

A Brief Overview of Yoga for Children with Physical and Mental Needs

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Abstract

Yoga is increasingly being used for its benefits in promoting positive health as well as in preventing and treating certain disorders. Yoga has improved health in children with physical and mental needs. This mini review covers three physical disorders viz. Duchenne muscular dystrophy (DMD), cystic fibrosis, cerebral palsy and three primarily mental/ psychological disorders viz. attention deficit hyperactivity disorder (ADHD), mental retardation and autism. Yoga improved mobility, breathing and lung functions in DMD. Yoga improved the psychological state in cystic fibrosis. In ADHD yoga practice improved sensory-motor performance, processing ability, academic performance and reduced symptoms of ADHD when children were rated by their teachers and parents. Yoga also improved intelligence quotient (IQ) and social adaptation in mentally challenged children. In autism, yoga improved classroom behavior of the children. Hence yoga can benefit in children with physical and mental needs.

Keywords: Yoga; Children with Physical and Mental Needs; ADHD; DMD; Autism

Abbreviations

DMD: Duchenne Muscular Dystrophy; ADHD: Attention Deficit Hyperactivity Disorder; IQ: Intelligence Quotient

Introduction

Yoga is a mind-body practice [1] which helps to establish harmony between the body and the mind [2]. Yoga is a safe practice for children over 3 years of age [3]. Previous studies have reported various physical, mental, psychological and behavioral improvements in children after practicing yoga [1]. Yoga practice improves in children with normal health and also in children with physical and mental needs [4].

This mini review covers three physical disorders viz. Duchenne muscular dystrophy (DMD), cystic fibrosis, cerebral palsy and three primarily mental disorders viz. attention deficit hyperactivity disorder (ADHD), mental retardation and autism.

Children with DMD showed an improvement in mobility, self-care and ease of breathing after 18 months of yoga and ayurveda [5]. In another study, after yoga breathing exercise for a period of 10 months there was an improvement in FVC and FEV which are markers of pulmonary functions in children with DMD [6]. In cystic fibrosis while yoga practice does not influence respiratory functions adequately, there are psychological benefits such as reduced anxiety and a more positive mental state, with a decrease in overall discomfort [7]. In cerebral palsy, yoga acts as a stretching activity and improves muscle extensibility, maintains joint functional movement and delays orthopedic surgical interventions [8].

In earlier studies, meditation showed an improvement in sensory-motor performance and processing ability in children with attention deficit hyperactivity disorder (ADHD) [9]. In another study, yoga practice in co-operation with behavioral therapy improved academic performance [10] and reduced symptoms of ADHD when the children were rated by their teachers and parents [11]. The children had practiced yoga for 6 weeks, with a one hour session twice in a week.

Yoga practice for one academic year (5 hours in every week) showed an improvement in the intelligence quotient (IQ) and social adaptation in children who were diagnosed as mentally challenged in an early randomized controlled trial with a one year follow up period [12].

Yoga was also found beneficial in children with autism with disruptive behavior. Children with autism improved their classroom behavior when they practiced yoga for 16 weeks [13] and some other core features related to autism also changed [14].

Apart from these examples which have covered the benefits of yoga practice in children with diagnosed physical and mental disorders, yoga practice appears to improve visual perception [15], motor skills, strength [16], planning, execution time [17], spatial memory [18], self-esteem [19] and emotional balance in children with normal health [20].

The results suggest that yoga is a promising mind-body intervention which should be investigated more extensively for children with physical and mental disorders as well as children with normal health.

Conclusion

Yoga practice which includes yoga postures, cleansing practices, voluntarily regulated breathing and meditation has been reported to be useful for children with physical disorders such as Duchenne muscular dystrophy, cystic fibrosis, cerebral palsy and mental disorders such as attention deficit hyperactivity disorder, mental retardation and autism. Yoga practice showed an improvement in mobility, breathing, pulmonary functions, sensory-motor performance, behavior, intelligence and social adaptation also showed a reduction in anxiety and discomfort.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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