

ATTENTION DEFICIT HYPER ACTIVITY DISORDER (ADHD) - AN AYURVEDIC PERSPECTIVE WITH SPECIAL REFERENCE TO UNMADA

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ABSTRACT

Attention Deficit Hyper Activity Disorder is the most common neuro behavioral disorder of childhood. It is characterized by inattention, impulsiveness and hyper activity persisting for at least 6months, to a degree that is inconsistent with developmental level and that negatively impact social academic and occupational achievements¹. About one third to one half of patients with ADHD will have persistent symptoms in to adulthood. Children with untreated ADHD often have a life time of sufferings and often have a number of associated complications. Structural, functional, physiological abnormalities in various regions of the brain by complex interactive operations of genetic and environmental factors lead to the pathogenesis of ADHD. Statistics shows an upward trend in the prevalence of ADHD. Even though the exact co-relation of ADHD is not found in our classics, numerous neuro - behavior symptoms present in ADHD was found scattered throughout our classics. As these symptoms are collectively found under the description of *Unmada*, ADHD can be taken as *Bala unmada* and can be treated accordingly. This paper mainly aims to understand and validate the condition like ADHD in an Ayurvedic perspective which is essential for utilizing the individualized and multi model treatment approaches of Ayurveda and for developing the preventive strategies for that condition.

Keywords: ADHD, *Unmada*.

INTRODUCTION

Attention Deficit Hyperactivity Disorder (ADHD) is the most common neurobehavioral disorder of childhood. It is characterized by inattention, impulsiveness and hyperactivity persisting for at least 6 months, to a degree that is inconsistent with developmental level and that negatively impact social, academic and occupational achievements¹. The disorder is often chronic, with one third to one half of those affected retaining the condition in to adulthood and causes a lifetime of

sufferings. Children affected with ADHD can experience academic failure and behaviour problems, poor peer relationship and a low self-esteem. Among Adolescents and Adults, ADHD may often lead to anti-social behavior, substance abuse, anxiety disorder, stuttering and other speech and language problems. Statistics shows an increase in prevalence of ADHD. According to the study conducted by CDC (Centers for Disease Control and Prevention) in 2012-2014,

percentage of children aged 5 to 17 years with diagnosed ADHD was 10.2%. Anganwadi based systematic sample survey, in Kerala showed a prevalence rate of 11.3%³.

Multiple factors have been implicated in the etiology of ADHD. Complex interactive operations of genetic and environmental factors result in marked difference in manifestations, severity and co-morbidity of ADHD symptoms. Converging evidence from various research studies has suggested that ADHD has a neuro biological basis and has been associated with possible structural, functional, physiological abnormalities in various regions of the brain. Nowadays with the help of various diagnostic criteria's and diagnostic tools it is possible to determine the condition as early as possible.

Even though the exact co-relation of ADHD is not found in our classics, the symptoms of abnormal behavior are found scattered throughout classics. Variation of the three body humors and mental humors at the time of fertilization or later produces various abnormal behavior patterns in individuals. All the six *prakriti*'s (physical constitution) except the *sama prakriti* shows some abnormal behaviour patterns as there is definite predominance of particular *doshas* in them.

Among the psychic constitution *rajasa* and *tamasa prakriti* shows abnormal *behavioural* pattern. While describing the *Nanatmaja vyadhis*, various behavioural abnormalities were mentioned. Description of abnormal behaviour such as *Anavastitachittatwam* (instability mind), *manovibhramam* (Perversion of mind), *Buddivibhramam* (perversion of intellect), *Smritivibhramam* (perversion of memory), *Seelavibhrama* (perversion of manner), *Chesta vibhrama* (perversion of behaviour) are seen scattered throughout our classics. As these neuro behavioural symptoms have been mentioned collectively under the description of *Unmada Vyadhi* and these symptoms closely resemble the clinical features and associated features of ADHD, this disease can be taken as *Bala unmada* and can be treated accordingly.

Unmada spectrum disorders and ADHD:

Unmada, described in Ayurveda classics is an umbrella term for a variety of psychiatric/psychosomatic disorders. *Unmada* is the excited state of the mind caused by aggravated *sarira* and *mano doshas* and pervading of them to the *manovaha srotas* or channels of mind. Very definition of *unmada* incorporates various forms of inappropriate actions as a result of distortion of mind, intellect, consciousness, knowledge, desire, manner and behavior, physical acting and learned skills.

In *Charakam Nidana Unmadam* is defined as the '*Mano, Budhi, Sajna, Jnana, Smriti, Bhati, Seela, Chesta and Achara Vibhramam*'⁴ (distortion of mind, intellect, consciousness, knowledge, desire, manner and behavior, physical acting and learned skills).

In *Manovibrama* /perversion of mind, the mind loss the control over the senses. So the reaction to unwanted stimuli, loss of inhibitory functions, impaired deduction and decision making occurred. This leads to the signs and symptoms of ADHD.

In *BudhiVibhrama* /Perversion of intellect, the normal function of *buddhi* - decisive cognition of the *indriyarthas* by the respective *indriya buddhi* and specific direction for requisite motor function or *chesta*, either vocal or physical -get impaired leads to the improper perception of things because of which a person views eternal things as ephemeral and harmful things as useful and vice versa. Children affected with ADHD often show risky behaviour due to this *budhi vibhrama*.

A person affected by the *jnana vibhrama* /Perversion of knowledge may not be able to take a proper decision in proper time and as a result of which he may resort to inappropriate actions. Due to *budhi vibhrama*, *jnana vibhrama* also occurs which leads to difficulty in reading, writing and arithmetic in ADHD children.

Smriti bhramsa /Perversion of memory- occurs due to over powering of mind by *rajas* and *tamas*. *Smriti vibhrama* leads to inability of the child to learn from past experiences and hence the child will behave impulsively. Here *manoarthas* are also deranged leading to inappropriate thought processes and inappropriate decisions, which will also lead to impulsive behav-

ious. Thus the child blurts out answers at wrong places, unable to wait for turn, often intrude on others, becomes aggressive and often engages in dangerous activities.

Due to perversion of desire/ *Bhakti Vibhrama*, disinclination develops for things desired previously. The patient may show interest in strange things which leads to inappropriate actions. Children with ADHD shows less interest in activities which needs constant attention. But most of them spend long time in watching TV programs, cartoons, films, etc. which needs lesser mental strain.

Due to *Seela Vibhrama* /Perversion of manners, a person, shows exaggerated emotions at improper time and place. The child may show sleep disturbances, likeness for particular tastes of foods and drinks, day sleep, night awakening, pica etc.

Due to *Cheshta Vibhrama* /perversion of behavior, the child squirms or fidgets in seat, unable to play or take part in leisure activities quietly and seem as if driven by a motor.

Due to perversion of conduct/ *Achara Vibhrama*, the patient resorts to such activities that are against the rules. The child may get involved in fights and quarrels because of impaired inhibitory functions of the intellect or the child may not attend to call by parents, may not listen to teachers etc.

The neurobehavioral symptoms of *Unmada*/ADHD are also explained under *prajnaparadha* or intellectual blasphemy. Impaired intellect -*Dhi*, *Dhrithi*, *Smriti*, if caused, an indulgence in unwholesome action, it is termed as *prajnaparadha*. In *dhee bhramsa*, identification of the objects (*tatkala vishaya jnana*) and acquiring knowledge about the object (*nischayatmika jnana*) are impaired. Thus a child with *dhee bhramsa* cannot recognize what is good and what is bad and he would continually respond to irrelevant stimuli. Also the child is not able to learn from his past experiences and thus continues to repeat his mistakes resulting in hyperactivity and impulsivity.

Dhriti restrains mind from harmful objects and controls mind to do things properly⁵. In *dhriti bhramsa*, the mind will start to perceive *ahitha arthas* / harmful objects. Inattention and impulsivity in ADHD are the

consequence of *dhriti bhramsa*. An ADHD patient has inability to delay a response despite the anticipation of negative stimulus consequences for the behavior and cannot sustain his attention to a particular for a long duration resulted in impulsivity and inattention. In ADHD, the child does not remember about the past experiences of pain or warnings from the parents and repeatedly engaged in dangerous activities due to *smriti bhramsa*.

NIDANA OF ADHD:

The various intrinsic and extrinsic etiological factors occurring prenatally, natively and postnatally, affects the behavioral integrity of an individual and cause ADHD.

1. *Nija Nidana* – Intrinsic factors

a. *Sahaja* (Genetic Factors) –

ADHD has a strong genetic basis. Vitiating of genetic material of parents by germline mutation/chromosomal abnormalities or vitiating of genetic material of embryo by de novo mutation often resulted in ADHD/genetic syndromes associated with ADHD. Charakacharya has described those abnormalities of microfine constituents of the germ cells, (*beeja*, *beejabhaga* and *beejabhagavayava*) to be responsible for congenital deformities in the fetus⁶. In some situation even though the genetic materials of parents are not vitiating, the progeny shows the disease⁸. This is considered as the result of past deeds and can be correlated with de-novo mutation after fertilization. Conglomeration of the six procreative factors (shat garpha bhavas) is also essential for the fulfillment of genetic continuity from generation to generations and for proper organogenesis. The *manas* and *buddhi* are derived from *atmaja* and *satvikabhavas*⁸. In the context of ADHD, the traits related to intellect and higher order psyche, which are passed from the *Atma*, are important and in the full blown clinical presentation of the disease many of these traits are found to be functioning abnormally. *Sattwaja bhavas* relevant in the context of ADHD includes *bhakti* (likings), *sheela* (character), *dwesha* (disliking, hated), *smriti* (recollection), *moha* (confusion), *matsarya* (jealousy), *shaurya* (courage), *bhaya* (fear), *krodha* (anger) *utsaha* (enthu-

siasm), *gambheerata* (seriousness) and *anavasthitatwam* (unsteadiness)⁹.

b. *Garbhaja Nidana [Janmabala pravrtta]* – Antenatal Factors.

Matru Ahara (dietary deficiencies, toxins, drugs), *Matuvihara* (maternal smoking and alcohol consumption) and *Ashayadosha* (Placenta Previa, abruptio placenta and cord abnormalities which in turn leads to fetal hypoxia and brain damage) leads to ADHD in children. Alcohol consumption by pregnant women would lead to *alpsmriti* (short memory span) and *anavasthita chittatwam* (inattention) in the child.¹⁰

c. *Jataja Nidana [Doshabalapravrtta]* - Postnatal Factors.

Postnatal factors include improper *ahara vihara*/ Diet and regimen of child.

The role of *ahara* is well established in the manifestation of psychopathology Consumption of vitiated breast milk and inadequate breast milk affects the mental development of child as it contains amino acids specific for brain development and serotonin synthesis. Studies showed that imbalance of serotonin-dopamine relationship is one of the major factors responsible for hyperactivity in an ADHD child. *Viruddha ahara* (incompatible food), *Dushta ahara* (polluted or improperly processed food) and *Ashuchi ahara* or *Malina ahara* (unhygienic food) is the important factor in the manifestation of psychological disorders like *Unmada*¹¹. Modern researchers have now established the relationship between diet and ADHD. In compactable foods produce inflammation at the molecular level and cause various psychological conditions like ADHD by hindering the metabolism of tissues (especially the brain tissues), and inhibiting the process of formation of tissues.

Vihara /regimens of child such as *Adharaneeya vegadharanam* (withholding/inhibiting the natural body urges) brings strain and disorders of nervous system by *vata pradhana tridosha*'s. As *Vata*, is acknowledged as the controller of mind and body, *vega dharana* leads to the manifestation of various psycho somatic disorders. *Adaranam* of *Dharaniya*

Vegas (suppressible urges) such as *Lobha* (greed), *Irshya* (envy/jealousy) etc impairs the synchrony of *manogunas* and cause *manovikara* like *unmada*. Sleep disturbances impair serotonin –melatonin metabolism and produce inattention and behaviour changes in ADHD children¹².

2. *Agantu Nidana [Peedakrta]* – Extrinsic factors.

Exogenous risk factor for ADHD/*Unmada* includes *bhootavesha*¹³/various bacterial and viral infections that may affect brain prenatally / postnatally, *Sirobhighata* and *Simanta marma abhighata* /TBI (Traumatic brain injury and mild concussive injury to the head, neck or upper back)¹⁴, *Visha*, *Upavisha* and *gara*¹⁵/ chronic exposure to various neuro toxic heavy metal such as Lead (Pb), Mercury (Hg), and Cadmium (Cd) etc. The over-indulgence (*athiyoga*), non-indulgence (*Ayoga*), and mis-indulgence (*mithya yoga*) of *mano arthas* which are responsible for afflicting *manas* and *budhi*¹⁸ is also considered as exogenous. It is told that children should not be frightened in any situation. In the case of ADHD, negative psychosocial environment like deprivation, abuse, neglect, and poor socioeconomic status are described as the etiological factors.

SAMPRAPATHI OF ADHD:

The *Samprapti ghataka* of ADHD can be categorized as follows:

Dosha:

Saririka

Vata – *Prana, Udana, Vyana*

Pitha – *Buddhi vaisheshika*

Kapha – *Tarpaka*

Manasika – *Rajas, Tamas*

Dushya – *Rasa, Majja.*

Srotas – *Manovaha Srotas.*

Dushti – *Sangam.*

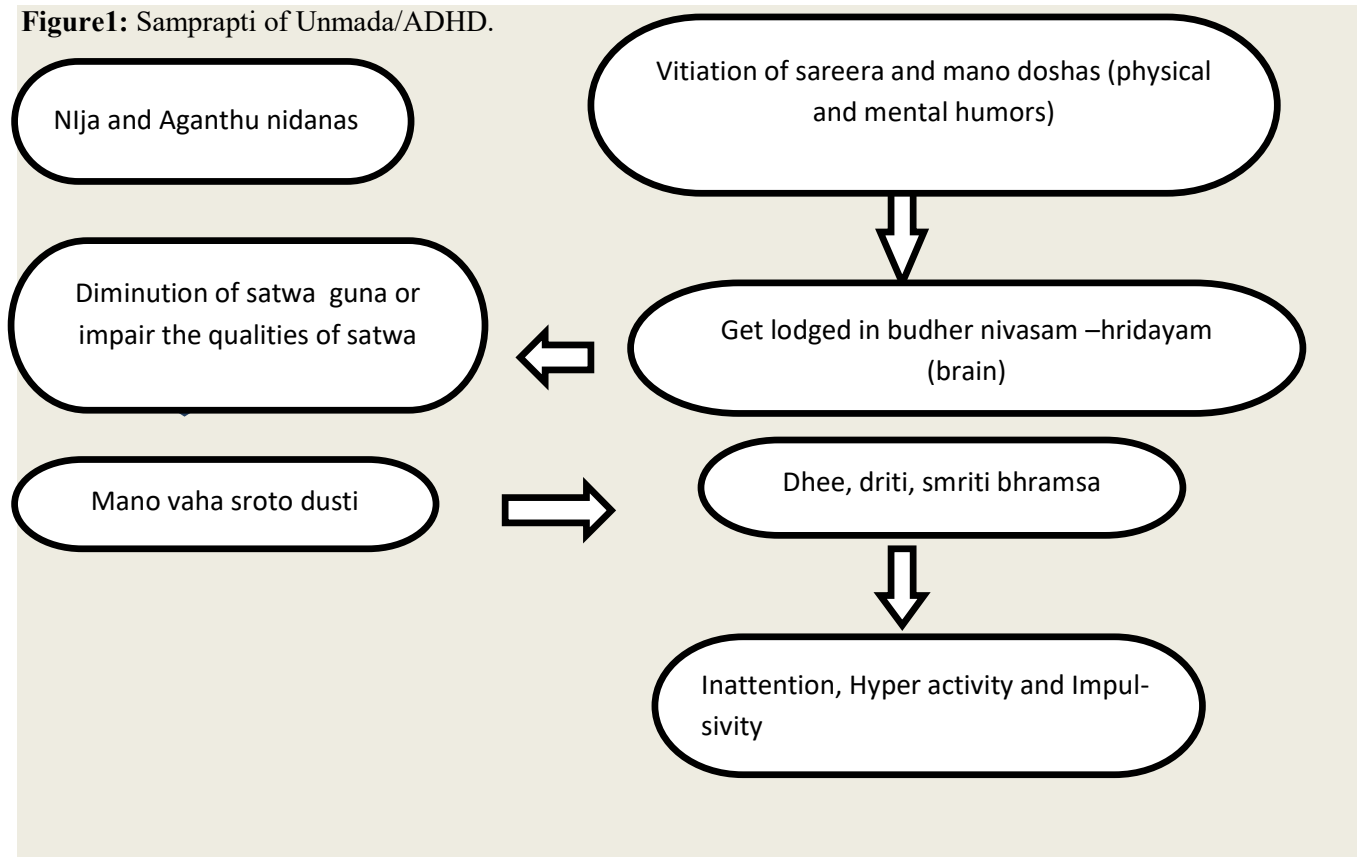
Agni – *Vishama, Tikshna.*

Udbhava sthana – *Mastishka, Hridaya.*

Vyakti sthana – *Sarva Sarira.*

Rogamarga – *Madhyama.*

Figure1: Samprapti of Unmada/ADHD.



POORVAROOPAM:

Though the symptoms of ADHD start very early in childhood, a clear manifestation of the disease will occur only during preschool or school age. But some prodromal symptoms like *chkshushorakulataha* (anxious look), *asyasamsravana* (drooling), *arochaka* or tastelessness, *avipaka* (indigestion) *asthane moha udwega* (anxiety in improper situations), *unmatta chittatwam* (deranged mental state)¹⁷ etc often observed in infancy and in toddlers, The prodromal symptoms of *Aganthuja unmada* such as *himsa ruchitwam* (liking for hurting), *kopanatwa* (temper tantrums), *arathi* (restlessness), impaired *ojas* (immune functions), *varna* (complexion), also seen as an early manifestation of ADHD.

SYMPTOMS OF ADHD-

The core symptoms of ADHD include inattention, hyper activity and impulsivity¹.

a. Inattention (*Anavasthita chitattwam*)

Due to derangement of *Dhee*, *Drithi* and *Smriti*, mind loses its capacity of concentration, attention and learn-

ing and the person indulges in irrelevant tasks and dangerous activities. *Vata vridhi* and *rajo vridhi*. causes *manovibhrama* by the properties of *chalatwa* and *anavasthitattwam*.

Hyperactivity (*Cheshtavibhrama*)

Cheshta vibhrama is explained by Chakrapani as *anuchita cheshta* or improper activities such as runs about or climbs in situations where it is not appropriate, excessive talking etc. In ADHD, an increase in the *Chalatwa gunam* of *vayu* and *raja* leads to hyper activity. *Dhrithi bhramsa* (derangement of controlling and regulating power of mind) also leads to hyperactivity.

Impulsivity: (*Autsukya*)

This is similar to the term '*autsukya*' caused by *budhi vibhrama* which has been explained by *Hemadri* as '*avicaarya karya pravriti*'¹⁸. Due to this, the person get lost himself in the *vishayas* and take sudden decisions without considering the consequences and situations and result in impulsive actions or thoughts. Due

to *Smriti vibhramsa* also, the child is unable to learn from past experiences and thus behave impulsively. According to *kasyapa*, a child with *Unmada* shows the symptoms like *vaichityam* (instability of mind)

pralapam (incoherent speech) and *Arati* (Inattention)¹⁹.

Table-1: General signs and symptoms of *Unmada* and ADHD:

Lakshana of <i>Unmada</i>	ADHD symptoms
<i>Dhee Vibhrama</i>	Intellectual confusion.
<i>Sattwa Pariplawa</i>	Fickle mind/excessive spontaneous mind wandering.
<i>Adheerata</i>	Fear and anxiety co-occurring with ADHD.
<i>Abadha Vaaktwam</i>	Indistinct and incoherent speech.
<i>Hridayam Cha sunyam</i>	Sensory processing problems associated with ADHD .
<i>Paryakula Drsti</i>	Altered control of visual fixation and saccadic eye movements.

Table 2: The features of *Vataja* and *Pittaja unmada* seen in ADHD:

<i>Vatika unmada</i> <i>Lakshanas</i>	ADHD Symptoms	<i>Pittaja unmada</i> <i>lakshanas</i>	ADHD Symptoms
<i>Ajasram atana/atanaseelata</i>	Frequent wandering/acting as if driven by a motor/or often runs about or climbs in situations where it is not appropriate	<i>Santharjanam</i>	Beats/fights others
<i>Bahubhashita</i>	Excessive talks	<i>Krodha</i>	Temper tantrums
<i>Asthane rodana akrosa hasitha stimita Narttanam</i>	Crying, shouting, laughing, dancing at inappropriate places/situations	<i>Mushtiloshtadi abhidrava</i>	Quarrels, fights
<i>Geetavaditra vaaganga Viksh`epa asphotanaani cha</i>	Singing, squirming, fidgeting limbs	<i>amarsha, krodha, samrambhascha asthane,</i>	Intolerant/ hateful disposition, initiates action at inappropriate places
<i>Vikrosathi, bhramathi, Parushavak</i>	Crying, wandering, harsh talk	<i>Trishna sweda daha bahula</i>	Thirst, sweating and excess heat .(may be due to autonomic dysfunctions.)
<i>Karsya, parushya</i>	Emaciation and dryness - may be due to eating disorder comorbid with ADHD	<i>Vinidra:</i>	Sleeplessness

PROGNOSIS (Sadhyasadyata)

Milder forms of the disease with few clinical symptomatology and severity, without any co-morbidity generally resolve by adolescence and are thus *sukhasadhya*. Early diagnosis and timely intervention is pivotal. Those with associated co-morbidities like conduct disorder etc and are moderately severe in their clinical presentation and in the early stages of the disease are *krichrasadhya*. The patients with all the

symptoms of ADHD with co-morbidities and having a genetic predisposition are *yapya* and they persist into adulthood.

UPADRAVA/COMORBID CONDITIONS:

Attention deficit hyperactivity disorder (ADHD) is frequently comorbid with a variety of psychiatric disorders. The progress and severity of the psychopathology lead to associated symptoms of mood dis-

orders further leading to antisocial personality, drug abuse etc.

LINE OF TREATMENT (Chikitsa sutra)

As the symptoms of the disease ADHD are same as that of *vatapittotara unmada*, the treatment adopted

should be of the same. As the mind and the body are a functional continuum, this condition can be approached with *sodhana* and *samana* and *chittaprasadana* measures, taking care of the age *prakriti*, *datu sarata* and *bala* of child and concerning the indications and contra indications.

PATHYAAPTHYAM

Table 3: Restrictions in diet and regimen in the treatment of *unmada*²⁰

Item	Pathya	Apathya
Cereals	Wheat, Rice	Maida, polished rice
Pulses	Green gram	Black gram
Fruits	Coconut, Grapes, Wood apple, Jack fruit	
Food Additives	Butter, Ghee, Honey, Milk	Preserved food, coloredfoods, margarine
Non vegetarian foods	Meat of animals in arid region	Beef
Vegetables	White gourd melon, Sponge gourd	
Liquids		Alcohol
Type of Food	Sweet, unctuous, easy to digest.	Pungent, bitter, hot, unclean, unaccustomed, improperly cooked.
Activities	Adequate sleep, cleanliness, prayers, Observance of <i>sadvriha</i>	Withholding natural urges, exertion.
Emotions	Happiness and a positive attitude	Anger, fear, anxiety.

PREVENTIVE ASPECTS:

Nidana parivarjana or avoidance of the causative factors of disease has been described as the first line of management in any disease. Since ADHD has a strong genetic basis, prevention of that condition can be achieved by optimizing the quality of *sukra* and *arthava* before conception through various pre conception measures such as advice of avoidance of *tulya gotra vivaha* (Consanguineous marriage), treating *sukra* and *sonitha* disorders before conception, following of the *artavakala charya*, *ritu kala charya*, (regimens advised during the menstrual period and the ovulation period) etc.

Through maintaining proper physical psychological health of mother by providing proper ante natal care such as avoidance of *Garbhopaghatakara bhavas*, following the dietetics and the do's and dont's as advised during pregnancy and management of *vata dosha* throughout the pregnancy by various regimens and therapeutics, development of various psychologi-

cal and psycho somatic disorders in the child during antenatal period can be prevented.

The perinatal and postnatal insults to CNS by various infections, hypoxia, hypoglycaemia, undernutrition etc have also known to cause ADHD. Through following the infant care protocol provided in our classics such as *jatakarma*, *rakshakarma*, *pranapra pratyagamana margas* and various *lehana* and *prakarayogs* we can prevent the condition like ADHD.

CONCLUSION

Nowadays ADHD become a burning issue in the society. Its prevalence, comorbidities and adverse impact shows an upward trend. Even though a clear cut description of ADHD is not found in our classics, we can understand the condition like ADHD in an Ayurvedic view as basic scheme of understanding newer diseases has been laid down by our Acharyas. Most of the neuro behavioral symptoms of ADHD were found scattered throughout our classics and all of

them are found collectively under the description of *Unmada*. Understanding and validating the condition like ADHD in an Ayurvedic perspective is essential for framing a management plan and preventive strategy based on Ayurvedic principle which is individualized multi-dimensional, scientific and devoid of adverse reactions.

REFERENCES

1. Adhd-institute.com. Overview of the DSM-5TM medical classification system for ADHD. [Online]. Available from: <http://www.adhd-institute.com/assessment-diagnosis/diagnosis/dsm-5tm/>. [Accessed 10 May 2017].
2. <https://www.cdc.gov/mmwr/preview/mmwrhtml/MorbidityandMortalityWeeklyReport> [Accessed 10 May 2017].
3. Sachidananda kamaths, S. Indianpediatricsnet Childhood Disability – Our Responsibility. [Online]. Available from: <http://indianpediatrics.net/jan2015/jan-13-14.htm> [Accessed 4 May 2017].
4. Agnivesa. Nidana sthana 7/5. In: Vaidya jadavji trikamji acharya (ed.) Charaka samhitha revised by Charaka and Dridhabala with Ayurveda Dipika commentary of Chakrapanidutta. Varanasi: Krishnadas Academy; 2000. P.
5. Agnivesa. Vimana sthana 4/8. In: Vaidya jadavji trikamji acharya (ed.) Charaka samhitha revised by Charaka and Dridhabala with Ayurveda Dipika commentary of Chakrapanidutta. Varanasi: Krishnadas Academy; 2000.
6. Jadavji Trikamji Acharya. Charaka samhitha by Agnivesa with Ayurveda dipika commentary of Chakrapanidatta. Sareera sthanam -3/17. Varanasi: Chaukhambha orientalia; 2011.
7. Jadavji Trikamji Acharya. Charaka samhitha by Agnivesa with Ayurveda dipika commentary of Chakrapanidatta. Sareera sthanam -3/10. Varanasi: Chaukhambha orientalia; 2011.
8. Jadavji Trikamji Acharya. Charaka samhitha by Agnivesa with Ayurveda dipika commentary of Chakrapanidatta. Sareera sthanam -3/10. Varanasi: Chaukhambha orientalia; 2011.
9. Jadavji Trikamji Acharya. Charaka samhitha by Agnivesa with Ayurveda dipika commentary of Chakrapanidatta. Sareera sthanam -3/13. Varanasi: Chaukhambha orientalia; 2011.
10. Jadavji Trikamji Acharya. Charaka samhitha by Agnivesa with Ayurveda dipika commentary of Chakrapanidatta. Sareera sthanam -3/17. Varanasi: Chaukhambha orientalia; 2011.
11. Hariharaprasada Tripadi. Harita samhitha of Haritha with Hari Hindi commentary Sareera sthanam 54/4. 2nd ed. Varanasi: Chaukhambha Krishnadas Academy; 2009.
12. Dhiman. AYURVEDA BASED DIETARY AND LIFESTYLE ADVOCACY FOR MENTAL HEALTH & PSYCHIATRIC DISORDERS. New delhi: Central Council for Research in Ayurvedic Sciences; 2018.
13. Agnivesa. Sutra sthanam -21/36. In: Vaidya jadavji trikamji acharya (ed.) Charaka samhitha revised by Charaka and Dridhabala with Ayurveda Dipika commentary of Chakrapanidutta. Varanasi: Krishnadas Academy; 2000. P
14. Agnivesa. Sutra sthanam -7/51. In: Vaidya jadavji trikamji acharya (ed.) Charaka samhitha revised by Charaka and Dridhabala with Ayurveda Dipika commentary of Chakrapanidutta. Varanasi: Krishnadas Academy; 2000. P
15. Vagbhata. Sareerasthanam4/35. In: Bhisagacharyaharis astriparadakara vaidya (ed.) Ashtanga Hridaya with the commentaries Sarvangasundara of Arunadutta and Ayurveda rasayana of Hemadri. Varanasi: Chaukhambha Orientalia; 2014. p.
16. Vagbhata. Uttarasthanam6/17. In: Bhisagacharyaharis astriparadakara vaidya (ed.) Ashtanga Hridaya with the commentaries Sarvangasundara of Arunadutta and Ayurveda rasayana of Hemadri. Varanasi: Chaukhambha Orientalia; 2014.
17. Agnivesa. Sareera sthanam -2/44. In: Vaidya jadavji trikamji acharya (ed.) Charaka samhitha revised by Charaka and Dridhabala with Ayurveda Dipika commentary of Chakrapanidutta. Varanasi: Krishnadas Academy; 2000. P
18. Vagbhata. Sutra sthanam-11/1. In: Bhisagacharya harisastri paradakara vaidya (ed.) Ashtanga Hridaya with the commentaries Sarvangasundara of Arunadutta and Ayurveda rasayana of Hemadri. Varanasi: Chaukhambha Orientalia; 2014. p.
19. Vridha jeevaka. In: Pandit hemaraja sarma, Sri satyapala bhisagacharya (eds.) Kasyapa Samhitha (Vridhajeevakeeya Tantra) Revised by Vatsya. Varanasi: Chaukhambha Sanskrit Sansthan; 2012. p

20. Shri govind das. Bhaisajyaratnavali. (20th ed.). Varanasi: Chaukhambha Prakashan; 2010.
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