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Effect of yogasana on academic performance of school going students

Dr. Kalidas Karak, Abhijit Ghoshal and SK Rasid Mahammad

Abstract

Introduction: The world is becoming more and more competitive. Quality of performance has become the key factor for personal progress. The desire for the high level of achievement puts a lot of pressure on students, teachers, Schools and in general educational system. Achievement is the end product of all educational Endeavors. Yoga helps the students for promoting the Academic performance. Practice of Yoga would directly contribute to human resource development and improvement in the quality of life by developing their fitness (Physical, mental, emotional as well as spiritual). It enhances the quality of life by improving motor ability.

Purpose: Purpose of the study was to find out the effect of Yogasanas on academic performance of school going students.

Materials & Methods: To achieve the purpose, total one hundred (100) high school students were randomly selected for the study. They were taken from Harimara Konarpur S.S.C High School, Konarpur, Patharpara, Goaltore, Paschim Medinipur, West Bengal. The subjects were divided into two groups. One group was utilized as the control group and the other as experimental group. Each group contains fifty (50) subjects. The Experimental group (yoga group) has been given the twelve (12) weeks yoga training in the school campus. The training schedule were fixed in the morning session as well as in the afternoon session minimum time duration 60-90 minutes per session with various types of Yogasanas including slow warming up, warm down and resting time between and set of the exercises. On the other hand, Control group (Non-yoga group) has not given the yoga training. The Pre-test and post-test mean scores of the two groups have been taken and their scores are recorded. The Independent Paired-‘t’ test was conducted for evaluate the data and the level of significance was fixed at 0.05 level of confidence. The academic performance of the subject was collected from their office records.

Results & Discussion: The data was analyzed statistically by computing mean, standard deviation and ‘t’ test. The pre-test and post-test mean, SD and MD of the control group are (61.50 ± 3.05) & (62.35 ± 3.85) and 0.85 respectively. The calculated value (1.47) was less than the table value (2.01), so the result was insignificant. Similarly, the pre-test and post-test mean, SD and MD of the Experimental group are (62.50 ± 3.68) & (70.60 ± 5.15) and 8.10 respectively. The calculated value (5.63) was more than the table value (2.01), so the result was significant. The hypothesis was tested at 0.05 level of confidence. The Significant result was found in the academic performance of the experimental group due to yoga training.

Conclusion: On the basis of the obtained result, it has been observed that experimental group has the better academic performance than the control group due to yoga training programmes.

Keywords: Yogasanas, academic performance, school going students

Introduction

Yoga plays an important role and has made unlimited Contribution in the modern age as it Cater to the biological, Sociological, Spiritual and Physiological necessities of the man. The word ‘yoga’ is derived from the roots of Sanskrit ‘Yuj’ which means to join, to attach, to bind, yoke, and a concentrate or one attention. It also means Union. Yoga is true union of our will with the will have had. The literal meaning of the word ‘Yoga’ is ‘yoke’. It means for uniting the individual spirit with the Universal spirit or God. Yoga means the Experience of oneness or unity with inner being. It is a science by which the individual approaches truth. Yoga is not religion it is a method by which one obtain Control of one’s latent powers. It is the means to reach complete Self-Realization. Yoga is a reduction of one’s mental process, along with the physical. Yoga helps the students in the Academic Achievement. Yoga is one of the ancient heritages of India. It is the greatest contribution of our country to the world. Practice of Yoga would directly contribute to human resource development and improvement in the quality of

life by developing their fitness (Physical, mental, emotional as well as spiritual). Yoga the art and science of maintaining physical and mental wellbeing that has its origin in India, is among the most ancient yet vibrant living traditions that is getting increasingly popular today. A potent stress buster, yoga is an instrument of self-evolvement and enlightenment, through physical and mental well-being. It enhances the quality of life by improving motor ability. Education is the process of developing the capacities and potentials of the individual so as to prepare that individual to be successful in a specific society or culture. From this perspective, education is serving primarily as an individual development function. Education begins at birth and continues throughout life. It is constant and ongoing. The main concern of all educational efforts is to see that the learner achieves.

The world is becoming more and more competitive. Quality of performance has become the key factor for personal progress. Parents desire that their children climb the ladder of performance to as high a level as possible. This desire for the high level of achievement puts a lot of pressure on students, teachers, Schools and in general educational system. Achievement is the end product of all educational endeavours. Academic achievement is defined in different ways by different authors. It refers to any desirable learning that is observed in the students. Any behaviour that is learnt may come within the scope of achievement. Pupil achievement means the status of pupil with respect to attained skill or knowledge as compared with other pupils or with schools adopted standards. The term academic achievement refers to the degree of success or level of attainment by pupil in the scholastic or the curricular subjects prescribed within the syllabus. In brief academic achievement is the amount of knowledge derived from learning in the classroom. According to Thorndike and Hegen (1970) "Academic achievements are performance, based to show what a pupil has already learnt to do." Academic performance is concerned with the quantity and quality of learning attained in a subject or group of subjects after a long period of instruction. Excessive stress hampers students' performance. Improvement in academic performance and alertness has been reported in several yogic studies. Better Motor Ability means high level of physical fitness which helps in the positive self-perception and improves the academic performance. The children of today are exposed to far greater stress and trying times than previous generation. Yoga will help them cope and emerge stronger and more physically, mentally and emotionally fit. Hence, the researcher was motivated to take up the present study. The present study examines whether there is an effect of yoga on academic performance of high school students.

Types of Yoga: Yoga mainly are seven types. They are ---

- 1) **Karma Yoga:** 'Karma' can be defined as 'Action', which everyone performs, whether consciously or unconsciously.
- 2) **Jana Yoga:** 'Jana' yoga means knowledge and wisdom, thus it is a yoga of knowledge and wisdom. It is a supplement to meditation, Dhyana, when it combined with dhyana, it converts into Samadhi later on, because Samadhi is experimental of Spirit.
- 3) **Hata Yoga:** Hata Yoga means to action physical and mental purification and balance.
- 4) **Raja Yoga:** The word 'Raja' yoga means 'king', thus raja yoga is the king or royal yoga. It is the yoga of awakening the psychic awareness and facilities.
- 5) **Mantra Yoga:** It is the yoga of freeing the mind by

utilizing a second vibration. It is the force which liberates the mind from bondage. Therefore, the purpose of Mantra yoga is to free the mind from the worldly attraction.

- 6) **Laya Yoga:** It is the Yoga of Conscious dissolution of individuality.
- 7) **Bhakti Yoga:** It is the yoga of intense devotion, with emphasis on faith. The true follower of Bhakti is one who is free from both guilt and egoism.

Stages of Yoga: There are eight stages of yoga to secure purity of body, mind, and soul. They are...

- a) **Yama (social discipline):** It means restraint or abstention.
- b) **Niyama (Individual Discipline):** It involves the physical and mental rules of conduct towards oneself for purification of the mind.
- c) **Asana (postures):** Asana means holding the body in a particular posture to bring stability to the body and poise to the mind. The practice of asana brings fitness to the body and vitality to the body and the mind.
- d) **Pranayama (Breath control):** It is required for purifying the mind and internal organs.
- e) **Pratyahara (Discipline of the sense):** This process is required to put the sense under restraint. Dharma (concentration): The practice of Dharma helps the mind to concentrate on a particular object.
- f) **Dhyana (meditation):** It is the process by which we can merge our unit-self into cosmic-self is called Sadhana or meditation.
- g) **Samadhi (self-realization):** In this one's identity becomes both externally and internally immersed in meditation. Supreme happiness, free from pleasure, pain or misery is experienced. Samadhi is the climax of Dhyana.

Purpose of the Study: Purpose of the study was to find out the effect of yoga in improving the academic performance of high school students.

Review of Related Literature: The following studies were reviewed for the purpose of the study:

- i) Kauts and Sharma (2009) ^[1] investigated on "Effect of yoga on academic performance in relation to stress." The results show that the students, who practiced yoga performed better in academics. The study further shows that low-stress students performed better than high-stress students, meaning thereby that stress affects the students' performance.
- ii) Telles *et al.* (2007) ^[2] research done on "Immediate Effect of Three Yoga Breathing Techniques on Performance on A Letter-Cancellation Task". The letter-cancellation task scores were significantly improved, i.e., there were fewer errors following right and alternate nostril yoga breathing (Wilcoxon paired signed-ranks test). The improved performance may be related to the enhancement of contra-lateral hemisphere function found with selective nostril breathing.
- iii) Slovacek *et al.* (2003) ^[3] researched whether participants in the Yoga Education curriculum had a change in academic performance while participating in yoga. Academic improvement was shown to increase in middle school students who participated in the program. The students' participation in yoga was correlated with attendance, school discipline referrals, suspensions, gender, grade levels, ethnicity, and grades. It was not clear that yoga caused the increase, but it may have contributed to the results.

iv) Slovacek *et al.*, (2003) [3] conducted a survey on the teachers were also a part of taking the survey to help determine if Yoga Education was contributing positively in the school. The results showed that the classroom teachers felt yoga was influencing in some way the students’ academic performance, focus, ability to deal with anger and self-control, ability to deal with stress, level of confidence, completion of their homework, getting along with others, attitude toward their bodies, and academics.

Methodology

Subjects: To achieve the purpose, one hundred (100) high school students were randomly selected from Harimara Konarpur S.S.C High School, Konarpur, Patharpara, Goaltore, Paschim Medinipur, West Bengal. The students were divided into two groups. One group was considered as the control group and the other as the experimental group. Each group contains fifty (50) subjects. Experimental group was given yoga training for twelve weeks. The academic performance of the subject was collected from the office records.

Procedure: Total one hundred (100) high school students were randomly selected for the study. They were divided into two groups. One group was utilized as the control group and the other as experimental group. Each group contains fifty (50)

subjects. The Experimental group (yoga group) has been given the twelve (12) weeks yoga training in the school campus. The training schedule were fixed in the morning session as well as in the afternoon session minimum time duration 60-90 minutes per session with various types of Yogasanas including slow warming up, warm down and resting time between and set of exercises. On the other hand, Control group (Non-yoga group) has not given the yoga training. The Pre-test and post-test mean scores of the two groups have been taken and their scores are recorded. The academic performance of the subject was collected from their office records.

Statistical Analysis: The Independent Paired-‘t’ test was conducted for evaluate the data and the level of significance was fixed at 0.05 level of confidence. To get the final result Mean, SD, Mean Difference and ‘t’-test were calculated.

Hypothesis: Yoga improves the concentration and the mental peace. So it was hypothesized that yoga training will help the subjects in improving the academic performance.

Result & Discussion: The result of the study is discussed under the following table with the graphical presentation. Table-1 shows the significant difference between pre-test and post-test scores of the subjects in Academic Performance among control group and experimental group.

Table 1: Significance Difference between Pre-test and Post-test on Academic Performance after calculating the Mean, SD and t-ratio of school going students.

SL.No	Variables	TEST	Mean	SD	MD	t-ratio	Significant
1.	Control Group	Pre - test	61.50	3.05	0.85	1.47	0.05*
		Post - test	62.35	3.85			
2.	Experimental Group	Pre - test	62.50	3.68	8.10	5.63	
		Post - test	70.60	5.15			

*Significant at 0.05 level

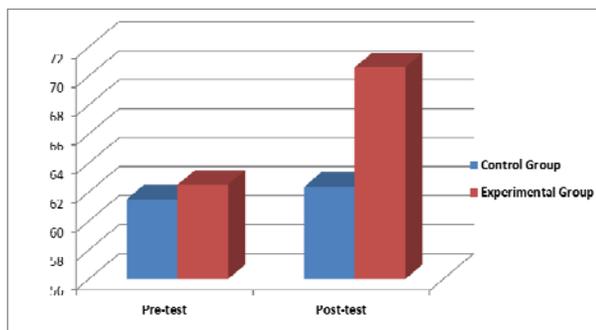


Fig 1: Graph Showing the Significance Difference between Pre-test and Post-test on Academic Performance according to the Mean both the control group and Experimental Group of school going students.

It is observed from the above table and figures that in the experimental group the Academic Performance mean scores of pre-test is 62.50, which has increased to 70.60 in post test, whereas among control group the pre-test and post-test mean scores of Academic Performance are 61.50 and 62.35 respectively. It is also evident from the above table that the calculated value (1.47) in the control group is less than the Table value (2.01) at 0.05 level of significant on Academic Performance. So the result was insignificant. On the other hand, calculated value (5.63) is more than the table value (2.01) at 0.05 level of significant on Academic Performance in the experimental group. So the result was significant. The hypothesis is accepted since there was a significant improvement in the academic performance of the experimental

group due to 12 weeks of yoga training. This is in confirmation with the findings of Kauts and Sharma (2009) [1] who found that those students who practiced yoga performed better in academics.

Meditation or Dhyana, a part of Astanga yoga plays an important role for reduce the stress and anxiety which have been reported by Anderson and Freshman [6] (1982), Nagendra [2], Deshpande and Raghuram [4] (2009), Morison and Ibrahim [7] (1981) and Yadhav [5] (2006). In this study, Meditation reduced stress significantly after six months of yoga treatment. Meditation have a greater impact on the mind and the senses than other exercises with the result that meditation helps to develop one’s physical and mental powers to make the mind clam and control the emotion. Yoga involves and includes eight paths (i.e. Astanga yoga – yama, niyama, asana, pranayama, pratyahara, dharana, dhyana and Samadhi.). The astanga yoga is based on the idealistic approach, a real road to attain good consciousness, self-confidence and self-concept. Meditation helps the individual to overcome these emotions to facilitate a calm, peaceful mind and healthy and stress free body. Meditation promotes relaxation, develops self-concept, self-confidence, positive attitude and social ability and reduces stress as well as anxiety. Academic performance is concerned with the quantity and quality of learning attained in a subject or group of subjects after a long period of instruction. Excessive stress and anxiety hamper the students’ performance. Improvement in academic performance and alertness has been reported in several yogic studies. Better Motor Ability means high level of physical fitness which helps

in the positive self-perception and improves the academic performance. The children of today are exposed to far greater stress and trying times than previous generation. Yoga will help them to cope and emerge stronger and more physically, mentally and emotionally fit. Hence, the researcher was motivated to take up the present study.

Conclusion

Many research studies have been done on the various types of training programmes. It is proved that twelve weeks (12) yoga training programmes have a significant role on the academic performance of school going students. On the basis of the results obtained from the present empirical investigation and within the limitation, the following conclusions may be drawn.

1. In the Experimental group (yoga group) the academic performance was better after the given period of twelve weeks (12) yoga training and the result was significant.
2. On the other hand, in the Control group (Non-yoga group) the academic performance was not better or slightly changed after the given period of twelve weeks (12) yoga training and the result was insignificant.

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