A QUALITATIVE INVESTIGATION INTO HOW YOGA CAN ELEVATE LEARNING CAPABILITIES IN SCHOOL-GOING CHILDREN

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ABSTRACT

Is YOGA really helpful in elevating the learning capabilities of students or is just another pampered term for an organic life. The present work makes an investigation into whether or not yoga is actually helpful in enhancing the cognitive abilities of the students. At most academic institutions, yoga has been accepted as a holistic system for improving the physical and mental abilities of the students. The schools and the educators have found this to be an effective mechanism for its purpose but an evidence-based component is yet to be seen. The wellness program has found its believers and practitioners across the world; however it is very important to understand yoga about what it offers in real terms. This study does a systematic analysis of the available literature on yoga and how it affects the learning capabilities of the students in a school – cognitive, academic and psychological. The qualitative investigation does an objective analysis of the available journals, reports and academic papers in order to highlight the factual evidences.

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1. WHAT DRIVES THE RESEARCH?
Yoga finds its roots into India’s ancient history as an accepted form of mind-body practice for achieving a unified state of self-realisation and consciousness [Parshad, 2004]. The Patanjali’s Yoga Sutra describes yoga as the tool for improving emotional
A Qualitative Investigation Into How Yoga Can Elevate Learning Capabilities In School-Going Children

and physical well-being [Parshad, 2004]. The traditional scripture mentions different postures [Asanas], deep relaxation [Yoganidra], controlled breathing [Pranayam] and meditation that have a specific influence on an individual’s body [Feuerstein, 1996]. A lot of academic literature and research papers have demonstrated the psychophysiological benefits of yoga on human body and how this relates to emotional stability, physical endurance and self-healing abilities [Feuerstein, 1996, Saraswati, 2002]. There is consensus about yoga’s additive effect on the quality of life and mental alertness [Saraswati, 2002]. It is however observed that yoga is mostly being used for its therapeutic effect and little is being done to use it for academic outcome of the students in a school setting [Sackett et al, 2000].

United Nations has stated categorically that a child or an adolescent spends an average of 15 years in the school and this is most right time for instilling yoga in their sub-conscious minds for promoting psychological-physical well-being. The children can thus be taught to deal with learning disabilities, stress, trauma and anxiety. It is believed that such contemplative techniques have a critical effect on the psychological state of students when they are the most susceptible to mental health disorders [Sackett et al, 2000]. It is claimed that 7.5% of the adolescents become a victim to DSM-IV-TR criteria and this creates a big space for yoga to make a correction. There are evidences to prove that yoga, as a mind-body practice, has the ability to increase self-control and concentration [Manjunath et al, 2001] in individuals, but there is little evidence that speaks about a similar effect on the children. Galantino et al [2008] has studied yoga for its benefits in the paediatric population but the research only mentioned the physical benefits. A lot of other researchers have concluded that the benefits with yoga are uncertain and the findings were based on low-quality trials.

In context to a school, yoga has been found to improve self-esteem and self-confidence among the students. The students showed an improved concentration, less stress and a greater positive attitude; however the intellectual development was not given much description [Hopkins, 1979]. Therefore the primary goal of this study is to understand how yoga perpetuates intellectual development in a school going children and does this have an effect on the learning abilities of the student. The study makes a systematic evaluation of the existing literature and explores the different evidences that speak about yoga intervention in a school setting. The present work covers thoroughly the work on yoga and how yoga affects the learning capabilities of the students in a school – cognitive, academic and psychological. The qualitative investigation does an objective analysis of the available journals, reports and academic papers in order to highlight the factual evidences.

2. METHODOLOGY

The study is based on research journals, academic papers and university reports on PsycInfo, PubMed, ISI and Cochrane. The search was made on key words – yoga, yoga & intellectual development, yoga & academic learning, yoga and cognitive learning at schools. The studies were identified on the basis of the research area, problem and relevance. The researcher has also conducted a manual evaluation of the various journals and also of their reviews. The selection of the journals was based on a criterion – Yoga: pre-intervention and post-intervention outcomes on school children; Yoga: cognitive and academic performance of the children and adolescents in the age group of 5 to 18; Evaluation of yoga for reduction of anxiety, stress, depression and other psychological measures; Comparative studies between controlled and uncontrolled groups.

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3. YOGA: COGNITIVE BENEFITS YES OR NO

The learning abilities of students can be divided into 3 key functions – memory, attention and intellectual development. Sarokte and Rao [2013] studied yoga for its effect on the cognitive and mental functions of 90 students in the age group of 10 to 16. The 3 months long study concluded that yoga might bring up the cognitive abilities of the school going children but it is still uncertain to quantify or measure the benefits. The study was based on two separate controlled groups of students where one group was administered Medhya Rasayana [Ayurvedic Medicine] for medically improving the cognitive functions and the second group was asked to practice yoga and the different asanas on a daily basis. The results for the 2 groups were different – the 1st group [Ayurvedic Medicine] showed significant improvement on serial recall effects test and short-term memory test pictures, while the 2nd group [Yoga] showed improvement on mini-mental status scale. The study indicated that yoga induces a positive effect on the neuro-muscular activity.

In a similar study, Telles et al [2013] claimed that both yoga and physical exercise have a similar effect on the cognitive performance of the students. The performance in the stroop task [color-word naming task] was similar for both the groups after a period of 12 weeks. Self-esteem was the only factor that showed a significant difference as yoga students showcased a much better performance on social behaviour and awareness. In the present context, yoga was indeed found to have a positive effect on the cognitive functions of school going children but this was similar to what the school can achieve with physical exercise also.

The cognitive benefits of yoga were discussed further by Verma et al [2014] who claim that yoga could induce significant improvements with the memory and mental ability in high-school students in the age-group of 11 to 15 years. The experimental group was put on yoga and after a 12-week yoga intervention the CFTs [Cognition Function Tests] showed significant improvement of memory and mental ability. The results were based on Guilford’s structure of Intellect Model for evaluating learning abilities after 45minutes of yoga session for a period of 5-weeks. Yoga was particularly more effective in increasing the primary processing of visual inputs.

The studies have moderately confirmed yoga as a definitive modality for neurologically evolved child. There is a mix of literature that speaks about the neuromuscular effects of yoga. The evidences belong to 2B grade or grade 4 and speak about a lot of variability on results. However, the majority of the studies claimed, or at least indicated, improvement on mental acuity and motor planning. The studies were based on studying over all functioning of the CNS ‘central nervous system’ - motor function, reaction time, planning and speed of execution. A pilot study by Bhavanani et al [2003] claims that mukh bhastrika yoga helped in decreasing the auditory and visual reaction time in the school going children. The study also indicated improvement on the processing ability of the CNS and also the sensory motor performance. These findings have further been substantiated by Manjunath et al [2001] who showed that students among the yoga-group could reduce the execution time by an improved motor planning. The tests were based on Tower of London test for both complex and simple tasks.

The researchers have also studied motor speed in terms of reaction time in school going children and adolescents. Dash et al [1999] worked with finger-tapping speed as the criterion on yoga effectiveness. The study found a significant improvement on the tapping speed after only 10 days of yoga intervention in school going children and a similar result in 30 days in the adult population. The increase in the tapping speed
indicated a faster CNS processing and motor speed. In one similar study, Telles et al [2013] found a remarkable decrease in the errors being made by students who have undergone yoga training. The results were based on a steadiness test wherein 90 children were studied for their ability to hold or insert a metal stylus into holes of decreasing sizes. The results indicated an improvement of CNS or motor activity in response to yoga.

4. CONCLUSIONS

Is YOGA really helpful in elevating the learning capabilities of students or is just another pampered term for an organic life. The present work makes an investigation into whether or not yoga is actually helpful in enhancing the cognitive abilities of the students. At most academic institutions, yoga has been accepted as a holistic system for improving the physical and mental abilities of the students. This study does a systematic analysis of the available literature on yoga and how it affects the learning capabilities of the students in a school – cognitive, academic and psychological. The qualitative investigation does an objective analysis of the available journals, reports and academic papers in order to highlight the factual evidences.

It is found that yoga has significant improvement on mini-mental status scale. The evidences suggest that yoga induces a positive effect on the neuro-muscular activity and a similar effect on the cognitive functions of school going children. Yoga was particularly more effective in increasing the primary processing of visual inputs. The studies have indicated improvement on the processing ability of the CNS and also the sensory motor performance. Most importantly, the students who practiced yoga could reduce the execution time by an improved motor planning. The schools and the educators have unanimously approved yoga as an effective mechanism for its purpose but an evidence-based component is yet to be seen. The wellness program has found its believers and practitioners across the world; however it is very important to understand yoga about what it offers in real terms.

REFERENCES


