The Effectiveness of Martial Arts and Yogic Practice on Attention of the Students

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Abstract

As a whole, martial arts training is good for you since it teaches you to control your emotions, become in shape (especially your mental and physical fitness), and respect others. Athletes may benefit from incorporating yoga into their training because it helps them get in the right frame of mind for competition, improves their concentration, and helps them learn to regulate their emotions. The purpose of this research was to investigate the effect of four weeks yoga training on Memory among student teachers. In this experimental study, demographic questionnaire, Multifactorial Memory Questionnaire (MMQ), for this study were used. Thirty Sarada college of education student teachers (women) were chosen with randomized way allocated into an experimental and a control group. The experimental group participated in daily yoga classes and Padmasana and Paschimottanasana for 30 minutes duration for one month. Both groups were assessed again after the one-month study period.

Keywords: Yoga, Memory, Student, teachers, Athletes, Padmasana,.

1. INTRODUCTION

Attention is a crucial part of our mental processes, and it has been defined in two ways: as a capacity or resource, and as a talent for effectively allocating those capacities. The ability to focus on a single activity for an allotted amount of time is known as sustained attention (SA). It's highly correlated with the difficulty of the work at hand. When compared to more difficult jobs, simpler ones are easier for SA to do. It's connected to how challenging the work at hand is going to be mentally. Examples of SA include the ability to study for long periods of time and to pay close attention for a whole lecture. Distinct forms of attention are mediated by different brain regions. To put it another way, SA is mediated by the right frontoparietal region. Poor SA has been linked to damage in the right prefrontal cortex. Neurons in the right frontoparietal network are demonstrated to be activated in imaging investigations of vigilance tasks involving SA. It's possible that Yoga's anxiety-reducing benefits contributed to the reported improvement in performance on SA-requiring activities. Both the conventional schooling system and the Gurukula method increase students' SA, although the latter is the more potent of the two. Several published research have investigated the impact of physical Yoga postures and meditation on SA. Asana (physical postures), Pranayama, Silence (Shamatha), and Trataka make up the Integrated Yoga Module (IYM), which has been shown to increase students' focus and concentration. Changes in SA, which are indicative of IYM's effectiveness for college students, have not, however, been recorded enough. The purpose of the current research was, therefore, to evaluate IYM's potential for improving students' performance in the classroom via the use of a digit vigilance exam (DVT). The purpose of this research was to use DVT to evaluate SA in IYM-engaging college students.

There may be many positive outcomes for young adolescents who regularly practice yoga at school, according to research. Different yoga practices rely heavily on the brain activity that is involved with various cognitive functions. Asana (postures), Pranayama (breathing techniques), and meditation all contribute to the goal of bringing the mind, body, and spirit into harmony, making yoga one of the most beneficial ways to alter one's way of life. Multiple adult population studies have shown that yoga has more potential to promote mental health than exercise does. Yoga has been shown to provide more advantages than physical education for school-aged children in a number of studies. Studies have shown a correlation between kids who are physically active and those who have better focus, memory, and attention.

Martial arts are a means of acquiring self-mastery by teaching us to rein in our most primal impulses. It teaches us how to move in sync with our physical and spiritual bodies, bringing our whole selves into balance. To maintain such mental sharpness and concentration, one must exercise complete mental command. Increased mental clarity and regulation has many positive outcomes for children, including enhanced concentration and productivity in the classroom. Better conduct is another result of this. The cerebral parts of martial arts training all contribute to a longer attention span in our kids. It is one of the primary ways in which martial arts help children learn to control their thoughts and develop better concentration and focus.

Martial arts training includes extensive periods of meditation and focused awareness. Before beginning strenuous exercise, students are generally instructed in meditation and mental clearing. When they are able to focus on their training without as many outside distractions, they see improvements in their performance. It has been hypothesized that the martial arts, which emphasizes both meditation and mindfulness, and other types of physical activity, might improve one's concentration and focus.

Millions of individuals in the United States suffer from depression each year, making it one of the most prevalent mental illnesses. The exercise-induced increase in serotonin and norepinephrine in the brain is thought to be responsible for the positive effects of martial arts training on mood. Anxiety is quite prevalent, just as sadness is. Exercising intensely, such as in a martial arts class, has been shown to help alleviate anxiety for many people. Because anxiety and sleeplessness sometimes go hand in hand, the fact that this may help you sleep is a major plus. Learning martial arts has several cognitive benefits. Signing up for a martial arts class may be beneficial for a child's brain in a number of ways. It can increase cognitive function, emotional health, and overall happiness.

The term "martial art," which is used to cover a wide range of fighting styles, is oversimplified and fails to make any mention of the physiological and philosophical components that are integral to the practice. Values like sportsmanship, honor, responsibility, pacifism, nationalism, sacrifice, and civic duty are examples of the internal philosophies, whereas religions and ethical systems are examples of the exterior philosophies.

2. LITERATURE REVIEW

Riya Agrawal et al (2021) A comprehensive assessment of the impact of martial arts training on adult learners' perceptions of their own abilities and the concentration spans they are able to maintain. Examining the impact of martial arts training on the self-confidence and focus of young people (those between the ages of 18 and 40). We reviewed PubMed, Cochrane, and Google Scholar for relevant articles published between 2010 and 2021. Criteria for inclusion in the systematic review Only studies that satisfied all of the following criteria were considered for inclusion: Article in its entirety, Works released during the previous decade Methods: Systematic reviews, cross-sectional studies, observational studies, Both sexes were represented in the population, The 18–40-year-old bracket is included. Conclusions Some people may benefit from martial arts training by increasing their sense of competence and staying focused for longer. The results showed that martial arts training helped people increase their sense of competence and focus.

P. SheelaJoiceP et al (2018) Learning relies heavily on mental operations including paying attention, staying focused, and remembering information. Some people think that practicing yoga may help them feel better both physically and mentally. The purpose of this research is to determine how yoga affects the focus, energy, and memory of medical students. For the study, researchers evaluated 100 healthy undergraduate medical students between the ages of 17 and 23. After 12 weeks of yoga instruction at Annapoorana Medical College in Salem, Tamil Nadu, India, participants' focus, memory, and attention were tested using the Postgraduate Institute memory scale. When compared to the control group, the yoga group demonstrated statistically significant improvement in attention, focus, and memory (P 0.001). The results of this research imply that regular yoga practice may have positive effects on cognition. These shifts might be the result of yoga's beneficial effects on personality development, focus, and the suppression of idle mental chatter.

Ashleigh Johnstone et al (2018) Significant evidence suggests that martial arts instruction is linked to enhanced cognitive function in youngsters, but the same cannot be said for adults who are otherwise healthy. In this research, we aimed to determine whether or whether people who had undergone intensive instruction in a martial art had improved their ability to exert mental discipline. We utilized the Attention Network Test (ANT) to compare the cognitive abilities of people with and without a background in martial arts. The participants were selected from a larger pool of over 500 people who voluntarily participated. Twenty-one people were randomly assigned to the Martial Arts group (mean age = 19.68), and twenty-seven were assigned to the Non-Martial Arts group (mean age =

19.63). Based on the findings of the pilot research, which indicated that age and body mass index were major confounders in ANT measurements, the two groups were balanced across these and other demographic characteristics. In contrast to the Orienting and Executive networks, the Alert network was found to be affected by martial arts training. When alertness was required to be maintained endogenously, martial artists performed better than the control group; when an exogenous cue was present, they were no better than the control group. There was also a negative link between years of experience in Martial Arts and the costs associated with the absence of an exogenous signal, supporting the idea that the longer someone engages in the activity, the stronger their endogenous alert. The effects of attentional training on various neurocognitive pathways are discussed in light of the findings.

Matteo Di Placido et al (2020) This article presents a case study of Odaka Yoga, a unique type of postural yoga that incorporates aspects of martial arts and places a premium on the health and self-transformation of its students and teachers. The paper delves deeper into how the philosophical foundations and practical repertoire of Odaka Yoga, a synthesis of "exotic" resources like Bushido, zen, yoga, and a persistent reference to the ocean waves and biomechanics, constitute a unique vision of health at the crossroads of Western science and esoteric knowledge. This study draws heavily on the work of Jennings, a theorist of martial creativity, and expands upon his ideas with the help of some of the most important analytical methods offered by other theorists, including Bourdieu and Foucault. It uses a mixed-methods strategy, including discourse analysis of the school's marketing materials, interviews with the school's founders and other influential faculty members, and participant observation of apprentice training sessions. More This paper first explores how and why Odaka Yoga came to be at the crossroads of Asian martial arts and yoga, before delving into the founders' personal journeys from competitive martial arts and fitness to yoga. Finally, the paper analyzes how Odaka Yoga blends the Western biomedical model with the subtle body model of Asian traditions like yoga and martial arts to conceptualize health. It argues that the Odaka Yoga Warrior, the prototypical practitioner, is the product of this school's conception of health; this body is subjected to the medical gaze and its imperatives of control, knowledge, and manipulation, but it is also deified because it is animated by the ephemeral flows of energy (qi or prana) that mastering practice aims to harness. Hybrid health perspectives and the pervasive function of health discourses and narratives are discussed as a way out.

Wesley Naves-Bittencourt et al (2015) When experienced on a regular basis, stress may cause changes in the body's cardiovascular and metabolic systems that can contribute to the onset of a variety of illnesses. Different psychosocial treatments use modified versions of eastern meditation practices called mindfulness (MF) to improve patients' physical and emotional well-being. MF is a psychological concept that denotes a non-judgmental, open-minded approach to the experiences that are happening right now, both inside oneself and in the world around one (i.e. without judgments). Clinical illnesses characterized by persistent stress, anxiety, or depression benefit greatly from mindfulness-based practices and therapies. Similarly, engaging in regular physical activity, particularly that which incorporates both mental and physical development, has several positive effects on health. Martial arts (MA) are a good example of this since they consist entirely of deliberate motions. Due of the intense focus and energy expenditure involved in MA, it may be a unique and exciting way to improve health and well-being. By increasing MF levels, frequent MA practice has the potential to improve practitioners' stress management, and by extension, their overall health and happiness.

3. MATERIALS AND METHODS

The purpose of the study was to investigate the effect of yogic practices enhances memory among Student teachers. To achieve the purpose of these study Thirty student teachers were randomly selected in Sri Sarada College of Education, Tamilnadu, India and their age ranged between 21 to 25 years.

Twenty instructors from three distinct martial arts were interviewed and observed: aikido (n=5), kick- and Thai boxing (n=5), and karate (n=10). Each instructor was teaching a kind of martial arts at a separate dojo, and all volunteered to take part in the research. The average age of the instructors was 47.50±9.31 years, and they had both extensive training in the martial arts (M=27.45±10.65 years) and extensive experience teaching the arts (M=18.80±11.29 years).

For the yogic practices tests randomized group design which consists of control group and experimental group were used. The subjects were randomly assigned to two equal groups of fifteen each and named as Group 'A' and Group 'B'. Group 'A' undertook yoga practice Padmasana and Paschimottanasana for thirty minutes once a day for thirty days and Group 'B' undertook not any practice and they had their routine life. Multifactorial Memory Questionnaire

(MMQ), measure widely used in social-science research. The data was collected. Before and after four weeks of training paired' ratio was computed. The level of significance was set at 0.01.

Examining TAMA Ratings Each martial arts instructor that was interviewed received a total TAMA score. Subjects were scored on a scale from 0 to 100 and then separated into three categories: "conventional" instructors, "educational sports" instructors, and "efficient" instructors (Table 3). The results showed that all aikido instructors were located in the traditional group, whereas most kickboxing and Thai boxing instructors were part of the efficiency group. The interviewee, who also teaches karate, belongs to the educational sporting organization that also includes kickboxing and Thai boxing instructors. The latter, however, were present across all three analyses.

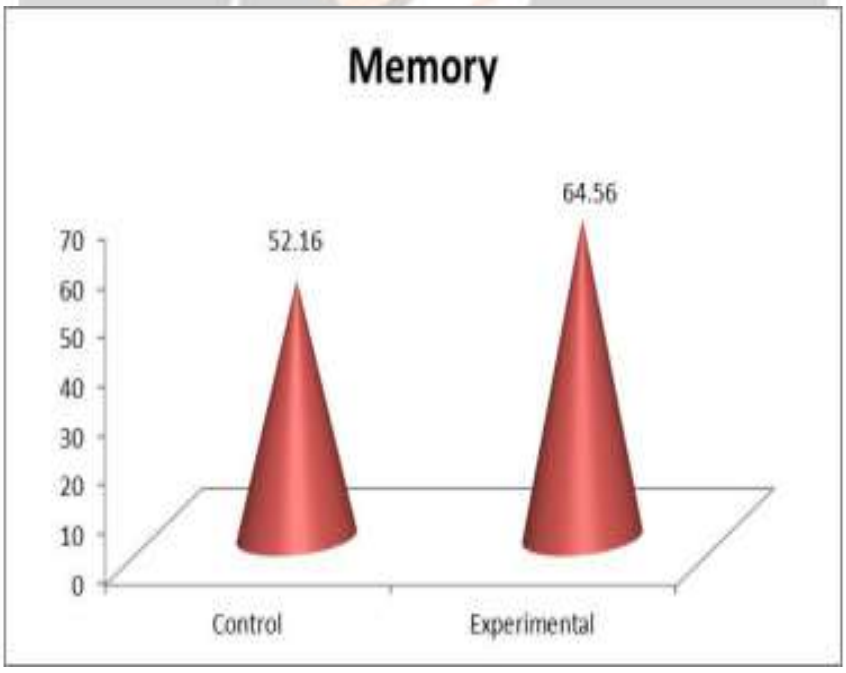
4. RESULT & DISCUSSION

The primary objective of the paired 't' ratio was to describe the differences between the Control group and Experimental Group mean among Student Teachers (Women)

Table – 1 Showing Mean Difference Of Control And Experiment Group Among Student Teachers In Their Yogic Practices Of Memory

Memory	N	Mean	SD	t- Value	Significant/NS Level
Control Group	15	52.16	9.42	6.50	S (0.01)
Experimental Group	15	64.56	6.21		

Required table value: 2.58 (0.01)



It is obvious fact from table that yogic practice has significant effect enhances Memory level between Control Group and Experimental group. As the mean value Control group is 52.16 and Experimental group is 64.56. An examination of table indicates that the obtained 't' ratio was 6.50 for memory respectively. The obtained 't' ratio was found to be greater than the required table value of 2.58 at 0.01 level of significance for 1, 29 degrees of freedom. Hence it was found to be significant.

It was decided to remove four things (kata, competition, dress code, and addressing the instructor) since they did not apply to all forms of martial arts. For the sake of neutrality, we altered one particular detail. The length of the opening and closing ceremony was considered rather than the degree of focus given to it. We evaluated this product on the basis of the video by timing how long the ceremony took. The 7-part final framework includes: (Table 2).

Table 2. Teaching Approach in Martial Arts framework (TAMA).

Dimensions	**Teaching approach**					
	Traditional					Efficient
1. Goal of teaching	Striving for unity between internal (spiritual and mental) and external (physical) elements + pedagogical oriented aims	1	2	3	4	5	Sporting activity with the focus on physical aspects
2. Duration opening and closing ritual*	Longer than one minute	1	2	3	4	5	There is no ritual
3. Ability groups	Martial artists are not divided into ability groups	1	2	3	4	5	Martial artists are divided into ability groups
4. Teaching techniques	Teaching techniques in different parts (analytical)	1	2	3	4	5	Teaching techniques in their whole (global)
5. Sparring	Only one person attacks + they have to help each other	1	2	3	4	5	Both persons attack and want to win
6. Use of traditional or efficient techniques	Hold on to traditional techniques	1	2	3	4	5	Tolerate adjustments if a technique can be more efficient
7. Response to inappropriate behaviour	Intrinsically and mentally oriented punishments (e.g., motivate verbally...)	1	2	3	4	5	Extrinsically and physically oriented punishments – 4= Physical punishments (push ups, …) – 5 = Suspend someone

* Quantified: 1 – >60 sec; 2 – 31–60 sec; 3 – 16–30 sec; 4 – 1–15 sec, 5 – no ritual

Table 3. Total scores on TAMA of the martial arts teachers.

	Subjects*	Total score TAMA (min. = 7, max. = 35)
Group 1: Traditional (tot. score = 7–16)	A 1	7
	A 3	9
	A 4	11
	A 2	12
	K 2*	12
	K 3*	13
	A5	14
	K 7*	16
Group 2: Educational sporting (tot. score = 17–25)	K 5*	18
	K 10**	20
	K 6**	21
	K 9**	22
	KTB 3	24
Group 3: Efficiency (tot. score = 26–35)	K 4*	26
	K 1*	27
	KTB 2	29
	K 8**	30
	KTB 4	31
	KTB 1	34
	KTB 5	35

* A = aikido, K = karate, KTB = kick-/Thaiboxing; ** Shotokan karate; *** Kyokushinkai karate

The results have better concentration and focus and better our overall cognition. yogic techniques that stimulate the brain and nervous system to improve memory and concentration. Spine lengthening postures, the forward and back bending poses, activate the spinal column and stimulate the nervous system. Inverted postures nourish the brain by increasing circulation of blood and oxygen. Asana and meditation are all powerful tools that stimulate the brain and improve the power of the mind. The Brain plays a phenomenal role in carrying out daily tasks. It ability to respond, comprehend, perceive and function well is related to the health of the brain.

This research compared and contrasted the methods employed by martial arts instructors from three distinct disciplines: aikido, karate, and kickboxing/Thai boxing. With the use of a self-created assessment instrument called the "Teaching Approach in Martial Arts" framework (TAMA), three distinct pedagogical stances were distinguished among the sample of martial arts instructors. It is important to notice that all aikido instructors were placed in the traditional group, but virtually all kick-/Thai boxing instructors were placed in the efficiency group, which helps address the research questions posed in this study (with the exception of one who was found in the educational sporting group). This implies that various styles of martial arts use varying methods of instruction. Karate instructors were also present throughout all three study groups. There are numerous diverse karate styles, making Aikido and kick-/Thai boxing more unified than karate. This may explain why instructors of certain styles, like aikido and

kick/Thai boxing, are concentrated in only one group, whereas those of karate may be found in all three. From this perspective, it stands to reason that instructors of a certain karate sub-style would use a consistent methodology for instructing their students. However, the current study's findings suggested otherwise, showing that kyokushinkai instructors were located in the group for educational, sporting, and efficiency, and that shotokan karate instructors were distributed throughout all three categories. The current study's findings indicate that educators using the three contrasting methods pursue distinct aims in the classroom. Teachers that take a more conventional approach to instructing kids in the martial arts report that their students place a high importance on the more traditional elements they learn. In addition, one of their primary missions is educational. A martial arts instructor that takes an instructional sports approach still values tradition and pedagogy, but sees his or her subject more in terms of competition. They placed a focus on the athletic and health benefits of martial arts training.

5. CONCLUSION

Yoga asanas that are designed to boost our memory. It can act as an instant cognitive boost. It helps relieve stress, which enhances the operation of the brain. It is more on creating a way to balance the body by enhancing our strength and flexibility. Memory practice helps reshape the brain. It helps balance our emotional well-being as we learn to detach ourselves from our thought patterns and emotions by just observing them and not reacting to them. The discipline of martial arts has long been used in adolescent development contexts. However, there are a number of crucial success variables, including the sort of guidance, that must be considered in order to create educational chances. Due to a dearth of prior research on the topic, the current study was an initial effort to learn more about the nature of instruction used in martial arts. The purpose of this study was to examine the pedagogical practices of martial arts instructors and to create a schema for classifying them. However, as TAMA is still a "work in progress," further study is needed to investigate (a) the many types of martial arts instruction and (b) the various methods used by martial arts instructors.

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