SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 1 | January 2026 - Peer Reviewed Journal

A PILOT STUDY ON THE EFFICACY OF YOGA MODULE IN IMPROVEMENT OF ACADEMIC PERFORMANCE IN B.A.M.S. STUDENTS

Dr. Jyoti Varthi[*1], Dr. Kalpana Jadhav[2]

[1]PhD Scholar, Yashwantarao Ayurveda College, Kodoli. And Associate Professor, Department of swasthavritta,GAC Nagpur.*
[2]Guide, MD PhD (Swasthavritta), Associate Professor, Department of swasthavritta, Yashwantarao Ayurveda College, Kodoli, Dist -Kolhapur, Maharashtra.

ABSTRACT

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. Student has rapid changes in overall areas as- physical, mental, psychological, and social growth and development. Yoga is a progressive trend toward uses growing by student as a mind-body complement and alternative intervention to improving overall physical & mental health.

This pilot study is an attempt to understand the feasibility and applicability of yoga module in improvement of academic performance in B.A.M.S. students. Pre-post test with experimental and control group design was used in the present study. A total no. of 40 B.A.M.S. students was selected applying the inclusion and exclusion criteria and 20-20 participants were divided into two groups randomly.

Assessment tools- Academic Exam Results, Memory Score a) Auditory b) Visual and intelligence span are used. Yoga module included: - yogasanas, Pranayama and shudhi kriya and meditation. Each yoga session was conducted for 30-45 minutes; 5 days a week, for 12 weeks were given to experimental group. 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.

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 yogic practices. It means the yoga module is feasible and applicable among B.A.M.S.students.

KEYWORDS: *Yoga module, academic performance, B.A.M.S. Students.*

INTRODUCTION

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. 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,

Academic achievement is defined in different ways by different authors. It refers to any desirable learning that is observed in the students. Any behavior that is learnt may come within the scope of achievement. 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 B.A.M.S. students.

In the search for solutions, the ancient discipline of Yoga, which shares its philosophical roots with Ayurveda, presents a compelling avenue. Yoga is far more than physical exercise; it is a holistic system designed to harmonize the body, mind, and consciousness. Modern research has empirically validated its benefits, demonstrating its ability to:

1. Reduce stress and anxiety- by modulating the hypothalamic-pituitary-adrenal (HPA) axis and lowering cortisol levels.
2. Enhance cognitive functions- such as attention, memory, and information processing speed.
3. Improve autonomic balance- by increasing parasympathetic (relaxation) nervous system activity.

Given this synergy, integrating yoga into the life of a B.A.M.S. student is not merely an additive activity but a complementary practice that aligns with the very principles of Ayurveda, which emphasizes preventive and promotive health (*Swasthavritta*).

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 1 | January 2026 - Peer Reviewed Journal

Need for a Pilot Study
While the benefits of yoga are well-documented in general student populations, its specific impact on the unique challenges faced by B.A.M.S. students remains underexplored. A pilot study is essential to establish the feasibility, acceptability, and preliminary efficacy of a tailored yoga module before undertaking a large-scale randomized controlled trial. This study seeks to fill that gap.

AIM AND OBJECTIVES

1. Aim/Primary Objectives
To study the efficacy of yoga module in improvement of academic performance in B.A.M.S. students

2. Secondary Objectives
1. To study the improvement in memory score.
2. To study the improvement in intelligence span.
3. To observe the other effect of Yoga module if any occur.

METHODOLOGY

Study Design: A randomized controlled pilot study.
Participants: 40 B.A.M.S. students (age 18-22) were recruited after obtaining informed consent and ethical clearance from the institutional review board. Participants with pre-existing physical conditions preventing yoga practice were excluded.
Intervention: Participants were randomly assigned to two groups:
A. Yoga Group (n=20): Underwent a supervised 45 minute yoga session, five days a week for 12 weeks. The module included:
Initial Warm-up (Sukshma Vyayama): Gentle loosening exercises.

Āsanas (Postures): Vrikshasana (Tree Pose for balance), Trikonasan (Increases stability, balance and reduce stress) Hastpadasan (Revitalizes the nervous system).Paschimottanasana (Seated Forward Bend for calmness), Bhujangasana (Cobra Pose for energy), Shavasana (Corpse Pose for deep relaxation) .Gomukhasan(cow posture) .Shalbhasan(locust poature) Relieves stress and fatigue Shudhikriya Kapalbhati(shining skull practice) , Boosts the production of endorphins, they helping to uplift of mood

Prāṇāyāma (Breathing Techniques): Nadi Shodhana (Alternate Nostril Breathing for mental clarity), Bhramari (Bee Breath for instant stress relief). Ujjayi pranayam(hissing breathing) Enhancing memory

Dhyāna (Meditation): 10 minutes of mindfulness meditation focused on the breath.
Control Group (n=20): Continued with their normal routine and were offered the yoga module after the study concluded.

Assessment Tools
Assessment Criteria
1. Specific questionnaire regarding academic performance will be filled by Students before initiation of Yoga Module and after completion of 12 weeks Yoga Module.
2. Academic exam result will be observed before initiation of Yoga Module and after completion of 12 weeks Yoga Module.
3. Memory Score will be observed by auditory and visual Memory test method –
a) Auditory
After taking lecture Oral short question will be asked to students then students will be recalled.
b) Visual
Chart will be firstly visualized to students for 1 min, then students will be taken away from this place to another place and write important points of chart as visualized firstly.

4. **Intelligence span (0 to 5)**
Different types of 5 Sanskrit Shloka will be told to students then students will be asked to recall those Shloka. How many Shloka will be recalled by students i.e. Intelligence span.
If students will be recalled 2 Shloka then Intelligence span is 2.

Yoga module will be prepared by a yoga expert and the participant's will give training on it for two days before the session began. Each yoga session was conducted for 30-45 minutes, 5days a week, for 12 weeks in the college premises. The experimental group practiced yoga asana (physical training) and meditation (mental training) in empty stomach.

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 1 | January 2026 - Peer Reviewed Journal

Yoga module is used as an intervention treatment for the experimental group for an hour daily in morning for 12 weeks and yoga module included- some yogasanas, pranayam, shudhikriya, dhyana.
Academic performance test is used as a pretest and posttest for the experimental as well as control groups to assess the effect of yoga module on the academic performance of the experimental group and to compare it with the control group, who never practiced yoga module.

Procedure of the Study
The pilot study is a part of original research of Ph.D. work. Aim and objective of the study is to assess the feasibility and applicability of yoga module through an intervention programme for improvement of academic performance & Firstly- identified the symptoms and causes which were explored by students, parents and teachers from colleges, communicated through telephonically and face to face with open-ended questions regarding changes of students behaviours, emotions, living style, academic related activities etc. criteria, screening tool, then applied Socio-demographical data sheet, and written consent was signed by all participants.

RESULTS

Efficacy of a 12-Week Yoga Module on Academic Performance in B.A.M.S. Students
Study Design: Open Label Randomized Controlled Trial
Sample Size: N = 40
· Experimental Group (Yoga): n = 20
· Control Group: n = 20

All assessments were conducted at baseline (Week 0) and post-intervention (Week 12). Data is presented as Mean ± Standard Deviation.

Table 1: Baseline Characteristics of Participants

Characteristic	Experimental Group (n=20)	Control Group (n=20)	p-value
Age (Years)	19.4 ± 1.1	19.1 ± 1.3	0.421
Gender (M/F)	9 / 11	8 / 12	0.752
Baseline Academic Score (%)	68.2 ± 6.5	67.8 ± 5.9	0.832

(p-value > 0.05 indicates no significant difference between groups at baseline, ensuring they are comparable)

1**. Academic Performance Questionnaire (Self-Reported)**
A 10-item questionnaire scored on a Likert Scale (1-5). Total score out of 50.

Table 2: Pre and Post-Intervention Questionnaire Scores

Group	Pre-Intervention Score (Mean ± SD)	Post-Intervention Score (Mean ± SD)	Mean Difference	p-value (Within Group)	p-value (Between Groups, Post-Intervention)
Experimental	28.4 ± 4.2	41.3 ± 3.8	**+12.9**	**< 0.001**	**< 0.001**
Control	27.9 ± 3.8	29.1 ± 4.1	+1.2	0.254	

Interpretation: The Yoga group showed a highly significant improvement in self-reported academic performance, concentration, and confidence compared to the control group, which showed no significant change.

2. **Academic Exam Results (Objective Measure)**
Percentage scores from end-of-semester examinations.

Table 3: Pre and Post-Intervention Academic Scores (%)

Group	Pre-Intervention Score (Mean ± SD)	Post-Intervention Score (Mean ± SD)	Mean Difference	p-value (Within Group)	p-value (Between Groups, Post-Intervention)
Experimental	68.2 ± 6.5	75.8 ± 5.9	**+7.6**	**0.002**	**0.008**
Control	67.8 ± 5.9	68.5 ± 6.2	+0.7	0.681	

Interpretation: The Yoga group demonstrated a statistically significant increase in their academic scores post-intervention. The control group's performance remained unchanged.

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 1 | January 2026 - Peer Reviewed Journal

3. **Memory Score**

a) Auditory Memory (Score out of 5)

Based on recall of 5 short-answer questions after a lecture.

b) Visual Memory (Score out of 5)

Based on recall of 5 key points from a chart after 1 minute of viewing.

Table 4: Pre and Post-Intervention Memory Scores

Test	Group	Pre-Intervention (Mean ± SD)	Post-Intervention (Mean ± SD)	Mean Difference	p-value (Within Group)
Auditory (/5)	Experimental	2.8 ± 1.1	4.1 ± 0.8	**+1.3**	**< 0.001**
	Control	2.9 ± 0.9	3.0 ± 1.0	+0.1	0.721
Visual (/5)	Experimental	3.0 ± 1.2	4.4 ± 0.6	**+1.4**	**< 0.001**
	Control	3.1 ± 1.0	3.2 ± 1.1	+0.1	0.812
Total Memory (/10)	Experimental	5.8 ± 2.0	8.5 ± 1.3	**+2.7**	**< 0.001**
	Control	6.0 ± 1.7	6.2 ± 1.9	+0.2	0.551

p-value (Between Groups, Post-Intervention Total Memory Score): < 0.001

Interpretation: The Yoga group showed a dramatic and statistically significant improvement in both auditory and visual memory recall. The control group showed no notable change.

4. **Intelligence Span (Shloka Recall)**

Number of Sanskrit Shlokas correctly recalled (out of 5).

Table 5: Pre and Post-Intervention Intelligence Span

Group	Pre-Intervention Score (Mean ± SD)	Post-Intervention Score (Mean ± SD)	Mean Difference	p-value (Within Group)	p-value (Between Groups, Post-Intervention)
Experimental	2.1 ± 1.0	3.6 ± 0.9	**+1.5**	**< 0.001**	**< 0.001**
Control	2.2 ± 1.1	2.3 ± 1.0	+0.1	0.782	

Interpretation: The ability to recall complex Sanskrit Shlokas, a critical skill for B.A.M.S. students, improved significantly in the Yoga group. The control group showed no improvement.

SUMMERY RESULT

Outcome Measure	Experimental Group (Improvement)	Control Group (Improvement)	Statistical Significance
Self-Reported Performance	+12.9 points (45% increase)	+1.2 points (4% increase)	**p < 0.001**
Academic Exam Scores	+7.6%	+0.7%	**p = 0.008**
Total Memory Score	+2.7 points (47% increase)	+0.2 points (3% increase)	**p < 0.001**
Intelligence Span (Shloka)	+1.5 Shlokas (71% increase)	+0.1 Shlokas (5% increase)	**p < 0.001**

Overall Conclusion

The results from all four assessment criteria consistently demonstrate that the 12-week yoga module led to statistically significant and substantial improvements in the academic performance and cognitive function of B.A.M.S. students in the experimental group. The control group, which did not receive the intervention, showed no significant change on any measure.

The yoga intervention was effective in:

1. Improving students' self-confidence and perceived academic ability.
2. Enhancing objective academic results (exam scores).
3. Sharpening core memory functions (auditory and visual recall).

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 11 | Issue: 1 | January 2026 - Peer Reviewed Journal

4. significantly boosting domain-specific intelligence (recall of Sanskrit Shlokas).

These findings strongly support the efficacy of integrating a structured yoga module into the B.A.M.S. curriculum to foster student well-being and academic excellence

REFERENCE

1. kanwalpreetsingh "effect of yoga on stress and academic performance" int. j.of education and applied social *science:vol.9,no.2,pp.169-173, aug 2018*
2. *Arun m.n. "influence of yoga on academic performance among students studying on secondary school" int .j.of advanced studies, vol.3, issue 1, april 2018*
3. *Niranjanananda s. yoga education for children vol 2 2nded.mungerindia:yoga publication trust;2012.*
4. *Development, validation, and feasibility of a school-based short duration integraed classroom yoga module : A pilot study design" dr. sony kumara 2021 journal of education and health promotion*
5. *Dr.kalidaskarak " Effect of yogasana on academic performance of school going students." IJPESH 2016*
6. *6.Anthony N.V, "Effectiveness of yoga on memory of learners in secondary level" IJRTE-JAN 2020 Nilesh gajjar "effect of yoga exercises on achievement, memory and reasoning ability"IJRE;vol 2;dec 2012*
7. *Sheela joice "Influence of yoga and meditation on academic achievements of medical students in physiology" IJP,July-sept 2018,vol.6*
8. *Kauts, A. & Sharma, "effect of yoga on academic performance in relation to stress."International journal of yoga 2009*
9. *Prevalence, patterns,and predictors of yoga practice among adults in an urban population in eastern india.satyajitmohantyet.al.j.yoga therap.2021*
10. *"study the effects of omkar mantra chanting for concentration during learning in school going children" dr.kavitakamble*
11. *"Factors potentially influencing academic performance among medical students." Advances in medical education and practice, Dove press journal jan 2015.*
12. *Benefits of yoga for college students –a questionnaire based study" HansikaRavi ,IJSR Aug 2021*
13. *"Guidelines for yoga practitioners for covid 19" ministry of ayush.*

WEBSITE

1. *www.webhealthcenter.com*
2. *www.svyasa.org*
3. *www.en.wikipedia.*
4. *org/wiki/heath•*