

Sarvam snehamayam - Clinical significance of Snehapana in Psychological disorders in accordance with Central Nervous System

Seminar Article

Sowjanya J^{1*}, Prashanth Gokhale²

1. PG Scholar, 2. Associate Professor, Department of Kayachikitsa
A.L.N Rao Ayurvedic Memorial College & Hospital, Koppa taluk, Chickmagalore District, Karnataka.

Abstract

Psychological disorders encompasses a broad range of conditions characterized by patterns of abnormal behavioural and psychological signs and symptoms that result in dysfunction. Worldwide 1 in 7 subjects, with the prevalence of 970 million and DALYs of 10 percent as a share of total disease burden are suffering from one or more psychological disorders, whereas in India the suffering rate is 7.5 percent of total Indian population which constitutes one sixth of all health related disorders with DALYs of 2443 per one lakh and 15 percent of the global mental, neurological and substance abuse disorder burden. As the psychiatric medications dose not cure mental illness, but they can only act on the symptoms, *Ayurveda* being a holistic science plays a vital role in not only improving the symptoms but also acts on organs and systems affected, in turn providing whole support by means of three basic treatment modalities: *Daiva vyapashraya*, *Yukti vyapashraya* and *Satvavajaya* which primarily includes *Snehapana* which acts: 1. Based on the composition of CNS, 2. Drug distribution in blood and Blood brain barrier, 3. Action on enteric nervous system- brain in the belly and 4. Action on neurotransmitters and neurological pathways effectively in all the Psychological disorders by its specialized pharmacological qualities and action.

Key Words: *Ayurveda, Snehapana, Psychological disorders, CNS, Drug distribution, Blood brain barrier.*

Introduction

Psychological disorders encompasses a broad range of conditions characterised by patterns of abnormal behavioural and psychological signs and symptoms that result in dysfunction-(DSM-IV, 1994). According to American Psychiatric Association:-Mental illnesses are health conditions involving changes in emotion, thinking or behaviour (or a combination of these). Mental illnesses are associated with distress and/or problems functioning in social, work or family activities.

Ayurvedic definition of psychological disorders is stated as “*Mano Buddhi Sanjna Jnana Smrthi Bhakthi Sheela Chesta Achara vibhramam vidyat*”-(*Ch. Ni 7/5*)(1,2) which refers to perversion of mind, intellect, consciousness, knowledge, memory, desire, manners, behaviour and conduct.

Causes(4)

Combination of biological, psychological and environmental factors such as:

1. Stress
2. Paediatric autoimmune neuropsychiatric disorder (PANDA), Obsessive compulsive disorder (Streptococcus bacterial infection)
3. Dementia- Memory disorders, personality changes and impaired reasoning.
4. Autism spectrum disorder
5. Anxiety, Depression, Paranoia (person loses touch with reality/ delusions)
6. Poor nutrition, Exposure to toxins such as lead.

According to Ayurveda

1. *Ishtasya alabhat* (Not acquiring the desired)
2. *Labhat anishtasya* (Acquiring undesired)
3. *Trividha karana* (Other three Causes)
 - *Asatmyendriyarthasamyoga* (Incompatible relation of senses with their object)
 - *Prajnaparadha* (Intellectual error)
 - *Parinama* (Time factor)

Classification

Based on 5 diagnostic axes specified by DSM-IV (Diagnostic and Statistical Manual of Mental Disorders)

*** Corresponding Author:**

Sowjanya J

Department of Kayachikitsa

A.L.N Rao Ayurvedic Memorial College & Hospital,

Koppa taluk, Chickmagalore District, Karnataka.

Email id - drsowjanya93@gmail.com

Table No.1. DSM-IV Classification of Psychological disorders (4)

AXIS 1	Clinical Disorders	Major depressive disorder, Post-traumatic stress disorder, Learning disorder such as reading or arithmetic disorders, Developmental disabilities, such as autistic disorder
AXIS 2	Personality Disorders or Mental Retardation	Mental retardation (MR)
AXIS 3	Medical or Physical Conditions	Cancer Diabetes
AXIS 4	Contributing Environmental or Psychosocial Factors	Job loss, divorce, financial problems or homelessness
AXIS 5	Global Assessment of Functioning The GAF is a number between 0 and 100	Indicates the level of functioning, or ability to engage in adaptive daily living.

According to Ayurveda

1. Diseases with primary mental origin and predominantly mental symptoms (*Kevala Manasika Rogas*)
2. Disease with primary mental origin and predominantly physical Symptoms (*Mano-Sharirika* i.e. Psychosomatic disorders)
3. Diseases with primary physical origin and predominantly mental symptoms (*Sharira-Manasika* i.e. Somato- psychic)
4. Diseases with primarily physical origin and predominantly physical symptoms
5. Diseases with primarily idiopathic origin and predominantly mental and physical symptoms.

Treatment (4): Although psychiatric medications does not cure mental illness, they can often significantly improve symptoms. Some of the most commonly used classes of prescription psychiatric medications include:

- **Antidepressants:** Inhibits re-uptake of neurotransmitters through selective receptors increasing the concentration of specific neurotransmitter around nerves in the brain. Example: Selective serotonin re-uptake inhibitor (SSRI).
- **Anti-anxiety medications:** Stimulation of neurotransmitters such as serotonin and Dopamine

receptors on nerves or by increasing GABA (Gamma amino butyric acid) Example: Buspirone, Benzodiazepines

- **Mood-stabilising medications:** Reduces episodes of Mania and depression by modulating GABA, Example: Lithium
- **Antipsychotic medications:** Blocks dopamine receptors in the dopaminergic pathway of brain: Example: Chlorpromazine
- **Substance abuse treatment:** Prevention or withdrawal of drugs, Counselling, rehabilitation.
- **Psychotherapy**, also called talk therapy, involves talking about the condition and related issues with a mental health provider. During psychotherapy, one can learn about the condition, moods, feelings, thoughts and behaviour. With the insights and knowledge gained, one can learn coping and stress management skills.
- **Brain-stimulation treatments:** They include electroconvulsive therapy, Transcranial magnetic stimulation, an experimental treatment called deep brain stimulation and vagus nerve stimulation.
- **Hospital and residential treatment programs**

According to Ayurveda

1. *Vikara Anutpattikara Chikitsa* (Preventive measures)
2. *Vikarasya Chikitsa* (Curative measures)

As the psychiatric medications dose not cure mental illness, but they can only act on the symptoms, *Ayurveda* being a holistic science plays a vital role in not only improving the symptoms but also acts on organs and systems affected, in turn providing whole support by means of three basic treatment modalities: *Daiva vyapashraya* (Spiritual measures) *Yukti vyapashraya* (Pharmacological therapies) and *Satvavajaya* (Psychotherapies) which primarily includes *Snehapana* (Oleation therapy).

Aims and Objectives

To analyse the efficacy of *Snehapana* in Psychological disorders by its specialised pharmacological qualities and action.

Materials and Methods

The present study is aimed to collect, analyse and interpret all the available literatures including Ayurvedic classics and contemporary science, including the published scientific papers in reputed journals both in printed and online media.

The following are the different varieties of *Snehapana* which acts on Psychological disorders:

Table No.2. Pharmacological qualities of *Snehapana* in Psychological Disorders (1, 2, 3)

<i>Ghrita</i>	<i>Dhi</i> (Intellect), <i>Smruti</i> (Memory), <i>Mati</i> (Knowledge) enhancer
<i>Taila</i>	<i>Medhakara</i> (Intellect enhancer)
<i>Vasa</i>	<i>Marmarujahara</i> (Relives all sorts of pain)
<i>Majja</i>	<i>Balavardhana</i> (enhances Strength)

Action of *Snehapana* in Psychological disorders (5, 6, 7, 8, 9, 10, 11, 12, 13, 14)
Based on the composition of CNS and *Sneha*

Image No 1. Composition of Human Brain

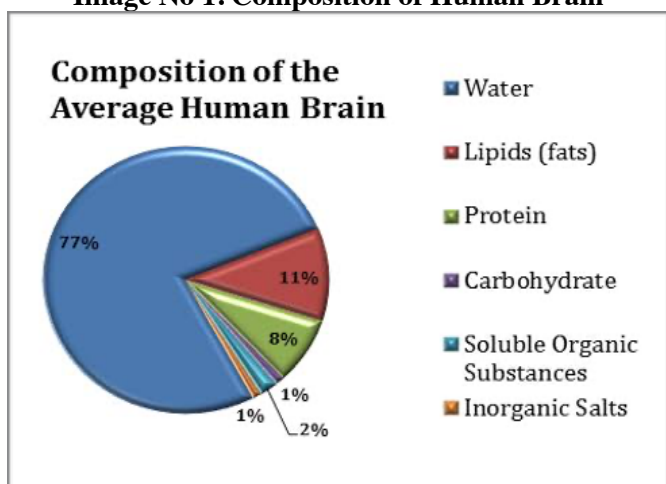
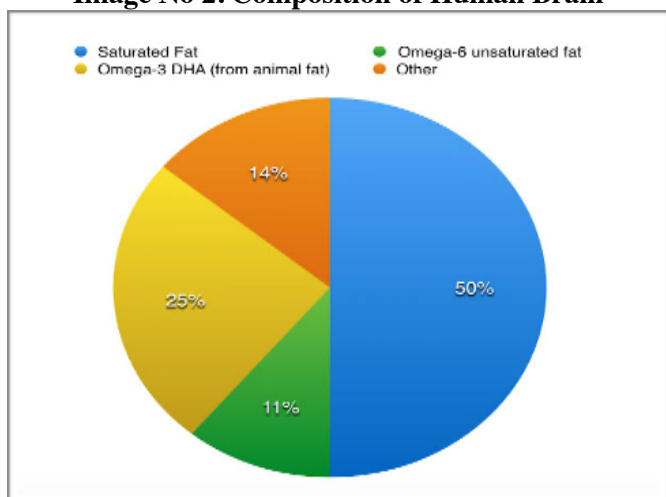


Image No 2. Composition of Human Brain



Composition of *Sneha*
Table No.3. Composition of *Sneha*

Saturated fat	Poly unsaturated fatty acids (PUFA)
Omega 3 fatty acids	Docosahexaenoic acid (DHA)
Linoleic acid	Medium chained Triglycerides
Vitamin A, D, E, K	Monoglycerides, Diglycerides, Triglycerides, Ketoacid glyceride
Phospholipids	Free fatty acids

Action on CNS

- Beneficial role in case of Memory enhancement, Dementia, Stress management, Depression, Anxiety, Psychosis, Epilepsy.
- Effective in case of Bipolar disorders, Schizophrenia, borderline personality disorders, OCD, Attention deficit disorder Mood disorders and Insomnia.
- Acts on brain’s cognitive function, effectiveness in Alzheimer’s disease, Parkinsonism, Atherosclerosis, Diabetes, Autoimmune disorders and also occurrence is lessened.
- Enhances formation of Serotonin.

Drug distribution in blood and Blood brain barrier:

The influential factors of drug distribution in blood are mainly:

- Difference in blood flow
- Lipid solubility
- Ionization

An aqueous soluble drugs are absorbed in extra cellular spaces, do not diffuse to CSF and other body cavities whereas Lipid soluble drugs are readily available to intra and extra cellular spaces.

Blood brain barrier has Lipophilic molecular structure which makes the lipids and lipid soluble drugs pass easily through it. The lipophilic nature of *Sneha* facilitates entry of *Sneha* or formulations prepared with *Sneha* into the cell and its delivery to mitochondria, micro some and nuclear membrane as cell membrane also contains lipids.

Action on enteric nervous system - brain in the belly

- 90% of Serotonin, 50% dopamine and 30 other neurotransmitters are produced and co regulated by Intestines in the enteric nervous system also called as “gut brain” by Cholesterol mechanism.
- These neurotransmitters regulate Mood, Memory, Ability to learn, Stress levels, Sleep patterns, mental functioning and other essential body processes.
- If the amount of cholesterol is low, it hampers the proper functioning of neurotransmitters.
- Thus, *Sneha* having necessary cholesterols produces and regulate Serotonin.

Action on neurotransmitters and neurological pathways

Unsaturated fatty acids present in *Sneha* acts on brain tissue and neurological pathways.

Sneha possess the CNS antidepressant action by synapse block of afferent pathway, enhancing serotonin levels in hypothalamus and hippocampus.

Discussion

Psychological disorders has become significant public health crisis in the present world as in Worldwide 1 in 7 subjects, with the prevalence of 970 million and

DALYs of 10 percent as a share of total disease burden are suffering from one or more psychological disorders, Whereas in India the suffering rate is 7.5 percent of total Indian population which constitutes one sixth of all health related disorders with DALYs of 2443 per one lakh and 15 percent of the global mental, neurological and substance abuse disorder burden.

The study was planned to analyze the efficacy of *Snehapana* in Psychological disorders. The pharmacological qualities and action of *Sneha* on Psychological disorders are elaborated in detail which acts on CNS, Drug distribution in blood and Blood brain barrier, enteric nervous system, Neurotransmitters and Neurological pathways.

Conclusion

The logical conclusions based on the above study can be drawn as:

Manasika Vikaras can be correlated to Psychological disorders, which is commonly seen in society as a prominent problem.

The causative factors such as Genetics, Infections, Brain defects / Injury Prenatal damage, Substance Abuse and Other factors are brought under the umbrella of *Ishtasya alabhat, Labhat anishtasya, Trividha karana –Asatmendriyartham samyoga, Prajnaparadha* and *Parinama*.

As the psychiatric medications dose not cure mental illness, but they can only act on the symptoms, *Snehapana* plays a vital role in not only improving the symptoms but also acts on organs and systems affected, in turn providing whole support.

Based on the above study and studies so far, it can be concluded that *Snehapana* has a significant role in all Psychological disorders by its effective pharmacological qualities and action and also there is a further scope of research in this attribute.

Reference

1. Jadavji Trikamji Acharya. Sushruta Samhita of Acharya Sushruta. Reprint:2014, Varanasi; Chaukambha Prakashana; 167p, 180p,171p
2. Jadavji Trikamji Acharya. Charaka Samhita of Acharya Charaka, Reprint: 2014, Varanasi; Chaukambha Prakashana; 82p, 223p
3. Anna Moreswara Kunte. Ashtanga Hrudaya of Acharya Vagbhata. Reprint:2014, Varanasi; Chaukambha Orientalia; 73p, 77p, 244p
4. Sandhya A Kamath, Siddharth N Shah, API Textbook of Medicine- Volume 2, 11th ed.
5. Vandana S Yeragi, Dhyaneswar.G.K, Study of the effect of Tila taila in Nidrabhramsha; Medplus
6. Kshama Gupta, Prasad Mamidi, Ayurvedic management of Schizophrenia: Report of 2 cases; International Research Journal of pharmacy.
7. Archana Madhavi, Savitha.H.P, A critical review on the usage of Ghrita in Unmada; Research gate.
8. G Marano, Omega 3 fatty acids and Schizophrenia: Evidences and recommendations; Pub Med.
9. Yogita ahir, HM Chandola, Evaluation of clinical effect of Kushmandadi Ghrita in generalized anxiety disorder; Indian journal of Traditional knowledge.
10. Babar.R.P, S.M.gund, Concept of Medicated ghee in the management of Childhood epilepsy (Apsmara); Research gate.
11. Yogita Surendra karandikar, A comparison between the effect of cow ghee and butter on memory and lipid profile of Westar rats; JCDR
12. <https://healthyayurveda.com>, updated on 19-Sep-2015
13. <https://bebrainfit.com>, updated on November 1, 2019
14. <https://drjockers.com>, browsed on 11/11/2018.
