



Science

## **A SHORT REVIEW ON UNNMAD W.S.R. TO ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)**

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### **Abstract**

Unnmad is one type of mansik-vyadhi which is most common form of mental disorder. Unnmad can be co-related with Attention deficit hyperactivity disorder (ADHD). Today's modern era day to day psychosomatic disorder affected children are increased in pediatric clinics, out of that Attention deficit hyperactivity disorder (ADHD) one of them. Due to increased distractibility and difficulty sustaining attention; poor impulse control and decreased self-inhibitory capacity; and motor over activity and motor restlessness. etc leads to this disease.

Attention Deficit Hyperactivity Disorder (ADHD) neurobehavioral disorder of childhood and one of among the most prevalent chronic health conditions affecting school-age children. In modern medicine except presynaptic dopaminergic agonists, there is no other treatment for this disease While traditional life science Ayurveda has most effective solution over this. The present article is an attempt to highlighting on details of unnmada with co-relating with ADHD.

**Keywords:** Unnmad; Attention Deficit Hyperactivity Disorder (ADHD); Treatment; Review.

**Cite This Article:** Dr. Ganesh S Chavan, and Dr. Renu B Rathi. (2019). "A SHORT REVIEW ON UNNMAD W.S.R. TO ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)." *International Journal of Research - Granthaalayah*, 7(1), 25-33. <https://doi.org/10.29121/granthaalayah.v7.i1.2019.1029>.

### **1. Introduction**

All the psychiatric diseases in Ayurveda have been described under the heading of 'manasvyadhi'. "unnmadam punah mano buddhi sadnya dhyan smruti mati bhakti shil chesta acharvibhram vidhyat" it's the one line unique identity of unnmada.<sup>(1)</sup> due to etiology of vitiation *dhee*, *dhriti* and *smriti* that causes imbalance of *kala* and *karma* which results into improper contact of the senses with their objectives (*Asatmendriyarthasamyoga*) and give rise to inattention, hyperactivity and impulsivity<sup>(2)</sup>. The Prevalence rate of ADHD among primary school children was found to be 11.32%<sup>(3)</sup>. The ADHD subtype is rare (about 2%), while the ADHD subtype is the predominant one and is associated with severe impairment. There is no satisfactory

treatment in any other system of medicine except in Ayurveda, where a lot of description about its etiopathogenesis and treatment is available right from the Vedic and *Samhita* period. Hence it is necessary to study this disease thoroughly.

### Definition of Unnmad

According to *Acharya Charak Unnmad*, is the *manasvyadhi* is which understood as the unsettled condition of the *Manas* (mind), *Buddhi* (understanding), *Samjna* (consciousness), *Gnana* (perception), *Smriti* (memory), *Bhakti* (inclination), *Sheela* (character), *Chesta* (behaviour), and *Achara* (conduct)<sup>(4)</sup>.

### Nidan Panchaka of Unnmad

Nidan: the hetu of the Unnmad are given as –

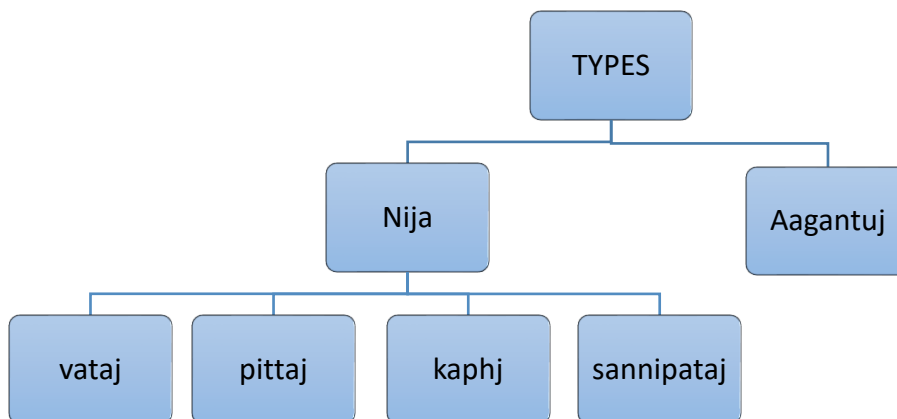
#### General *hetu* of Unnmad<sup>(5)</sup>

- 1) Aaharaja Hetu
  - 2) Viharaja Hetu
- **Aaharaja-Hetu:** Incompatible, dirty, impure food like fruits and milk, heavy diet like non-veg, dhadhi, bekari products etc increases tridoshas
  - **Viharaja-Hetu:** disrespect of Dev (God), Guru (Teachers), Brahmins (learned), excessive *bhaya* (fear), *Harsha* (joy) to produce *manobhigata* disturbing all the normal mental functions increases rajas and *tamas mansik doshas*. Agantu Unmaadas arising Himsa (cruelty) the Rati (lust) and Abhyarchana (extortion)<sup>(6)</sup>.

### Types<sup>(7)</sup>

classification of Unmaada is based on the prognosis, the knowledge of which is very essential in treating any disease is Focusing on aetiology, mode of manifestation, prognosis and principles of treatment he offers two more classifications as

*Nija* and *Agantu Nija Unmada* is further divided into four kinds. They are also known as *Doshaja Unmaadas* (those arising from the morbidity of *Doshas*. Out of these the fourth kind namely *Sannipataja unmaada*. (insanity of tridiscordance) is said to be incurable



According to Acharya shushruta and vagbhata there are 6 types of unnmad manas unnmad inciuded in this. <sup>(8,9)</sup>

### **Samprapti (Pathogenesis) <sup>(10)</sup>**

Acharyas have described the following *Samprapati* of the disease.

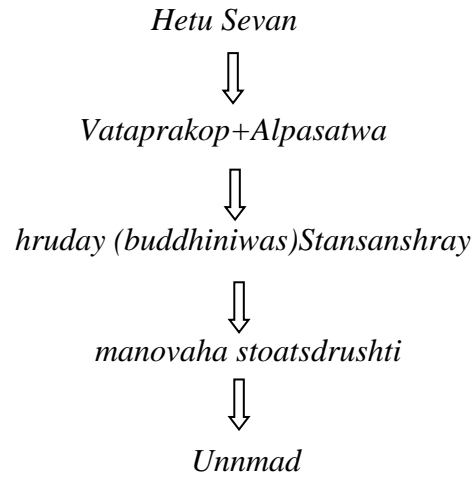


Table 1 : Showing Samprapti-Ghatakas of Unnmad:

<b>Samprapti Ghatakas of Unnmad</b>	
<b>Doshas</b>	Sharirik –Tridosha Mansik- rajas,tamas
<b>Dushya</b>	Mana
<b>Agni</b>	Jatharagnimandya
<b>Srotas</b>	Manovaha strotas
<b>Srotodusti Prakara</b>	Sanga
<b>Udbhavasthana</b>	Hridaya
<b>Adhithana</b>	Mana,indriya, buddhi
<b>Vyadhimarga</b>	Madhyam

### **Rupa <sup>(11,12)</sup>**

Rupa of unnmad, according to different Ayurvedic classics areas –

Dhi vibrama

satwa pariplawa

drushti adhirata

abaddh vakya

hruday shunyata

According to different types of *dosha* involvement the symptoms should be given below

<i>Vataj</i>	<i>pittaj</i>	<i>kaphaj</i>	<i>sannipataj</i>	<i>aagantuj</i>
<i>astanhas, smit nrutya, gayan, radan</i> (inopportune laughing, smiling, dancing, singing, speaking, movement of body)	<i>amarsha</i> (intolerance)	<i>strikamata</i> (desire to sex)		<i>sarambha</i> (agitation)
<i>fenagamsyat</i> (foaming through mouth)	<i>sarambha</i> (agitation)	<i>lalashikan stravam</i> (extra secretion through mouth and nose)		<i>maithuni bhava rajaswala</i> (sex during menses <i>sunya gruh vase</i> (live alone)
<i>yanamatanee</i> (moving on non-vehicles)	<i>satarjan</i> (terrorizing)	<i>Anannabhilasha</i> (anorexia)	showing symptoms	<i>sunya gruh vase</i> (live alone)
<i>bahubhashita</i> (irrilivant talking)	<i>nagnata</i> (nakedness)	<i>alpa chakraman</i> (slow movements)	of all doshas	<i>nagnatwa</i> (nakedness)
<i>parushya</i> (emaciation)	<i>krodh</i> (anger)	<i>ekant priyata</i> (loving to live alone)		disrespect of Dev, Guru, Brahmins
<i>karshya</i> (lean and thin)	<i>atidravan</i> (excessive movement) excessive movement	<i>nidradhikya</i> (excessive sleeping)		<i>mastilguddyochiste</i> (eating wasted food)
<i>jirnabala</i> (less immunity)	<i>pitwarnata</i> (yellowish lustre)	<i>swet varnata</i> (whitish body)		

### Treatment <sup>(13)</sup>

Remedial measures for the curable 2 types are as follows:

recitation of *mantras*, wearing of roots and gems, auspicious rites, offerings, gifts, oblations, religious rules, vow, propitiation, fasting, blessings, prostration, visit to religious places etc.

The therapeutic measures for the 3 curable types of insanity are: unction, fomentation, emesis, purgation, non-unctuous and unctuous enema, pacification, snuffing, smoking, fumigation, collyrium, inhalation of herbal juice, blowing (into the nose), massage, paste, bath, after-paste, striking, tying, confinement, frightening, inducing surprise and forgetting, desaturation and bloodletting, proper dietetic regimen according to dosas, and other remedial measures which are contrary to etiological factors.

## 2. Modern Review of ADHD <sup>(14)</sup>

### • Definition

Attention deficit hyperactivity disorder (ADHD) is a behavioural disorder that includes symptoms such as inattentiveness, hyperactivity and impulsiveness.

### • Causes

The exact cause of attention deficit hyperactivity disorder (ADHD) is not fully understood, although a combination of factors is thought to be responsible.

- 1) **Genetics**- ADHD tends to run in families and, in most cases, it's thought the genes you inherit from your parents are a significant factor in developing the condition.
- 2) **Brain function and structure** - Studies involving brain scans have suggested that certain areas of the brain may be smaller in people with ADHD, whereas other areas may be larger.
- 3) **Groups at risk**-
  - who were born prematurely (before the 37th week of pregnancy) or with a low birth weight
  - with epilepsy
  - with brain damage

### Symptoms in Children and Teenagers

- The symptoms of ADHD in children and teenagers are well defined, and they're usually noticeable before the age of 6. They occur in more than one situation, such as at home and at school.

### Inattentiveness

The main signs of inattentiveness are:

- having a short attention span and being easily distracted
- making careless mistakes – for example, in schoolwork
- appearing forgetful or losing things
- being unable to stick to tasks that are tedious or time-consuming
- appearing to be unable to listen to or carry out instructions
- constantly changing activity or task
- having difficulty organizing tasks
- having difficulty organising tasks

### Hyperactivity and Impulsiveness

The main signs of hyperactivity and impulsiveness are:

- being unable to sit still, especially in calm or quiet surroundings
- constantly fidgeting
- being unable to concentrate on tasks
- excessive physical movement
- excessive talking
- being unable to wait their turn
- acting without thinking
- interrupting conversations
- little or no sense of danger

These symptoms can cause significant problems in a child's life, such as underachievement at school, poor social interaction with other children and adults, and problems with discipline.

### Medication

There are 5 types of medication licensed for the treatment of ADHD:

methylphenidate  
dexamfetamine  
lisdexamfetamine  
atomoxetine

These medications are not a permanent cure for ADHD but may help someone with the condition concentrate better, be less impulsive, feel calmer, and learn and practice new skills.

### Ayurvedic Management of ADHD:

The *Ayurvedic* treatment of ADHD involves correction or balancing of *tarpaka kapha*, *sadhaka pitta*, and *prana vayu*, the *doshas* present in the brain.

- 1) **Nootropic herbs:** following herbs have possible action on psycho-neurological deficits; *Ashwagandha*, *Brahmi*, *Shanka pushpi*, *Jatamansi* (*Nardostachys Jatamansi*, *Vacha* (*Acoruscalamus*). These may act as a mild stimulant and sedative also depending on what mood state needs to be balanced.
- **Ashwagandha:** The use of *Ashwagandha* in Indian culture for a very long time for all age groups irrespective to sexes and even during pregnancy without any side effects.<sup>(15)</sup> Clinical trials and animal research support the use of WS for anxiety, cognitive and neurological disorders i.e. Two new glycowithanolides, sitoindoside IX (1) and sitoindoside X (2), isolated from *Withania somniferous* Dun., were evaluated for their immunomodulatory and CNS effects (anti-stress, memory and learning) in laboratory animals.<sup>(16)</sup>
- **Brahmi:** It has been traditionally used for its medicinal properties as a neuro-protective and protects the nerves degeneration. It effectively treats depression and epilepsy and it has been observed that *Brahmi acts as anti- depressant* properties equal to modern anti-depressant medicines.<sup>(17)</sup>
- **Vacha:** The methanol and acetone extract of *Acorus calamus* leaves was evaluated for their CNS activity in mice. They showed the spontaneous locomotors activity for immobility by time using through forced timed swim test, diazepam induced sleeping time and motor impairment assessment using Rota rod for CNS depression/ analytic activity of ACME and ACAE in mice.<sup>(18)</sup> The various methods which is used for inducing the experimental epileptic models induces the recurrent seizures and epileptic discharge similar to humans post traumatic epilepsy through generation of free radicals into sensorimotor.<sup>(19)</sup>
- **Jatamansi:** It has been widely used for medicine and in perfumery for centuries in India. It is valued for many medicinal properties such as anti-lipid per oxidative, antioxidant, sedative, tranquilizing, antihypertensive, antidepressant-like activity, anticonvulsant activity and hypotensive properties and several nervous disorders such as epilepsy, neurosis, insomnia, excitation, alzheimer's disease, learning and memory disorders.<sup>(20)</sup>
- **Tinospora cordifolia:** It is used as a *Rasayana* in Ayurveda since *vedic* period for treating and prevention of many diseases. Previous studies suggests the effect of *Tinospora cordifolia* on learning and memory in normal rats and on cyclosporine induced memory

deficits, both alcoholic and aqueous extract of *T. cordifolia* enhanced the cognition in normal rats as were seen in behavioral tests – Hebb William maze and the passive avoidance task. <sup>(21)</sup>

2) **Panchakarma** – *Abhayanga*, *Shirodhara* and *Shiro Pichhu*.

- **Abhayang** (oleationtherapy): *Abhyanga* is the process of application of plain / medicated oil or *Sneha Dravya* over the body with massage. <sup>(22)</sup> *Snehana* therapy is useful for promoting strength, nourishment (bulk), vitality (energy) to the deficient part and particular required area of the body. The *abhayanga* with medicated oils i.e. *Chandanaaadhi*, *Mahanarayana* and *Bala* are provides stimulation to the nervous system improves the sensory motor integration.
- **Shirodhara**: *Shirodhara* is a type of *Murdha taila*<sup>(23)</sup> (Application of oil to the head/ scalp) in which prescribed medicated oil/ liquid is continuously poured over the forehead and then allowed to flow over the scalp from a specific height for a certain period of time. *Mahanarayana* and *Bala* are more effective in treating patients of ADHD by lipophilic and hydrophilic active principles of *Vatavyadhinashaka* (*Vata* normalizing) drugs, which may modulate the secretions of various neurotransmitters and hormones in brain. Constant flow of liquid use in *Shirodhara* act as relax the mind, calms & tranquilizer the patients. <sup>(24)</sup>

3) **Behavioral therapy** (*SatvaAvajayachikitsa*): *Sattvavajaya Chikitsa* of ADHD is the commonest neuro-bherival disorders in pediatrics age group, so some protocols adopted for treating these type of patients i.e.

- Counseling to the parents, family members, teachers and child itself is of great help in treating as well as prevention of ADHD patients.
- The use of medicines which have properties of cognitive function along with Meditation or *Yoga*.
- It is assisted with the daily diet regulation and making sleep time-table of an affected child. Diet should be of nutritional balance, on proper time, avoiding excess oil and spice, rich in antioxidants and immunity boosters.
- Sound sleep and a good amount of water intake is also a must.
- Scalp massage (*Shiro abhyanga*), massage of soles of feet with sesame oil is also beneficial in decreased hyperactive.
- Daily work should be listed and overcoming problems (e.g. during writing) should be handled one by one and slowly.
- Daily use of Cow's ghee, cod-liver oil, are playing good role to develop brain activities and prevent developing of ADHD.
- The previous studies have been shown the nootropic effect of some herbal medications which play a major role in treating as well as prevention of ADHD, such as:

4) **Dietary Management**

Most of ADHD affected patients have the proper nutrients deficient that's why, parents who are troubled with medicating their children are often more comfortable with the initiative of dietary interventions. <sup>(25)</sup> Proper nutrition is essential for growing children, and children who eat a diet high in "junk food" in early childhood are more likely to exhibit hyperactivity by age seven; this may reflect a long-term nutritional imbalance. <sup>(26)</sup> So advised the parents to refined, carbohydrates,



sugars, and processed foods containing additives should be completely eliminated from the diet.

### 3. Conclusion

Psychiatric disorder is well explained in Ayurvedic samhita. That ancient knowledge of Ayurveda will help in diagnosis and management *unmad* in present era very well. In *Ayurveda* it may be correlated to *Unmad* (insanity) disease which is *Vatika Vikara*. So, line of treatment according to *Vatika* disorders such as neuro-protective medications along with *Pancha karma* therapies have definitely shown outcome on the disease and thus pave way to further researches in employing *Ayurvedic* methods towards the management of *ADHD*. So its review article is an attempt to highlighting on details *unmada with co-relating with ADHD*.

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