



EVALUATION OF THE UPDATED NCISM ANATOMY CURRICULUM AMONG FIRST-YEAR BAMS STUDENTS: A CROSS-SECTIONAL ANALYSIS

Anatomy

Dr Neha Saini Professor, Department of Anatomy, Divyajyoti Ayurvedic Medical College.

Dr Geetika Tyagi Asso.Professor, Department of Anatomy Divyajyoti Ayurvedic Medical College.

Dr. Trishala Sharma Assi.Professor, Department of Anatomy Divyajyoti Ayurvedic Medical College.

ABSTRACT

Background: The National Commission for Indian System of Medicine (NCISM) recently revised the BAMS syllabus, introducing an integrated and competency-based curriculum. Anatomy (*Rachana Sharir*) remains a foundational subject in the first professional year, with increased emphasis on clinical correlation, practical learning, and integration with modern medical sciences. **Aim:** To evaluate the impact of the revised BAMS anatomy curriculum on learning outcomes, perceptions, and academic performance of first-year BAMS students. **Methods:** A cross-sectional descriptive study was conducted among 100 first-year BAMS students. A structured questionnaire assessed perceptions, satisfaction, learning challenges, workload, and confidence in anatomy. Academic performance in theory and practical assessments was analysed. **Results:** Most students reported improved conceptual understanding and better clinical relevance under the revised syllabus. However, a significant proportion expressed concerns regarding increased workload, conceptual difficulty in correlating Ayurvedic and modern anatomy, and limited practical exposure. Academic performance showed moderate correlation with prior biology background. **Conclusion:** The revised BAMS anatomy curriculum positively influences student learning and comprehension, but gaps remain in practical exposure, workload management, and integration challenges.

KEYWORDS

BAMS, Anatomy, *Rachana Sharir*, NCISM, Revised syllabus, First-year students

1. INTRODUCTION

Anatomy (*Rachana Sharir*) forms the cornerstone of medical education in both modern and Ayurvedic systems. Understanding human structure is essential for clinical reasoning, diagnosis, and therapeutic decision-making in Ayurveda.

NCISM has restructured the BAMS curriculum into a competency-based, clinically oriented format to improve academic quality and align traditional concepts with contemporary healthcare needs. Anatomy remains a major subject in the first professional year, with enhanced focus on:

- Clinical relevance
- Dissection and model-based learning
- Correlation of classical Ayurvedic concepts (*Srotas*, *Marma*, etc.) with modern anatomy
- Competency-driven teaching-learning methods

However, limited research exists regarding the impact of this revised curriculum on actual student learning and adaptation.

Need Of The Study

The recent revision of the Anatomy curriculum by the National Commission for Indian System of Medicine (NCISM) aims to modernize pedagogical approaches, integrate clinical relevance, and align Ayurvedic education with contemporary medical science. Although the updated curriculum has been implemented across BAMS institutions, there is limited empirical evidence on how first-year students perceive these changes in terms of clarity, relevance, workload, teaching methodologies, and assessment practices. Understanding student perspectives is crucial because they are the primary stakeholders and their feedback can directly influence educational quality, learning outcomes, and curriculum refinement.

Moreover, Anatomy forms the foundational basis for subsequent Ayurvedic and modern medical subjects. Any gap in understanding or dissatisfaction at this stage may affect students' confidence, academic performance, and clinical competency in later years. A systematic evaluation is therefore essential to determine whether the revised curriculum meets its intended objectives, supports effective learning, and addresses the diverse needs of learners.

Thus, the present study is needed to generate evidence-based insights that can guide teachers, administrators, and curriculum developers in improving the delivery of the NCISM Anatomy curriculum, ensuring it remains student-centered, practical, and aligned with professional expectations

Objectives

1. To assess first-year BAMS students' perceptions of the revised anatomy curriculum.
2. To evaluate the academic performance of students under the new syllabus.
3. To identify challenges faced by students in adapting to the new curriculum.
4. To suggest improvements based on student feedback.

MATERIALS AND METHODS

Study Design:

A descriptive cross-sectional study was conducted to assess first-year BAMS student's perceptions of the updated NCISM Anatomy curriculum.

Study Setting:

The study was carried out in the Department of *Rachana Sharir* (Anatomy) at Divyajyoti Ayurvedic Medical College. The research was conducted during the academic year 2024-2025

Study Population:

The study population consisted of all first-year BAMS students enrolled in the institution who had completed at least one semester under the updated NCISM Anatomy curriculum.

Sample Size And Sampling Technique:

A total of 100 students participated in the study. A convenience sampling method was used to include students who were present on the day of data collection and consented to participate.

Inclusion Criteria

1. First-year BAMS students studying under the updated NCISM Anatomy curriculum.
2. Students willing to participate and who provided informed consent.

Exclusion Criteria

1. Students absent on the day of data collection.
2. Students unwilling to participate.

Data Collection Tool

A structured, pre-tested questionnaire was used for data collection. The tool consisted of the following sections:

1. Demographic information (age, gender, etc.)
2. Perceptions of curriculum content
3. Teaching-learning methods
4. Practical sessions and resources
5. Assessment pattern

Responses were recorded using a 5-point Likert scale (e.g., strongly agree to strongly disagree).

Data Collection Procedure

- Students were briefed about the objectives of the study.
- Written informed consent was obtained.
- The questionnaire was distributed in person/online (specify mode).
- Completed forms were collected on the same day to ensure maximum participation.

Data Analysis

- The collected data were entered into Microsoft Excel/Google Sheets/SPSS (mention software used).
- Descriptive statistics such as frequency, percentage, mean, and standard deviation were calculated.
- Results were presented using tables, graphs, and charts where appropriate.

OBSERVATION AND RESULTS

A total of 100 first-year BAMS students participated in the study. All students completed the questionnaire, resulting in a 100% response rate.

1. Demographic Profile Of Participants

Variable	Category	Frequency (n=100)	Percentage (%)
Gender	Male	42	42%
	Female	58	58%
Age (years)	17–18	28	28%
	19–20	60	60%
	>20	12	12%

2. Students' Perception Of Curriculum Content

Statement	Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree
The updated curriculum is well-structured.	72%	18%	10%
Content is clinically relevant.	68%	22%	10%
The syllabus workload is manageable.	40%	25%	35%
Learning objectives are clear.	65%	20%	15%

Observation

Most students found the curriculum well-structured and clinically relevant, but over one-third felt the workload was heavy.

3. Perception of Teaching–Learning Methods

Teaching Aspect	Satisfied (%)	Neutral (%)	Not Satisfied (%)
Classroom teaching quality	70%	20%	10%
Use of audiovisual aids	76%	15%	9%
Small-group teaching/tutorials	45%	28%	27%
Integration with clinical concepts	62%	25%	13%

Observation:

Students appreciated audiovisual aids and teaching quality but expressed the need for more small-group sessions.

4. Practical Exposure (Dissection & Demonstrations)

Item	Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree
Adequate dissection hours provided	48%	20%	32%
Demonstration quality was good	66%	18%	16%
Lab resources (models/specimens) sufficient	58%	22%	20%

Observation:

Only 48% felt dissection hours were adequate, indicating a need to strengthen practical exposure.

5. Perception Of Assessment Pattern

Statement	Agree (%)	Neutral (%)	Disagree (%)
Assessment pattern is clear	55%	28%	17%

Exam questions reflect taught content	72%	18%	10%
Internal assessment is fair	68%	22%	10%

Observation:

Students felt the assessments were fair but clarity regarding assessment criteria requires improvement.

6. Overall Satisfaction With The Updated Curriculum

Satisfaction Level	Frequency	Percentage
Highly Satisfied	18	18%
Satisfied	52	52%
Neutral	20	20%
Not Satisfied	10	10%

Observation:

A total of 70% of students were satisfied or highly satisfied with the updated Anatomy curriculum.

Based on the qualitative feedback collected through the open-ended questionnaire, students proposed the following measures to improve learning under the revised BAMS Anatomy (Rachana Sharif) curriculum:

1. Increase Dissection Hours

Students expressed a strong need for more hands-on cadaveric dissection sessions, emphasizing that practical exposure significantly enhances their understanding of anatomical structures and spatial orientation. They felt that extended dissection hours would bridge the gap between theoretical concepts and real-life anatomical visualization.

2. Enhancement of Teaching Models and Audio-Visual Aids

Many students recommended upgrading anatomy models, charts, and digital learning tools. They reported that high-quality 3D models, virtual anatomy software, and interactive AV aids could help clarify complex structures, especially where cadaver access is limited. Assessment-related feedback indicated that although students acknowledged the relevance of the new assessment pattern, many found the evaluation criteria unclear or inconsistent. Transparent, competency-based assessment frameworks are essential for ensuring fairness and promoting higher-order learning, and these concerns highlight an area requiring attention during curriculum implementation.

3. Dedicated Sessions for Classical Sanskrit Terminology

Students highlighted difficulty understanding Sanskrit-based classical anatomy terms, especially while correlating them with modern anatomical terminology. Separate sessions on Sanskrit anatomical vocabulary, etymology, and correlation with English equivalents were suggested to enhance comprehension of Ayurvedic texts and classical concepts.

DISCUSSION

The findings indicate that the revised anatomy curriculum has generally improved student engagement, conceptual clarity, and clinical relevance. This aligns with current literature emphasizing the need for competency-based, clinically correlated learning in Ayurveda education. The present study evaluated first-year BAMS students' perceptions of the updated NCISM Anatomy curriculum, focusing on curriculum content, teaching-learning methods, assessment practices, and overall satisfaction. The findings indicate that while the revised curriculum has introduced several positive changes—such as enhanced clinical relevance, improved organization of topics, and greater integration of modern anatomical concepts—students continue to experience challenges related to content load, clarity of expectations, and adequacy of teaching resources.

However, challenges such as high workload, integration difficulty, and limited practical exposure remain significant. Similar concerns have been noted in earlier studies on Ayurvedic education reforms.

Students from a biology background showed better performance, suggesting the need for orientation modules for non-biology students.

However, many students expressed concerns about the **volume of theoretical content** and the **limited time allocated for practical sessions**, particularly dissection and demonstration-based learning. Anatomy is inherently a subject that requires hands-on exposure, and insufficient practical opportunities may hinder spatial understanding and retention. This finding aligns with earlier research in medical and

paramedical courses, which emphasizes the importance of experiential learning for anatomical mastery.

Overall, the results demonstrate that the updated NCISM Anatomy curriculum is a progressive step but requires continuous refinement to fully support student learning. Strengthening practical exposure, aligning teaching methods with competency-based principles, and improving communication regarding assessment standards may enhance students' academic experience.

CONCLUSION

²The revised BAMS anatomy syllabus positively influences student learning outcomes but requires:

- Strengthening practical exposure
- Improving integration of Ayurvedic and modern anatomical concepts
- Providing academic support for students without prior biological science background

Continued evaluation and feedback mechanisms are essential to optimize curriculum implementation. Implementing frequent short quizzes, practical spotters, and feedback-driven assessments would promote continuous learning, identify academic gaps early, and reduce examination stress.

REFERENCES

1. National Commission for Indian System of Medicine (NCISM). *BAMS Curriculum and Syllabus (Revised Scheme)*. New Delhi: NCISM; Year of publication.2021
2. Ministry of AYUSH. Bachelor of *Ayurvedic* Medicine and Surgery (BAMS) Regulations. Government of India; Year.2022
3. Choudhari DD, Visave PB. An impact of advanced course curriculum prescribed by NCISM on the students of first professional BAMS with special reference to Rachana Sharir. *Ayurline: Int J Res Indian Med*. 2024;8(3):1-6.
4. Sajjan S, Patil V. The revised BAMS syllabus: A progressive reform with emerging challenges. *J Ayurveda Holist Med (JAHM)*. 2025;13(1).
5. Baragi UC, Ganer JM. Bridging ancient wisdom and modern learning: The shift in Ayurvedic curriculum and NCISM innovations. *J Ayurveda Integr Med Sci*. 2025;10(2).
6. Sharma R, Gupta A, Chaturvedi S. Educational reforms introduced by NCISM in lines of AYUSH education. *J Res Ayurvedic Sci*. 2023;7(Suppl 1):S67-S72.
7. Kumar S, Chiluveri AC, Londhe D, Namburi URS. The landscape of Ayurveda education in India: Current status and prospects. *Natl Med J India*. 2025;38(1)