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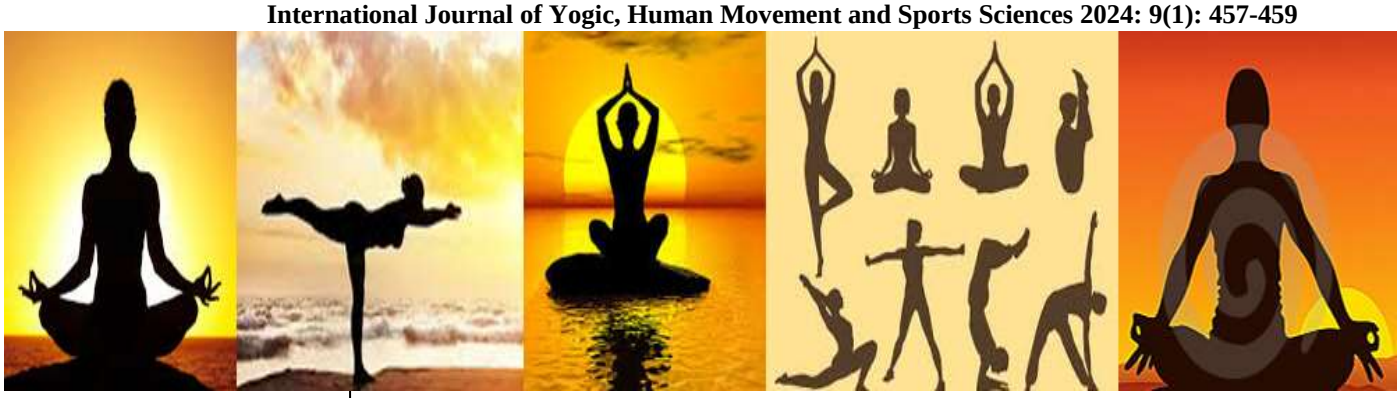

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Effect of yoga on mental health of students with visual impairment

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Abstract
Childhood visual deficiency impairs children's neuro-psychomotor development, greatly affecting physical, mental, social, and emotional health. Yoga's benefits for various aspects of health for sighted children have been largely supported by the literature. India is leading with one-fifth of blind children worldwide. Yoga's multidimensional benefits help to improve their ability to handle many of their challenges. Aim: this study was aimed to evaluate the effect of yoga practice on Mental Health of the Visual Impairment students.

Keywords: Students, mental health, visual impairment and yoga

Introduction
"Globally, it is estimated that at least 2.2 billion people have a vision impairment or blindness, of whom at least 1 billion have a vision impairment that could have been prevented or has yet to be addressed". (World Health Organization, 2019) [18] The eye is the pivotal sense organ to perceive the external world responsible for transmitting to the brain 80-90% of its received information. Functioning eyes are essential for a person's ability to function independently, to perform activities of daily living, and to travel safely through the environment. Impairment (any type of anatomical defect) of vision or even mild abnormality in function causes barriers to physical, mental and motor development. Furthermore, if impairment of the visual system is present at birth or develops shortly thereafter, it adversely affects infant development, mobility, and, later, education, social, marital, and economic prospects, affecting the individual, their family, and the community. Visual impairment (VI) is more pronounced in its effects than other impairments.

Definition of Visual Impairment
Various definitions of VI are used worldwide. The International Classification of Diseases (ICD-10) categorizes VI primarily on the basis of recommendations made by World Health Organization (WHO). In general, a wide range of visual function is described from low vision (LV) to total blindness, with four accepted levels of visual function, i) normal vision, ii) moderate VI, iii) severe VI, iv) total blindness. Moderate VI combined with severe VI is grouped under the term "low vision": low vision together with total blindness represents all VI (WHO, 2014) [17, 19, 20].

As a broad concept, VI refers to limited vision in the better eye with presenting correction (eyeglasses, contact lens). ICD-10's classification of VI is based on assessment of visual acuity (VA) and visual field (VF), and can be categorized as follows: i) Moderate VI (Category 1) —VA of 6/18–6/60, ii) Severe VI (Category 2)-VA of 6/60–3/60, iii) Blindness (Categories 3–5)—VA of 3/60 to no light perception or VF no greater than 10° in radius around central fixation (WHO, 2014) [17, 19, 20].

A different VI classification is used specifically in sport-science literature. This classification is divided into three classes:

1) B1—no light perception in either eye up to light perception, but inability to recognize the shape of a hand at any distance or in any direction;

2) B2—from the ability to recognize the shape of a hand up to VA of 2/60 and/or a VF of less than 5° in the best eye with presenting correction;
3) B3—from VA above 2/60 up to 6/60 and/or a VF of less than 20° (United States Association of Blind Athletes [USABA], 2014).

Prevalence and Burden – Global

Childhood VI is of global concern. WHO estimate that 19 million children aged below 15 years are visually impaired (WHO, 2014) [17, 19, 20] contributing 5% of world blindness. Three quarters of the world's blind children live in the poorest regions of Africa and Asia.

Prevalence & Burden – India

In India, approximately 6,80,000 children are visually impaired, about one-fifth of those worldwide, the most of any country. Limited evidence suggests that 1 child in a 1000 in India is blind.

Children with VI are observed to be less physically active, less physically fit, have poor locomotive functions and object control skills, impaired balance, lower quality of life, higher anxiety levels, and greater physiological arousal than their sighted peers. Early vision loss thus adversely affects physical, mental, social and psychological health, and quality of life. Children with VI require more support to fulfill all aspects of their lives.

To tackle these issues, activities such as balance exercises, aerobics, ice skating, gymnastics skills, goal ball game, and rope jumping as exercise training have been specially adapted for children with VI. Yoga is well accepted as a physical activity today, as beneficial or better than exercises at improving levels of fitness and health outcomes.

Yoga as a Solution

A study by Telles *et al*. (1995) [14] found that yoga practice led to a significant improvement in visual cognitive performance, and another study by Rangan *et al*. (2009) [9] observed that yoga enhances VM. (Visual Memory), VP (Visual Perception) enables individuals to recognize and identify objects, shapes, colors, and other qualities, allowing them to make precise judgments about an object's composition, size, and Spatial Relationship (SR) (Case-Smith & O'Brien, 2013) [1]. Diggory's experiments demonstrated that children from impoverished areas often experience learning difficulties due to a deficiency in their ability to simultaneously synthesize VP and stimuli. Programs combining language, behavioral, and perceptual training can be beneficial for these children. Individuals with mathematical learning disabilities showed significantly poorer performance in VP, and visual awareness plays crucial role in enhancing students' reading skills (Çayir, 2017) [2], while fast reaction time can improve academic performance (Prabu Kumar *et al*., 2020) [8]. Yoga, derived from the Sanskrit word "yug", which means "to unite" or "to yoke," encompasses self-awareness, mindfulness, and a transcendent state of consciousness, seeking to unify the mind, body, and spirit, and cultivate greater awareness and consciousness (Vivekananda, 2005) [18].

According to Patanjali's Yoga Sutra, "Yogascittavrttinirodhah," where "chita" means being conscious, "vritti" refers to both the conscious and unconscious mind, and "nirodhah" means blocking, thus "blocking the patterns of consciousness" (Sarasvati, 2013) [11]. The Yoga Vasistha defines yoga as "a mind-stabilizing technique," and The Bhagavad Gita describes it as "karmasukausalam", maintaining relaxation and awareness in action (Varma, 2013; Nagendra, 2014) [15, 6].

Hatha yoga, known for its ancient yoga books, involvespracticing Asana, Shatkarma, Pranayama, Mudra, and Banda, with purification consisting of dauti, basti, neti,nauli, trakata, and kapalabhati (Muktibodhananda, 1998) [5]. Telles *et al*. (2012) [13] found Kapalabhati improved fine motor skills and visual discrimination.

As trataka is related to eye fatigue and VP, practicing it can be helpful for eye health and improved VP. Trataka involves gazing at a small point and has two types of practices: antaranga (internal Trataka) and bahiranga (external Trataka). It can help not only the eyes but also mental and physical functions, making it therapeutic for poor concentration and memory. The Gherand Samhita mentions that it can help accelerate clairvoyance by enabling the perception of subtle manifestations (Telles *et al*., 2012) [13]. Asana and Pranayama exercises help integrate breathing, body, mind, and intelligence. Breathing slowly and effortlessly during Asana practice can relieve tension from the perception organs (eyes, nose, ears, skin, and tongue). Our bodies carry not only blood-flowing channels, but also vital Prana to each part. Through yoga asana training, the energy of this prana can be balanced, which eventually affects the behavior of the human brain with the left hemisphere and the right hemisphere. In the classic yoga text, asana is defined as creating a stable and comfortable physical condition without blockage.

Yoga is a widely performed ancient Indian form of conditioning practice. Yoga asanas are postures combined through slow, smooth, steady, and graceful movements. They are rated as a low to medium intensity exercise (Ray, Pathak, & Tomer, 2011) [10], and asserted to develop strength and fitness at physical, mental and emotional levels (Nagarathna & Nagendra, 2013) [7].

Yoga has received much attention from the scientific community over the last 20 years due to its effectiveness in enhancing muscular strength, endurance, body flexibility (Woodyard, 2011) [16], generating balanced energy, vitality, and cultivating calmness of mind (Nagarathna & Nagendra, 2013) [7]. Empirical research on yoga in children has been primarily directed towards potential benefits for the normal sighted, with the goal of improving physical fitness, cognitive abilities and psycho-social wellbeing; Khalsa, Hickey-Schultz, Cohen, Steiner, & Cope, 2012 [3]; Noggle, Steiner, Minami, & Khalsa, 2012) [3].

Yoga can be as effective at improving health related outcomes as many contemporary forms of exercise including walking, jogging, cycling, and aerobics. Accumulating evidence suggests that yoga based health promotion programs are well received by sighted children and may bring favorable improvements the development of children with VI.

Conclusion

According to W.H.O., of the children with VI in the world, 1.4 million are irreversibly blind, and will remain so for the rest of their lives. These need visual rehabilitation interventions for full psychological and personal development (WHO, 2014) [7]. Research on this population has been limited, however. Early intervention is essential for them to lay a foundation for their all-round development. Research on yoga for these children is still in its early stages, but will probably not be added to regular curricula for those with VI until its beneficial effects are more widely appreciated. Scarcity of yoga studies on health related outcomes in particular led us to plan this study aimed at investigating

effects of yoga practice on their physical and mental health.

References

1. Case-Smith J, O'Brien, JC. Occupational therapy for children -E-Book. Mosby/Elsevier; c2013.
2. Çayir A. Analyzing the Reading Skills and Visual Perception Levels of First Grade Students. Universal Journal of Educational Research. 2017;5(7):1113-1116.
3. Khalsa SBS, Hickey-Schultz L, Cohen D, Steiner N, Cope S. Evaluation of the mental health benefits of yoga in a secondary school: a preliminary randomized controlled trial. The Journal of Behavioral Health Services & Research. 2012;39(1):80-90.
4. Mohanty SL. Effect of Yoga on Physical and Psychological Health of Children with Visual impairment (Shodhganga), 2017.
5. Muktibodhananda S. Hatha Yoga Pradipika (3rd editio). Yoga Publications trust, Munger, Bihar, India; c1998.
6. Nagendra H. Yoga Instructor's Course. Swami Vivekananda Yoga Prakashana, 2014.
7. Nagarathna R, Nagendra HR. Integrated approach of yoga therapy for positive health (1st ed.). Bangalore, India: Swami Vivekananda Yoga Prakashan; c2013.
8. Prabu Kumar A, Omprakash A, Kuppusamy M KNM, BWCS, PVV, Ramaswamy P, 2020.
9. Rangan R, Nagendra H, Bhat GR. Effect of yogic education system and modern education system on memory. International Journal of Yoga. 2009;2(2):55.
10. Ray US, Pathak A, Tomer OS. Hatha yoga practices: energy expenditure, respiratory changes and intensity of exercise. Evidence-Based Complementary and Alternative Medicine: eCAM; c2011, 241294.
11. Sarasvati Satyananda. Four Chapter on Freedom (2nd editio). Yoga publications trust, Munger, Bihar, India, 2013.
12. Telles S, Sharma S, Yadav A, Singh N, Balkrishna A. Immediate changes in muscle strength and motor speed following yoga breathing. Indian Journal of Physiology and Pharmacology. 2014;8(1):22-29.
13. Telles S, Balkrishna A, Singh N. Finger dexterity and visual discrimination following two yoga breathing practices. International Journal of Yoga. 2012;5(1):37.
14. Telles S, Nagarathna R, Nagendra H. Improvement in visual perception followed yoga training. Journal of Indian Psychology. 1995;13:30-32.
15. Varma RR. The Bhagwat Gita. Fingerprint! Belief. Vivekananda, Rishi (2005). Practical yoga psychology. 2013, 307.
16. Woodyard C. Exploring the therapeutic effects of yoga and its ability to increase quality of life. International Journal of Yoga. 2011;4(2):49-54.
17. World health Organisation. Prevention of Blindness and Visual Impairment; c2014. http://www.who.int/blindness/causes/priority/en/index3.html
18. World Health Organization. Blindness and vision impairment; c2019. Retrieved from https://www.who.int/news-room/fact-sheets/detail/blindness-and-visual-impairment
19. World health Organisation. Visual impairment and blindness, Fact Sheet N°282, Updated, 2014. http://www.who.int/mediacentre/factsheets/fs282/en/
20. World Health Organization. Physical activity, 2014. Retrieved from http://www.who.int/topics/physical_activity/en/
21. World Health Organization. Cumulative official updates to ICD-10, 2013. Retrieved from
22. http://www.who.int/blindness/GLOBALDATAFINALforweb.pdf?ua=1
23. World Health Organization. Global recommendations on physical activity for health. Geneva, Switzerland: World Health Organization, 2010. Retrieved from http://www.who.int/dietphysicalactivity/publications/9789241599979/en/
24. Yengar BKS. Light on the Yoga Sutras of Patanjali, 2005.