



# THE EFFECT OF RAGA THERAPY ON CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER

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## **Abstract**

Attention Deficit Hyperactivity Disorder (ADHD) is the most prevalent neurobehavioral disorder in children and adolescents. Children with ADHD experiences problem mainly in three areas of functioning: sustaining attention (inattention or attention deficit), impulsiveness, and hyperactivity (or over activity); it develops before the age of seven. Along with ADHD symptoms, children often have behavioral, cognitive, emotional, and social deficits. In the present scenario, Raga therapy has become an essential therapeutic tool in improving the overall well-being of patients. Raga therapists follow a sequence of selected notes known as “raga” in the selective combination of ‘mood’ and emotion. The study aims to assess raga therapy's effect on children with ADHD. The study was designed in the pre-posttest experimental method; through the sampling method, five ADHD children (4-14 yrs) were selected. BASIC- MR PART-B tool was administered at the beginning and at the end of the study period. In addition raga, “Bhairavi” therapy was applied to ADHD children as an intervention in between the pre-posttest. Therapy was given every morning for the next 3 months with duration of 45 minutes. Results revealed, raga therapy made a positive impression on ADHD children with moderate improvement in the behavioral performance of children.

**Keywords:** ADHD, raga therapy, hyperactivity, inattention, impulsiveness, behavior.

## **Introduction:**

Attention deficit hyperactivity disorder (ADHD) is a neurobehavioral disorder; it is prominent in childhood and adolescence. The defining features of ADHD are inattention (or attention deficit), hyperactivity (or over-

activity), and impulsivity as explained in the DSM-IV-TR (APA 2000). ADHD is also associated with functional impairments across social, cognitive, and emotional domains in addition to all basic symptoms. The most recent definition of ADHD in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* distinguishes between diagnostic subtypes characterized by maladaptive levels of both inattention and hyperactivity-impulsivity (combined type), maladaptive levels of inattention only (predominantly inattentive type), and maladaptive levels of hyperactivity-impulsivity alone (predominantly hyperactive-impulsive type). The multifaceted nature of ADHD on society, families, and individuals, understanding its underlying causes, and developing new and more effective treatments to target them are essential objectives for neuroscience research. Indeed, in at least 15% of ADHD children, the disorder persists into adulthood, while an additional 50% have a partial diagnosis in adulthood with the persistence of some symptoms leading to continued impairments. Symptoms of persistent ADHD include inattention, forgetfulness, poor concentration, distractibility, lack of conscientiousness, disorganization, and emotional deregulations including mood instability and irritability. Hyperactive symptoms are often attenuated as compared to the childhood condition, yet increased motor activity and fidgetiness, impatience, risk-taking behavior, and sensation seeking are commonly seen and are highly impairing in some cases (R. Vadala, E. Giugni, et al,2011).In addition, ADHD in adults has problems like high co-morbidity rates of severe depression, anxiety disorders, and alcohol/drug abuse and dependency, as well as long-term problems with low self-esteem and the development of personality disorders. Persistence into adulthood profoundly impairs functioning in multiple areas and significantly contributes to a variety of adverse health, social and economic outcomes. According to certain research, a listening method called music therapy may be beneficial for those with stress-related and mental health concerns; the synchronization of musical rhythms with the heart rate taking place during music therapy has a relaxing effect on the body, mind, and soul. It has been suggested that listening to certain ragas from Carnatic and Hindustani music may help one's gastronomic, psychological, behavioral, and linguistic health. Raga is a melodic concept, it's a group of notes known as Swara-s (a musical note or melodic notion or scale of sound). Raga-based music produces changes in the body that relieve anxiety, affect relaxation, and bring about sleep. It also, however, brings about gentle stimulation and increases the attention span. Much research suggests the positive impact of raga therapy on depression; however, their lack of rigorous quality standards requires more evidence to be available. Unpublished research confirms these findings and also points to improved cognitive and behavioral outcomes as well as emotional healing. Other areas in which Indian music therapy has provided some evidence of being a

credible alternative therapy include schizophrenia, dementia, autism, insomnia, and substance abuse, as well as disorders of speech and coordination, and in relief of terminal cancer pain. Indian music therapy with other forms of music therapy confers the following benefits: Positive effects on mood, better concentration, and attention, Assists with coping and relaxation, Help understand the person's inner self, image, and personality, Gives a better awareness of self and environment and thus produces a positive impact on social interactions (Thomas, Liji. (2021).

### *Objectives*

- To assess the behavioral changes in ADHD children
- To see the effect of Indian classical music/raga on the behavior of children with ADHD.

### *Hypothesis*

There is no effect of raga on the behavior of children with ADHD.

### **METHOD**

#### *Tools*

Behavioral Assessment Scales for Indian children with Mental Retardation (BASIC-MR) Part-B developed by Reeta Peshawaria and S. Venkatesan. The test-retest reliability coefficient for BASIC-MR Part-B is 0.68. The construct validity was established by measuring the significant difference between the mean scores of pre-test and pretest levels. It was found significant ( $p < 0.001$ ).

Raga therapy; Raga Bhairavi was selected as a therapeutic intervention given to children with ADHD. It is a heptatonic (consisting of 7 notes) raga from the Hindustani music tradition. Styles like thumri's, ghazals, bhajans, and light classical forms are well-known compositions in raga Bhairavi. It is a morning raga; it is best rendered when the sun rises. The best aspect of raga is it invokes different moods like Bhakti (devotion), Shringara (romance), and Veera (courage) depending on the style of rendition. Notes of raga: the Arohana of the raga is S r g m P d n S' and the Avarohana of the raga is S' n d P m g r S, the vadi is Ma and the Samvadi is Sa. [https://www.youtube.com/watch?v=ZtOQ49\\_hO8s](https://www.youtube.com/watch?v=ZtOQ49_hO8s) this raga was applied to children with ADHD.

#### *Participants:*

Randomized sampling method was used for the selection of the sample. The present study comprises five ADHD children of 4 to 14 yrs of age. The sample of Children with ADHD was taken from strive foundation society, Jodhpur, Rajasthan.

**Design:**

The present study is a pretest-posttest design and after-research design, in which children with ADHD behavior was observed and recorded first then raga treatment was given to the children and after treatment, another observation was taken and recorded. Treatment was given for 3 months continuously every morning.

$$O_1-----X-----O_2$$

**Procedure:**

The study is conducted in three parts by pretest and posttest design method. In the first part of the study, 5 children with ADHD were randomly selected and BASIC-MR part –B was administered to ADHD children to see the present behavior. The individual behavior score was calculated and recorded according to the manual scoring key. The Mean was calculated. In the second part of the study, raga therapy was administered to children for 3 months every morning for 45 minutes around 8:00 am to 9:00 am. In the third part of the study, BASIC-MR part-B was again administered to children with ADHD, and their score was recorded again, and mean was calculated.

After collecting the data, the scoring was done participants and their parents & caretakers were thanked for their support.

**Result and discussion**

Child no.	Pretest score	Posttest score
1	78	70
2	78	75
3	90	83
4	82	80
5	95	89

Table no. 1: pretest and posttest behavioral score of ADHD children

No. of children	Pretest mean score	Posttest mean score
5	84.6	79.4

Table no. 2: pretest and posttest behavioral mean score of ADHD children

As we perceive from table no. 1, the individual behavioral score of all five children with ADHD is been recorded, shown under pretest score. And for 3 months raga therapy was given to the children with ADHD. Then again the test was administered to the same children with ADHD, who got posttest behavioral scores shown under the posttest score. Further through statistics average mean of both pre and post-test scores were calculated as shown in table no.2.

The present study, investigated the effect of raga therapy on ADHD children. As we comprehend from table no. 2, the mean score of both the pretest and posttest behavioral scores, there is a decline in the value of the mean score of the post-test as compared to the pretest means score. So it indicated, raga therapy had a positive effect on children with ADHD as through raga therapy there is a drop in problematic behavior scores. It is been observed that children after having their raga therapy session were a little calmer and not all over the place. There was a significant drop in their agitated and destructive behavior in children. Through teacher observation, it was concluded that in the ongoing raga therapy session children started participating in activities when they were told to do like coloring or painting or arranging the classroom. These changes in behavioral patterns draw the conclusion that raga therapy gave a promising productive impact on children with ADHD.

The study not only emphasizes positive aspects such as delivering calmness, improvement in attention, mellow down hyperactive behavior, and stress but more over helps children in coping with the current scenario, try to fit in the current environment & retain their sanity. The previous finding explains the use of classical instrumental music to reduce hyperactive behavior, the claimed that children with ADHD who listened to instrumental classical music had less trouble sitting still for longer periods of time and engage in less restless behavior (Aulia, Jannatul & Zulkifli, et al (2018). During this period one of the parents of the participant started applying raga therapy before bedtime also lead the child into a peaceful sleeping pattern as compared to earlier. Similarly, Dr. Shambhavi Das (2021) discussed in one of her studies about interventions such as OM, mantra, raga, and rhythm described in ancient music have shown vital and beneficial improvement in brain functioning, relaxation, and constructive attitude among autistic children. From the result, it is deciphered that raga therapy has come so far, proven to be a fruitful therapeutic tool for children with ADHD.

## Conclusion

Classical music has shown to be a valuable remedy to help people with ADHD, autism, Tourette's syndrome, and many more disorders. When it comes to children with ADHD these study results have specifically

proven that raga therapy helps in boosting attention and focus, increase calmness, decrease levels of hyperactivity and enhance to adjust in the surrounding. Music can be a powerful tool as there are no other risky effects attached to it like other medication, on the other hand, music therapy is way easier to implement or manage with children with ADHD.

### Limitation

The study has a small sample size but if we consider this raga therapy for future perspective for a large group of people with ADHD, the result may be more effective.

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