tested doses, whereas in the MES model, the lower dose was found to be effective when compared with the higher doses (200 and 400 mg/kg, p.o.). It has been demonstrated that ACE possesses sedative and antiepileptic activities (Nagakannan *et al.*, 2011).

(viii) Kadugurohini:

Botanical Name: *Picrorhiza scrophulariflora*

Taste: *Kaippu* (Bitter). Thuvappu (Astringent).

Post Absorption State: Kaarpu (Spice)

Indication: It is indicated for Mania (Veri Noi) (Murugesu Mudaliyar, 2022).

The ethanol extract of *Clerodendrum serratum* (EECS) Linn. on acute restraint stress (ARS)-induced depressive-like behavior and biochemical alterations in mice. Ethyl acetate and n-butanol fractions of EECS were analytically characterized for the flavonoid components, apigenin (API) and luteolin (LUT) by reverse-phase high-performance liquid chromatography. Behavioral tests, namely, forced-swim test and tail-suspension test were performed for assessing antidepressant-like effect and anxiolytic activity in mice. Oxidative stress parameters and biochemical alterations in mice brain tissue were also performed. Flavonoids, API and LUT were present in ethyl acetate and n-butanol fractions of EECS, which significantly reversed ARS-induced depressive-like behavior without affecting locomotion. EECS also attenuated oxidative damage caused by ARS. The level of norepinephrine and 5-hydroxytryptamine was also significantly restored by pretreatment with EECS for 7 days (Vazhayil *et al.*, 2017).

(ix) *Kandupaarangi*:

Botanical Name: *Cleodendrum serratum*

Taste: Kaippu (Bitter), Thuvarrpu (Astringent)

Post Absorption State: Kaarpu (Spice)

Indication: It is indicated for the Manathadumaatram (Confusion of the mind) (Murugesu Mudaliyar, 2022).

(x) *Kaiyanthagarai*:

Botanical Name: *Eclipta prostate*

Taste: Kaippu (Bitter)

Potency: Hot (Veppam)

Post Absorption State: Hot (Kaarpu)

Indication: It Promotes the Clarity of Intellect (Butthikku Thelivu) (Murugesu Mudaliyar, 2022).

Eclipta alba (Asteraceae) is a traditional medicinal plant known as *Bhringaraj*. This plant has been used for the treatment of a variety of diseases. The leaves of *Eclipta alba* showed antihyperglycemic activity. The roots of *Eclipta alba* were found effective in wound healing. The possible antidepressant effect of *Eclipta alba* leaf extract (EALE) using Tail suspension test (TST) and Forced swim test (FST) has been evaluated. EALE produced significant antidepressant like effect at dose of 200 and 400 mg/kg administered for 7 and 14 consecutive days as indicated by reduction in immobility times of mice in TST and FST. The efficacy of EALE at 200 mg/kg was found to be comparable to that of Fluoxetine and Imipramine at doses of 20 mg/kg and 15 mg/kg (Swati *et al.*, 2013).

The potential neuro pharmacological activity of the plant *Eclipta alba* as a nootropic has been reported. Further neurochemical investigations can unravel the mechanism of action of the plant drug with respect to nootropic activity and help to establish the plant in the armamentarium of nootropic agents (Thakur and Mengi, 2005).

(xi) *Kaatu Kadugu*:

Botanical Name: *Cleome viscosa*

Taste: Spice (Kaarpu)

Potency: Hot (Veppam)

Post Absorption State: Hot (Spice).

Indication: Fumigation of the plant which is indicated for the Hysteria (Swati *et al.*, 2013).

(xii) *Koshtam*:

Botanical Name: *Costus speciosus*

Taste: Bitter (Kasappu), Spice (Kaarppu)

Potency: Ushnam (Hot)

Post Absorption State: Hot (Spice).

Indication: It promotes internal cheerfulness (Murugesu Mudaliyar, 2022).

The neuro pharmacological properties of *Costus speciosus* (*C. speciosus*) rhizome has been

evaluated by using different experimental mouse models. The anxiolytic effect was investigated by hole-board test, elevated plus maze and light/dark test, while central nervous system (CNS) depressant effect was evaluated by thiopental sodium-induced sleep test. Finally, antidepressant effect was evaluated by forced swimming test and tail suspension test. In both elevated plus maze and hole board test, 400 mg/kg *C. speciosus* showed more significant CNS depressant effect than 1 mg/kg diazepam. Both 200 mg/kg and 400 mg/kg *C. speciosus* extract produced a significant dose-dependent decrease in onset of sleep. In forced swimming test, *C. speciosus* rhizome showed a decrease in duration of immobility in a dose-dependent manner. Imipramine (10 mg/kg) and *C. speciosus* extract at 400 mg/kg dose exhibited a significant reduction in duration of immobility in tail suspension test which provided additional evidence of antidepressant effect of *C. speciosus* rhizome. *C. speciosus* rhizome possesses CNS depressant, anxiolytic and antidepressant-like activities. Further studies are warranted to determine the exact phytoconstituents and mechanism of action responsible for the neuropharmacological effect (Chen *et al.*, 2019).

(xiii) *Thoothuvelai*

Botanical Name: *Solanum trilobatum*

Taste: Little bitter, Spice

Potency: Ushnam (Hot)

Post Absorption State: Hot (Spice).

Indication: It promotes the Clarity of mind (Murugesu Mudaliyar, 2022).

(xiv) *Nilavembu*:

Botanical Name; *Andrographis Paniculata*

Taste: Little bitter, Spice

Potency: Ushnam (Hot)

Post Absorption State: Hot (Spice) (Murugesu Mudaliyar, 2022).

Pharmacological observations suggested

antidepressants-like efficacy of a medicinally used *Andrographis paniculata* extract (AP). Significant imipramine like antidepressant activity of AP was observed even after its lowest daily tested (50 mg/kg/day) in both behavioral tests used, and such efficacy of the extract dose increased with its increasing dose. Imipramine like effects of AP in elevating lower hippocampal levels of norepinephrine, dopamine, and serotonin was observed in diabetic rats. These observations strongly suggest that AP could be an herbal alternative for treatments of diabetes-associated depression resistant to imipramine like antidepressants, and that antidepressants like efficacy of the extract is most probably due to its inhibitory effects on brain mitochondrial monoamine oxidase activities. The observed beneficial of AP on brain oxidative status could be indicative of its neuro-protective potentials as well. In any case its minimal effective doses for all such efficacies should be below or around 50 mg/kg/day (Thakur *et al.*, 2014).

Naadi and mental health:

Uruthiyulla Pithamathu Thondril veppu

Marathiyudal Kirukiruppu Paithiya rogam

- Sathaga Naadi

Sirappaana Pithathil Vaatha naadi

Ayaasam kirukodu mayakka Moorchai

- Sathaga Naadi

Pithamae Kathitha pothu Pithatridum Pithae Kaelu

Pithamaam Naadi thaanae belathodu thanithu nirkil

Mathima paithiyathai valarthidum vaathaneer serum

-Naadi sasthiram Pathinen Siddhargal (Mohan, 2012)

As the poem stated that, when the Pittha humour increase it will induce the illness in the mental health.

Siddha system of medicine is Traditional system of medicine which was founded by

Siddhars. They treated fairly with the ailment accordingly with the Herbal remedies. They were chosen in the herbal plants. Siddhars told that the mental illness is the disease, which has been caused by the vitiated *Pittha* humour. Based on that, plants are categorized under Taste, Potency, Post absorption Taste. The taste are 6 types that are *Inippu*, *Pulippu*, *Uppu*, *Kaippu*, *Kaarpu*, *Thuvarpu* (Sweet, Sour, Salt, Bitter, Spicy, Astringen). Potency are classified in two types, *Thatpam* (Cool) and *Veppam* (Hot). Post absorption state is also known as *Vibaavam*. According to *Mooligai Gunapaadam*, the plants were categorized and elucidated based on the Taste, Potency and Post Absorption State. The plants which has been given for the Mental illness has been comes under the Hot Potency (*Veppa Veeriyam*) and the *Kaarpu* (Spice) Post Absorption State. In this consequence it will change the *Pittha* humour accordingly. According to *Sathaga Naadi*, *Naadi Sasthiram Pathinen Siddhargal* explains meticulously about the vitiated *Pittha* humour. The vitiated *Pittha* humour instigate to Mental illness. There is a controversy in the vitiated *Pittha* humour and mental illness. In spite of that *Siddhars* has used this for the treatment of mental illness.

Conclusion

It is concluded that the Siddhars have paved a protocolled treatment plan for mental illness using the plants taste, potency, post absorption state with their instinct. These plants have high therapeutic efficacy against mental illness and have been proven to have antipsychotic activity in scientific backgrounds.

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