

Role of Yoga in Early Childhood for Children with Special Needs- Experience in a School for Special Children in North India

Parineeta Jindal¹, Veena Sharma²

1. Introduction

Early childhood is the most sensitive and critical period of a child's life. Early childhood is considered up to the age of eight years^[1,2]. It comprises cognitive, emotional, social and physical changes.

According to Piaget, sensory and motor experiences are the basis for all intellectual functioning for approximately first 2 years of life.^[3] Early childhood is a period beginning towards developing of social and emotional skills. It is important as it influences the mental health and wellbeing of children.^[4,5] Mastering fine and gross motor skills helps children explore the world around them and helps with their cognitive development.^[6]

In the present time, an important therapy which can help children with special needs is Yoga. Yoga refers to a unification of the mind, body and spirit^[7]. There have been studies that have documented that yoga has helped children with special needs.^[8-10] Yogic science believes that the regular practice of pranayama and asanas strengthens the nervous system and helps people face stressful situations and events more positively.^[11] Studies have been conducted to know the effect of yoga on children with autism.^[12]

The present paper aims to highlight the role of yoga in early childhood through improvements observed in children of upto the age of eight years with Autism Spectrum Disorders (ASD), Cerebral palsy and Intellectual Disability in their co-ordination, flexibility and emotional areas. Yoga techniques were given as a part of their regular routine classes. The children study in Preparatory section in a Special School at Chandigarh(North India).

2. Sample

Child A: A child with intellectual disability having autism with an IQ of 69 and age of 06 years showed no response to the practices done in the class when he first came in the yoga class. He cried and shouted when touched, refused to obey and hit the child in the absence of the class teacher.

Child B: A child with intellectual disability having cerebral palsy having an IQ of 62 and age of 6 years showed no response when he first came to the class.

Child C: A child with intellectual disability having autism with IQ of 44 and age of 7 years showed no response in class.

Child D: A 7 year old child having intellectual disability with IQ 69 did not respond at all in the class and only smiled.

Child E: A child did not respond at all having IQ 59 and age 7 years.

Following objectives were taken:

- To improve sensory integration
- To improve social skills
- To improve communication skills
- To improve motor skills

Intervention: Yoga class was conducted 5 days a week for 40 minutes per class. The findings of upto 150 sessions in a year 1stSeptember 2016 to 1st September 2017 have been considered.

Following practices were given : Om Chanting , Awareness of body parts , Fist open and close, Shaking hands, Tapping of feet, Jogging, Jumping, Padhastasana, Helicopter, Rotation of arms- clockwise and anti-clockwise, Tadasana, Triangle pose, Camel pose, Clapping, Ram – chanting with various forms of clapping , Om namah shivay chanting , Laughing exercise.

In the beginning, only OM chanting was played in the background and chanted by the teacher but there was no chanting by the students due to poor speech skills. The students started following the yoga practices slowly, at their own pace.

3. Observations

Child A used to only imitate the movements of his class teacher in the beginning but thereafter he started loving the movement of the helicopter, rotation of arms and triangle pose. He used to rotate his arms both clockwise and anti-clockwise despite that anti-clockwise rotation is difficult to follow by children of his age and disability. Earlier he did not perform the activity of tapping the feet, but till the end of 150 sessions he started doing it. He started doing slow jogging as well. He himself used to indicate to do rotation of arms and triangle pose. While performing Tadasana, he slightly interlocked his fingers , raised his arms above the head and tried to raise his heels.

Earlier, he never used to clap which he started doing initially with physical prompt, then verbal prompt, then with demonstration by the class teacher. Thereafter, he started clapping independently and loved it and told the yoga therapist/class teacher to repeat this activity. While doing

Ram Naam chanting, he tried to imitate different ways of clapping that were being done in yoga class during this practice. In the end, when God's name was shouted aloud with raised arms, he used to raise his arms and say 'jai'.

After 146th session, Om namah shivay chanting was started in the class. On the first day, he listened quietly, and chanted "shivay" twice. After that, on the second day also he chanted 'shivay' twice. Chanting om namah shivay had a powerful effect on the child. He became more responsive. He enjoyed yoga class fully.

In yoga class, he was able to get in touch with the parts of his body and their movements in various ways. In the class, after the chantings, he started responding to the instructions of rubbing the hands and applying it on eyes and arms. He also joined hands in Namaste when instructed to do so. His awareness towards himself and his surroundings developed. Sometimes he was made to do yoga in a group with the children who were more active than him. His understanding of things and perceptive skills also improved.

He tapped the feet and his co-ordination skills also improved. He performed Padhastasna as per his ability very well. Since he is obese, therefore, yoga practices were included which targeted to reduce obesity, however, the process is slow. Eventually, he also started to respond to the instructions of sit and stand and started to laugh and enjoy in class.

Child B and E, though earlier did not respond to yoga practices. Child B started responding to the instructions after 50 sessions and child E started responding after 60 sessions and by the end of the 150 sessions, they were able to execute Ram chanting with various forms of clapping independently which involves co-ordination and is a complex activity.

Child C did not respond at all and was on medications. Though there was no response in the beginning and every yoga practice had to be made to do with physical prompt but after 125 sessions he began to respond to tapping of feet, jumping, and tadasana-though with physical prompt but responded to lifting of heels.

Child D did not respond at all, however, he took a lot of time in building rapport. Earlier, he had to be made to do every yoga practice with complete physical prompt but after 75 sessions he started to respond to instructions of standing and sitting on his own. He slowly started clapping hands and after 100 sessions started retaining the half camel pose. But due to transportation problems, he could not come to participate in yoga classes punctually.

4. Discussion

Sensory integration is the ability of the brain to receive, organize and use sensory input in order to participate effectively and satisfactorily in the world. It affects how an individual perceives his body and the world outside, his capacity to learn new skills and develop adaptive behaviours, and how he moves, thinks, acts, feels and relates to others^[13,14].

Motor skills including proprioception, bilateral movements and motor planning are often challenging for children with Autism Spectrum Disorder and other special needs. There is much evidence that improving motor skills also improve language and social skills^[15]. Trikonasana helps to stimulate vestibular and proprioceptive sense.^[10]

Motor planning is the brain's ability to create, organize and complete a sequence of unfamiliar body movements^[13]. Yoga therapy improves motor planning by breaking postures down into their smallest components. The visual cues and tactile prompts used in yoga therapy are helpful in motor planning for children with autism spectrum^[16]

Bilateral motions require motor planning. Co-ordinating the movements of both sides of the body across the midline "wake-up" the brain.^[16] During yoga practices, comprehension of spatial commands (right, left, front, back, up, down) may have improved as the child could use the yoga therapist/class teacher's body as a visual aid, which remained at their eye level.^[10]

Though the students were continuing with their academics, dance, music, sports, physiotherapy, speech therapy, occupational therapy, gym as per their routine schedule but it has been reported that the asanas support sensory regulation and decrease anxiety, which directly affects emotional and behavioral regulation^[17]. Yoga practices help to release nervous energy from the body in a controlled manner thus also leading to a calming sensation enabling the child to work together in a class^[11]. Many studies report that yoga practices and chantings improve many brain functions^[10,18] like increase in GABA level, a calming neurotransmitter in the brain that stimulates parasympathetic system which reduces anxiety and enhances calmness^[18]. Thus, in the present case study, the practices in yoga therapy may have led to an improvement in the brain functions of the children, thereby, improving their behaviour and response.

5. Conclusion

Where the primary goal of any treatment is to improve the overall ability of the child^[19], it can be said that yoga can play a pivotal role as an adjunctive therapy^[20] to develop the skills in children with intellectual disability having associated conditions of autism and cerebral palsy. Thus, yoga practices are an effective tool in managing the behaviour, developing social and communication skills, improving sensory integration and motor skills in children with special needs.

References

- [1] Retrieved from <https://www.waset.org/publications/17209/gross-motor-skills-of-children-with-mild-intellectual-disabilities>.
- [2] Early Childhood Development. Retrieved from <https://www.unicef.org/dprk/ecd.pdf>
- [3] The Importance of Motor Skills (July 20, 2010). Retrieved from <https://www.education.com/reference/article/importance-motor-skills/>

- [4] Retrieved from <https://www.nl.edu/educationdegreeinfo/earlychildhoodeducation/issuesinearlychildhooddevelopment/>
- [5] Retrieved from <https://www.kidsmatter.edu.au/early-childhood/about-social-development/about-social-skills/getting-along-early-childhood-0> retrieved on 26th Jan., 2018.
- [6] Motor Skills. Retrieved from <https://pathways.org/topics-of-development/motor-skills-2/>
- [7] Hardy, Thornton Shawnee. *Asanas for Autism and Special Needs*. Chapter: What is Yoga? Jessica Kingsley Publishers. 2015.
- [8] Hardy, Thornton Shawnee. *Asanas for Autism and Special Needs*. Jessica Kingsley Publishers. 2015.
- [9] Effectiveness of school based yoga when used with children diagnosed with autism to make positive behavior changes in the classroom(10 May, 2015.) Retrieved from:
http://alliedhealth.ouhsc.edu/LinkClick.aspx?fileticket=0Ps_pKtbChE%3D&portalid.
- [10] Integrated approach to yoga therapy and autism spectrum disorders. Retrieved from:
- [11] Iyengar , B.K.S. *B.K.S. Iyengar Yoga. The Path to Holistic Health*. London : DK Publishing.2008
- [12] Application of integrated yoga therapy to increase imitation skills in children with autism spectrum Disorder .Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2952122/>
- [13] Ayres, A. J. (1995.) *Sensory Integration and the child*. Los Angeles, CA: Western Psychological Services.
- [14] Kranowitz, C.S.(2005). *The out-of-sync child*. New York, NY: Penguin.
- [15] Daichman , J, Cueli-Dutil , T., & Tuchman, R.(2010). Motor deficits in children with autism and related disorders. In J. Redlich (Eds.), *Autism Spectrum Disorders*. Retrieved from <http://kidpt.com/2010/04/18/motor-deficits-in-children-with-autism-and-related-disorders/>
- [16] Louise Goldberg(2013). *Yoga for Children with Autism and Special Needs*. NY: W.W.Norton & Company
- [17] Yoga for improving Behavior in Children with Autism Shawnee Thornton. Retrieved from <http://yogadigest.com/yoga-for-improving-behavior-in-children-with-autism/>
- [18] How to stimulate your vagus nerve for better mental health. Retrieved from:
<http://www.optimallivingdynamics.com/blog/how-to-stimulate-your-vagus-nerve-for-better-mental-health-brain-vns-ways-treatment-activate-natural-foods-depression-anxiety-stress-heart-rate-variability-yoga-massage-vagal-tone-dysfunction>
- [19] Autism-Treatment Overview. Retrieved from:
- [20] Improve Autism with Yoga. Retrieved from:
contemplative-studies.org/wp/index.php/2017/05/04/improve-autism-with-yoga/