



Management of attention deficit hyperactivity disorder (ADHD) through yoga

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Abstract

Yoga is our ancient science. *Yoga* provides treatment modalities for many diseases without any bad effect on the body. ADHD is a commonest disorder of childhood in which child shows hyperactivity, impulsiveness and inattentiveness that is inappropriate for age. In modern there are some drugs that are used in ADHD but all the drugs have bad effect on the body. *Yoga* and *ayurveda* are two treatment modalities that may be used in the management of ADHD without any bad effect on the health. *Yoga* is a type of therapy that is used without medication. *Yoga* benefits children with ADHD as it uses *asanas* (physical posture), *surya namaskar*, *pranayam* and deep relaxation techniques to calm the senses decrease hyperactivity. Many studies showed beneficial effect of *yoga* in relieving the symptoms of ADHD like hyperactivity, impulsiveness and inattentiveness.

Key words: ADHD, *Asana*, *Ayurved*, *Yoga*, DSM-5 criteria, *Surya Namaskar*.

Introduction

As we know *yoga* and *ayurved* both are the ancient science of Vedic knowledge. Both sciences have its unique identity but still each branches overlaps in many places. As both branches has not impact bad effect on human being. *Ayurved* advocate all aspect of diseased and well being for body and mind' on the other hand *yoga* is a combination of breathing exercises, physical postures and meditation. The first reference of *yoga* having been found in 6th century BC. Many epidemiological research indicates that the adults and children who perceive *yoga* to be beneficial for musculoskeletal problems, mental health conditions, and overall health. Now a days due to improper life style, improper feeding habits of children and working mother who can not pay enough attention to her child, all these conditions results many diseases in child. ADHD is one of the most common diseases of children.

Materials and Methods

Many databases including research articles from Pub med, J-AIM, Research gate were considered reviewed with the key words like ADHD, *Asana*, *Ayurved*, *Yoga*, DSM-5 criteria, *Surya Namaskar*. Many text books of *yoga* and modern were also reviewed

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ADHD as per Modern View-

Suraj (2016), said ADHD is a disorder of a child in which hyperactivity, impulsiveness and inattentiveness that are inappropriate for age. Boys suffer almost thrice from this order as compare to girls. ADHD has been classified into three types namely predominant inattentive, predominant hyperactive/impulsive and combined means hyperactivity, impulsiveness and inattentiveness. (Washington, 1994). Polanczyk (2007), Ford (1999), Al Hamed (2008), estimates from various countries including India has shown a prevalence of ADHD ranging between 1-13%. ADHD patient's 'brain imaging shows cortex delay maturation and abnormal growth pattern between two halves of brain (Shaw, 2012; Gilliam, 2011; Dickstein, 2006).

There is unknown etiology in the occurrence of disease progression, but still brain damage, prematurity, low birth weight and psychosocial and genetic factor have been blamed. Of course child's environment also affect in disease progression. Diagnosis of ADHD is confirmed by DSM-5 criteria. Drugs used in the management of ADHD are stimulant drug like methylphenidate (Ritalin), dextroamphetamine and magnesium pemoline. Tricyclic antidepressants such as imipramine, desipramine and nonstimulant drug such as atomoxetine and selective alpha adrenergic agonists



such as clonidine and guanfacine are useful in treating core manifestations of ADHD. But all above drugs have many side effects such as anorexia, abdominal discomfort, and headache and sleep disturbances. Abhyanga (Oleation Therapy or Massage) –Abhyanga

ADHD as yoga perspective-

Yoga offers a practical form of therapy to deal with the problem of abnormal emotional development. *Yoga* is also an alternative therapy in ADHD patients with *ayurved*, but little is known about the efficacy of these therapies. *Yoga* offers a practical form of therapy to deal with the problem of abnormal emotional, psychological and behavioural development so that the child may catch adulthood without any personality disorder. *Yoga* requires long periods of concentration and is therefore supposed to reduce attention deficits. *Yoga* benefits children with ADHD as it uses *asanas* (physical posture), *pranayam* and deep relaxation techniques to calm the senses decrease hyperactivity and *surya namaskar* steps which provide strength and concentration to child.

Results and discussion

With the help of different data bases like Pubmed, PsychoInfo and Cinhal etc I have selected three research studies which have highest level of evidence.

First study- A study was conducted on children between the age group 5-16 years diagnosed with ADHD and co-operative for *yoga* were selected. *Yoga* training was given to them. They were scored on Conners' abbreviated rating scale-(CARS), ADHD-rating scale IV (ADHD-RS IV) and clinical global impression (CGI)-Severity. Paired t –test was employed to compare the means of scores. 8 *yoga* training sessions was given to subjects. The significant improvement was found in the ADHD symptoms as assessed on CARS ($P=0.014$), ADHD-RS IV ($P=0.021$) and CGI- S scale (Hariprasad *et al.*, 2013; Gilliam *et al.*, 2011).

Second study-This study was conducted to show the benefit of Sahaj Yoga Meditation on improving inattentiveness, hyperactivity and problems of concentration, swing mood problems at school of children with ADHD. This study included 48 children on the basis of inclusion criteria, (DSM-IV

diagnosis of ADHD and a score of 15 or higher on the Conners Parent –Teacher Questionnaire). Thirty-one children are receiving medication (such as Ritalin or dexamphetamine), 14 were not medicated and Sahaj Yoga Meditation are taught over a 6 week period, there was marked improvement showed in ADHD symptoms as measured by the Conners' Parent Teacher Questionnaire. Children showed less stress, increase happiness, and increased ability to manage anger (Linda *et al.*, 2004).

Third Study- Study was a single case design study that included 10 children of 6 to 10 years age with attention problems but without a diagnosis of ADHD. Commercial videotape of Yoga Fitness for Kids is shown to the children for 30 minutes, twice a week, for a period of 3 weeks. The videotapes instructed the students to engage in deep breathing, physical postures and relaxation exercises. The study concluded that on-task behaviors decreased slightly at follow-up (Heather and Thomas, 2005).

Effect of chanting-

Yoga, Pranayam, chanting and meditation balance cortisol level, regulate hypothalamus, proper functioning of adrenal gland and neurotransmitters and also the auditory stimulus that provoke the cognitive abilities of the children. Another study showed that Chanting and meditation influenced both cerebral hemisphere and results in activation of cells results in good attention that affected in ADHD children. A study showed that by continuous practice of *yoga*, can increase memory, concentration and attention (Ghalig, 2006).

Conclusion

From the above studies we can conclude that *yoga* is an alternative medicine for ADHD. *Yoga* shows good results in pacifying the symptoms of ADHD. In order to establish potential value of *yoga*, the study should be large, well controlled and randomized.

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