

Effect Of Yoga Practices On Academic Performance Among College Students- Randomized Controlled Trial Study

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Abstract

Challenge of college students in academic success depends upon their academic performance. Impact of academic success of college students is the reason for 'A' grade job in our country in any field of the employment. Good job makes the students 'on life' instead online if unemployed. College students feel secured about future if they are studying in college with true self. Studying with true self will enhance self empowerment to manage crucial periods during student life. Academic is a potent factor especially in tenure of college life. Parents can adopt the remedial method for their at risk children for academic progress. Yoga is the key to unfold the hidden potentialities during the tenure of college life. **Aim:** Effect of Yoga practices on academic performance among college students. **Material and Methods:** The study was experimental in nature based on two group pre test - post test design. A Sample Pool of 170 students was drawn randomly out of 600 students of college 1st year. 97 students were selected randomly in yoga group and remaining 73 students taken in control group. Academic Success Inventory for College Students (ASICS) scale was used to measure the variables. Data was collected before and after intervention. **Results:** Yoga practices are effective in improving the academic performance among College Students. **Conclusion:** This Study indicates that in college tenure after the practices of Yoga, factors of academics scale is significantly correlated with college GPA, and several subscales give information about ones motivation to do college-level work.

Keywords: Yoga Practices, Academic Performance, College Students.

Introduction

Yoga improves the sense of general well-being (Satyananda S, 2008). Yoga practices during college study remove their cognitive blocks, make them aware of the cognitive changes happening in their body and brain, make them aware of their distractions and give them the ability to focus on the subject they are studying (D. Sugumar and Ponnuswamy, 2018). Yoga evolves wisdom and understanding and enhances the capacity of rumination and deep introspection not for theorizing but for practice. Yoga is a holistic and scientific methodology that develops a sense of wholeness and oneness that match one's "True- self". Yoga is the mean to identify the premonitory symptom of intellectual conflict in a life of human being. Yoga inculcates the habits of inner silence and outer performance (Mahesh Tripathi, et al.; 2018, 2019).

Passing out from college is a big stepping stone for individual achievement and future success (Pritchard & Wilson, 2003). Employment and income is positively related with attaining the graduation degree. Academic performance depends upon so many factors in life of college students. Drop out of the college can be minimized by improving the factors responsible for academic performance. Very little job opportunity is available without college degree (Pascarella & Terenzini, 2005). In addition to this, college degree has impact on health too (Cohn & Geske, 1992; Link & Phelan, 1995). Tinto (1993) asserts that college can

grants a “Passport” a passage to adulthood. Hynd, Holschuh and Nist (2000) found that fear of failure can be a motivating factor in college student achievement. A small amount of anxiety possibly is a positive thing and was seen in students who worked hard and were concerned about future careers and the relationship between current performance and later jobs. Alternately, lacking general academic skills and not deciding on a major could have caused anxiety.

High performance of the college students is the need of nation building. Variables measured in this study felicitate the national assessment of educational progress.

Literature Review

There are range of theoretical approaches related to academic success and several different academic success assessments, including traditional measures and nontraditional measures (Deci & Ryan, 2000; Harackiewicz, Barron, Tauer, & Elliot, 2002; Zimmerman, 1989; Astin, 1993; Tinto, 1993; Kuh, 2001a). Academic performance is considered to be a very important factor to gauge a student's achievement in an educational setting. The prediction of academic achievement is important in scientific and applicability aspect. One of the very important determinants of acceptability and popularity in the classroom has been found to be academic performance and the achievement of high grades in examinations. It also has been found to be a crucial factor in determining one's future in the occupation sector and promotion related aspects. In fact academic scores have become criteria upon which all the teaching-learning activities are measured. It has a crucial influence on not only the students, but also the people and the environment around them. An individuals' personality and his belief in the causes of his success or failures plays a very important role in influencing their academic achievement. College setting is a fertile environment, where an individual gets access to ample opportunities to show their talents and perform their best. It is very necessary that the youth at this period get motivated towards performing according to their interests and should take ownership for the activities they undertake (Mahesh Tripathi, et al, 2018, 2019). It is a growing concern among educators that some college students continue to perform poorly in their tests and exams and how it takes a toll on their mental health. Many university students continue to have low grades, while many manage to turn around their academic fortunes (Martin & Marsh, 2006). There is a strong tie between students' overall health and resilience and their academic performance (West, 2003). Adolescents with depression are at increased risk for impairment in school and educational attainment (Asamow, Jaycox, Duan, LaBorde, et al., 2005). According to other study the highest performance students are personally adjusted by their high performance school surroundings for their academic success and students with positive self esteem are having positive sign for good academic performance (Hishamuddin, et al, 2019). A safe and calm environment is important for academic performance, which includes physical, social, emotional, spiritual and psychological well-being (Yasin & Dzulkifli, 2011). Students are the dynamic future of the country. Efficient learning is required before the leadership. Overall and comprehensive academic performance depends upon the so many factors including academic. The present study will examine whether there is an effect of Yoga Practices on Psychological wellbeing and among college students.

Aim and Objective of the study

To measure the effect of Yoga practices on academic performance among college students using Academic Success Inventory for College Students (ASICS)

Hypothesis of the study

Hypothesis: Yoga practices will have positive effect on academic performance among college students.

Null- hypothesis: Yoga practices will **NOT** have positive effect on academic performance among college students

Methodology

Design of study

This study is Randomized control trial with pre-post assessment. The participants were divided into two groups; first group was in experimental group while other group in waitlist control group.

Total sample size

The sample size was 97 students (both male and female) in Yoga group and 73 students (both male and female) in control group from a wide variety of disciplines between age group of 18 to 25. The study was conducted among college students of 1st year in TSR & TBK College in Visakhapatnam, Andhra Pradesh, South India.

Variables studied

The ASICS is a tool developed by Prevatt et al. (2011) for remediation and enhancement of academic performance with originally 50 items consisting 10 factors: General Academic Skills, Career Decidedness, Internal Motivation/Confidence, External Motivation/Future, Lack of Anxiety, Concentration, Socializing, Personal Adjustment, Perceived Instructor Efficacy, and External Motivation/Current. Prevatt et al. (2011) found that important factors in predicting grade point average (GPA) or academic success were *Personal Adjustment*, *General Academic Skills*, *Internal Motivation / Confidence*, *Socialization*, and *Concentration* but it is not necessarily the same variables, researchers will get in other research setting. More over it was found that the '*Perceived Instructor Efficacy*' and '*Personal Adjustment*' were two factors chosen by the high-ability students whereas the lowest ability group of students need more *External Motivation/ Future* and *External Motivation/ Current* for their academic success.. Furthermore, all the domains are showing a global picture of overall students' performance. Study conducted by Prevatt et al. (2011) found that the factors or construct of General Academic Skills had the highest internal consistency, while the External Motivation/Current showed the lowest internal consistency. They also found that Personal Adjustment, General Academic Skills, Internal Motivation/Confidence, Socializing, and Concentration were the most highly predictive subscales of grade point average (GPA). The factor structure of the scale was determined by exploratory and confirmatory factor analysis. It measures a variety of latent traits. ASICS not only facilitates the academic abilities but measures the skills, knowledge and moral values too. We can say that the ASICS scale used for this study had measured what it was supposed to measure very well.

Intervention

The intervention consisted of 8 weeks Yoga practices comprising of Kriyas, loosening practices, breathing practices, Surya Namaskar, Asanas (physical postures), Pranayama (breathing regulations) and Dhyan (meditation) apart from didactic and interactive sessions on philosophical concepts of yoga. The waitlist group has followed their regular college activities. The practices of yoga were given for 50 minutes and 6 days a week.

Data Analysis

Data analysis was done using S.P.S.S 20 Version.

Result and Discussion

The obtained data was systematically tabulated and organized and analyzed by within group paired sample t test and between group independent t tests. . The obtained results are presented in Table-1 and Table-2:

Table1- within group test yoga and control –Paired sample t test

Yoga					Control			
Variables	Pr-mean+-SD	Post-mean+-SD	% of mean	P value	Pr-mean+-SD	Post-mean+-SD	% of mean	P value
asics d1	12.20+-1.977	17.22+-2.595	41.14	.001	14.63+-2.221	15.15+-2.106	3.55	.001
asics d2	16.37+-2.744	24.03+-3.104	46.79	.001	19.74+-4.180	21.48+-3.392	8.81	.001
asics d3	13.15+-2.442	18+-2.428	36.88	.001	14.74+-1.724	15.11+-1.853	2.51	.001
asics d4	63.14+-5.105	73.60+-5.353	16.56	.001	61.21+-5.273	61.77+-5.514	0.91	.004
asics d5	43.29+-4.735	49.8+-4.875	15.03	.001	37.52+-4.868	37.84+-4.793	0.85	.052
asics d6	19.43+-2.968	25.21+-3.155	29.74	.000	17.7+-2.623	17.58+-2.687	0.67	.275
asics d7	18.36+-2.662	23.61+-3.252	28.59	.000	18.68+-2.443	18.92+-2.722	1.28	.084
asics d8	22.36+-3.361	28.92+-3.730	29.33	.000	21.11+-2.961	21.32+-2.976	0.99	.129
asics d9	18.28+-2.849	23.52+-2.972	28.66	.000	17.79+-2.809	18.12+-2.958	1.85	.003
asics d10	13.2+-2.115	17.64+-2.65	33.63	.000	13.77+-2.245	14.04+-2.104	1.96	.047

Table 2- Between group-Independent t Test

Variables	Pre-P value	Post-P value
asics d1	.001	.001
asics d2	.001	.001
asics d3	.001	.001
asics d4	.017	.001
asics d5	.001	.001
asics d6	.001	.001
asics d7	.411	.001
asics d8	.011	.001
asics d9	.271	.001
asics d10	.094	.001

Data was normally distributed, hence we have conducted parametric test, in within groups and between groups. Paired sample t test shows significant improvement in personal adjustment (asics d1) in terms of mean value has increased from 12.20 to 17.22 (41.14%)

($p < .01$), in concentration (asics d2) 16.37 to 24.03 (46.79%) ($p < .01$), in lack of anxiety (asics d3) 13.15 to 18 (36.88%) ($p < .01$), in general academic skill (asics d4) 63.14 to 73.60 (16.56%) ($p < .01$), in internal motivation/confidence (asics d5) 43.29 to 49.8 (15.03%) ($p < .01$), in external motivation/future (asics d6) 19.43 to 25.21 (29.74 %) ($p < .01$), in socializing (asics d7) 18.36 to 23.61 (28.59%) ($p < .01$), in instructor efficacy (asics d8) 22.36 to 28.92 (29.33%) ($p < .01$), in carrier decidedness (asics d9) 18.28 to 23.52 (28.66%) ($p < .01$) and in external motivation/current (asics d10) 13.2 to 17.64 (33.63%) while ($p < .01$). All subscales of The Academic Success Inventory for College Students (ASICS) have shown positive and highly significant impact in experimental group using Yoga as an intervention [Table 1].

In control group, test shows the change of mean value from 14.63 to 15.15 (3.55 %) ($p = .001$) in d1, 19.74 to 21.48 (8.81%) ($p = .001$) in d2, 14.74 to 15.11 (2.51%) ($p = .001$) in d3, 61.21 to 61.77 (0.91%) ($p = .004$) in d4, 37.52 to 37.84 (0.85%) ($p = .052$) in d5, 17.7 to 17.58 (0.67%) ($p = .275$) in d6, 18.68 to 18.92 (1.28%) ($p = .084$) in d7, 21.11 to 21.32 (0.99%) ($p = .129$) in d8, 17.79 to 18.12 (1.85%) ($p = .003$) in d9 and 13.77 to 14.04 (1.96%) ($p = .047$) in d10. Control group has approximately significant change in personal adjustment (asics d1) ($P = .001$), in concentration (asics d2) ($p = .001$), in lack of anxiety (asics d3) ($p = .001$), in general academic skill (asics d4) ($p = .004$), in carrier decidedness (asics d9) ($p = .003$), in external motivation/current (asics d10) ($p = .047$) while four other domain is not significant ($p > .05$) [Table 1].

In between group analysis using independent sample t test showed the p value (pre = .001, post = .001) for d1, (pre = .001, post = .001) for d2, (pre = .001, post = .001) for d3, (pre = .017, post = .001) for d4, (pre = .001, post = .001) for d5, (pre = .001, post = .001) for d6, (pre = .411, post = .001) for d7, (pre = .011, post = .001) for d8, (pre = .271, post = .001) for d9, (pre = .094, post = .001) for d10. It is evident from Table 2 that socializing (d7), carrier decidedness (asics d9) and external motivation/current (d10) also has significant improvements between groups ($P < .05$).

The study of Table-1 indicated that Yoga practices are effective in improving the academic performance among College Students. Therefore, according to this study, hypothesis 1 is accepted, and null hypothesis rejected. Yoga practices have positive effect on all domain of academic performance among college students, whereas control group have positive effect on only 6 domain of academic performance among college students while between groups is having significant change only in three domains.

The finding of this 8 week research study suggests the effectiveness of the Yoga practices in improving psychological wellbeing and academic performance among college students.

Previous study has indicated that academic performance improves by optimizing the stress level with the intervention of Yoga and low-stress students performed better than high-stress students (K. B. Pael, 2018) while as per Yusril, et al, 2019; student participation leads to academic performance but Sheela, et al, 2013 confirms that sustained attention leads to academic performance. Yasin & Dzulkifli, 2011 found that self esteem leads to academic excellence. But no one tried to assess the overall academic performance since this depends upon so many factors in this fast changing digital era.

A yogic concept of *ñvadharma* (स्वधर्म) in student language is chasing your dream, study becomes easy and enjoyable and one chooses a carrier as per one's inherent nature after the college life. Yoga practices lead a great phenomenon of 'perception' which is not conditioned by emotions or intelligence and is different from sensory perception. It flowers the true intellect which enables the college students for deep understanding instead of rote learning (Mayur, 2016) and improves the academic performance (Sheela, et al, 2013; K. B. Pael, 2018; Yusril, et al, 2019). . The findings of present study are supported by earlier research

reports. In fact, Yoga practices helped to improve academic performance among college students.

Conclusion

We can conclude from the above results and discussion that Yoga enhances the academic performance among college students. It should be noted that yoga practices contains Asanas, Pranayama (regulated breathing) and Meditation which enhances self-regulation, self –care and self-aware to increase the dimensions of positive functioning. If we assume academic progress is challenge in life of students then yoga-based training will have effect on overall academic performance of students. High performer students can prioritize in aspect with socializing, carrier decidedness and external motivation to achieve the academic goal. If we want to develop the country with better academic hub, country needs efficient education sector which will produce the dynamic leadership, scientist and good human being. In future effect of yoga can be examined with longer duration and repeated measures intervention.

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Conflict of interest

There are no conflicts of interest

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