

	Think India (Quarterly Journal) ISSN: 0971-1260 Vol-23, Special Issue-03 in collaboration with Indira Gandhi Government Girls Degree College, Rae Bareli, -229001, Uttar Pradesh, India Sponsored by Dept. of Higher Education , Govt. of U.P.	
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NATIONAL SEMINAR ON YOGA FOR WELLNESS AND POSITIVE HEALTH
14th - 15th December, 2019 (Saturday-Sunday)

PRACTICE OF YOGA, COGNITIVE FUNCTION AND STRESS: LITERATURE REVIEW

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Abstract

Yoga training is largely associated with claims of increased blood flow to the brain. Cognitive functions are intellectual processes by which one becomes aware of, perceives, or comprehends ideas. The regular practice of yoga is help to focus on the quick response ability, thinking, grasping power, learning ability, process the required information, arrive at the logical conclusion, decision making and then execute the task. Yoga is a way of life that includes the practice of specific postures, regulated breathing and meditation. Practice of yoga might be helpful in improving cognitive function and socio-emotional development. Cognitive function refers to a person's mental processes, including attention, producing memory, and understanding language, problem solving abilities, learning process, reasoning ability, and decision making capacity.

Introduction

Yoga has multiple physical, mental and spiritual benefits and holds that the influence of the mind on body is far more powerful than the influence of body on mind. Yoga helps in gentle and automatic massaging of internal organs and thus helps in enhancing functioning of nervous system, and endocrine system, (Khalsa, et.al 2012). Cognitive function refers to a person's mental processes, including attention, producing memory, and understanding language, problem solving abilities, learning process, reasoning ability, and decision making capacity (Nordqvist, 2013). Adolescent from rural area are more likely to be subjected to poor socioeconomic conditions as compared to urban adolescent children (Tine 2013). Poor quality of home environment can adversely affect children's development, leading to cognitive deficits (Singh, 2006). Yoga practices promote children's executive function. Executive function refers to the cognitive processes necessary for goal-directed cognition and behaviour (Rangan ,Nagendra, Bhat 2009) . In this context, practice of yoga might be helpful in improving cognitive function and socio-emotional development. Preliminary results suggest that yoga has the potential of playing a vital role in maintaining, cognitive skills, mental health and well-being of adolescent (Wacharasin et.al 2003). There are scientific evidence that yogic practices enhance cognitive function, mental health (Schoon et.al.2012), socio-emotional development, reduce anxiety, academic stress, improve sleep patterns and enhance overall well-being and quality of life (Best, 2010). Healthy social-emotional development in young children correlates with healthy cognitive development and therefore creates a strong foundation for future school achievement. Social-emotional development is a combination of social development and emotional development.

Yoga practices ,cognitive function and Stress

The practice of yoga can help an individual to improve their full potential and increase spiritual consciousness. Apart from the achieving physical health through pranayama and posture, one of the aims of the practice of the yoga is the ability to maintain cognitive ability and control, specifically the areas of memory, well-being, attention, and arousal control. It is well recognised, yoga helps to clear the mind and may have an effects on the ability to attend to relevant stimuli and recall information subsequently (Rangan ,Nagendra, Bhat 2009). Yoga training is largely associated with claims of increased blood flow to the brain (Nordqvist, 2013). Cognitive functions are intellectual processes by which one becomes aware of, perceives, or comprehends ideas. The regular practice of yoga is help to focus on the quick response ability, thinking,

grasping power, learning ability, process the required information, arrive at the logical conclusion, decision making and then execute the task. Yoga is an ancient Indian practice that has been utilized in several ways, for several reasons, between many groups of people for centuries (Vhavle et.al 2017). There is overwhelming evidence suggesting that an inverse relationship between life stress and cognitive ability exists due to the presence of intrusive thoughts, which can be defined as any distinct, identifiable cognitive event that is unwanted, unintended, and recurrent (Shipherd&Fordiani, 2015). In addition, psychological health issues, including impaired cognitive ability, may arise as a result of being subjected to consistent, long-term stress (Tennant, 2002). Stress can also have a detrimental effect on cognitive function. Higher stress levels, were found to be directly related to an increased number of everyday cognitive failures (Boals& Banks, 2012). Stress impedes cognitive ability, the relationship between perceived stress and response inhibition has not been given substantial attention. It is important to more clearly elucidate the effects that yoga can have on individuals' stress levels and cognitive performance. In addition, Adolescence is a developmental period for the establishment of socio economic and cognitive development. The socio-cultural context of the rural environment can present challenges to the emotional, physical and mental health of adolescents. Adolescence, the second decade of life (10-19 years) is a period of rapid development when young people acquire new capacities and are faced with many new situations.

Literature review

The research scholar has gone through the meta Analysis , which are relevant to the present study

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Davidson et.al. (2012) found that the benefits of yoga that have been observed in adults are also relevant for children and adolescents in school-based settings. **Telles et. al. (2013)** revealed that both yoga and physical exercise significant effect on the cognitive performance of the adolescents. These findings have further been substantiated by **Vhavle (2017)** revealed that significant improvement in health, learning ability, cognitive ability, behaviour, and positive emotions and decrease in negative emotions (all p 's<0.001) in school children. **Kondam et al. (2016)** the results showed yoga practices has a significant effect on the reduction of anxiety level and improvement in cognitive functions of medical students after practicing 6 months of

yoga. Gothe&Mcauley (2015) found that Yoga practice has the potential to assist in improving cognitive functions in areas such as processing speed, working memory, attention, and mental ability. **Cotant (2009)** found that students had positive comments about doing yoga at school, such as that they enjoy the break from doing school work, they have an easier time staying focused in class and they worry much less compared to if they didn't do yoga that day. Furthermore, **Manjunath,&Telles (2004)** found that Yoga help to improve learning, self-esteem, reduce anxiety, socio emotional development and other negative emotions seen in teenagers. White LS (2012) argued that, yoga helped to improve cognitive function and reduce aggressiveness, reduce emotional upheavals, laziness, and improve mood and wellbeing. One of the findings suggest that, implementation of yoga in one's daily life may be a possible stress reduction method and may help to improve cognitive ability (Villate, 2015). **Sarokte and Rao(2013)** studied the effect of yoga on the cognitive functions of **Adolescents** in the age group of 10 to 16. The 12 weeks study concluded that yoga improved cognitive abilities of the school children. **Verma et al (2014)**found that yoga could induce significant improvements with the memory and mental ability in Adolescents (age-group of 11 to 15 years). Vishnu 2017) studied the effect of yoga practices on selected cognitive development variables among adolescent in rural residential school. Significant improvement was observed in measures of mental ability and memory in experimental group. According to Hariprasad et al. (2013), "yoga related intervention appears to have a significant positive effect on cognitive functions like delayed recall of verbal attention, executive function and academic achievements when practiced for 6 months". **Verma et.al.(2014) investigated the** yoga practices on selected cognitive development of rural residential school children in kerala, cognitive development variables were improved after 12 weeks of yoga training in adolescent. **Nagia and Malhotra (2013)** studied to influence of regular practice of yoga on cognitive skills and mental health. **Udupaet al.(1977)** revealed that yoga has the potential to influence the cognitive ability. Another study has reported that yoga, improved cognitive function, and reduced problems related to maladaptive behaviors, increased emotional and physical health and psychological well-being. **Kauts and Sharma (2009)** were to assess the effect of yoga on academic performance in relation to stress. The results show that the students, who practiced yoga performed better in academics and physical health and psychological well-being, reduced the frequency of thought, reduced substance abuse, and generally improved the quality of life (Sahasiet al.1989, Singh 2006) but there is a

bit of a gap between cognitive functions in individuals who do and do not practice yoga, Moreover, there are several research reports indicating positive impact of yoga on mental health and other psychological factors but there are limited research studies exploring effect of yoga on cognitive function and social-emotional development in school Adolescents. The study relating to the effects of yoga practices on adolescents will not be complete without looking into the aspects of cognitive function and emotional development viz Self-esteem, Stress, Emotional Regulation and academic performance , therefore, All these aspects will be covered in this study.

Conclusions

This paper may help to know about the yoga related intervention appears to have a significant positive effect on cognitive functions like delayed recall of verbal attention, working memory , executive function , psychomotor speed, visual memory, processing speed, attention, mental ability, reduce emotional upheavals, reduce aggressiveness, laziness, and improve mood, psychological wellbeing and performed better in academics implementation of yoga in one's daily life may be a possible stress reduction method and may help to improve other functional abilities.

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