

COMPARISON OF ACADEMIC PERFORMANCE OF FIRST-YEAR MBBS STUDENTS RESIDING IN HOME AND NON-HOME ENVIRONMENT

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Received : 28/01/2026
Received in revised form : 12/03/2026
Accepted : 31/03/2026

Keywords:

Home Environment, Academic Performance, Non-Home Environment, medical education, medical students.

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DOI: 10.47009/jamp.2026.8.2.97

Source of Support: Nil,

Conflict of Interest: None declared

Int. J. Acad. Med. Pharm.
2026; 8 (2); 528-530



ABSTRACT

Background: One of the challenges for first-year MBBS students is adjusting to the demanding nature of professional medical education. The conditions under which students live in home and non-home environments differ and may affect how they perform academically. Understanding this could enable us to pinpoint the areas requiring intervention to raise academic achievement. The current study was carried out with the goal of comparing the academic performance of first-year MBBS students residing in home and non-home environments. **Materials and Methods:** Two groups of first-year MBBS students were involved in the current study: Group1: 52 students residing at home, Group2: 50 students residing as paying guests or living in hostels away from home. The first-year university examination scores of these two student groups were compared using the independent t-test. The same test was also used to compare the NEET-UG scores, which was used to gauge their prior academic performance. Information on residential status, NEET-UG scores and the percentage of marks in their first-year MBBS university examination was obtained from the college records. **Result:** The percentage of marks scored by students who lived in a home environment was significantly higher than students residing in non-home environments. The NEET-UG scores did not significantly differ between the two groups, suggesting that the groups' prior academic performance was similar. **Conclusion:** First year MBBS students staying in home environment are likely to show better academic performance than first year MBBS students staying in a non-home environment.

INTRODUCTION

Admission to the MBBS program in India is awarded following the results of the National Eligibility cum Entrance Test (NEET-UG) which is based on the multiple-choice-questions (MCQ) pattern. However, success in examinations while pursuing the MBBS program requires comprehending a large volume of academic material and demonstration of skills belonging to higher levels of learning domains which demands learning strategies different from those employed for the NEET UG examination. Therefore, students who are accepted into the first year of the MBBS program must confront the task of effectively adjusting to the demanding nature of professional medical education to achieve satisfactory academic results. Multiple factors may affect this adaptation, one of which could be their residential status.

Students residing in a non-home environment (the college hostel or paying guest accommodations available nearby) do not have the support of their family but have the advantage of negligible travel time, quick and round-the-clock access to learning

resources like the library, and more interaction and support from senior students and peers. Converse may be true for students residing at home. Exploring this relation among academic performance and residential status could help us to identify areas for appropriate intervention to provide the most conducive environment to students.

Aims and Objectives: The current study's objective was to compare the academic achievement of first-year MBBS students living in home and non-home environments.

MATERIALS AND METHODS

This study is a cross-sectional analytical study that was carried out in a medical college in Mumbai. The Institutional Ethics Committee granted permission to conduct the investigation. Additionally, authorization was acquired from the college authorities to access the records of students. The minimum sample size, estimated by using OpenEpi software available in Open Domain for Descriptive Cross-Sectional study using a qualitative variable (Proportion), was 48 for

each of the groups viz 'Home Group' (students staying at home) and 'Non-home Group' (Students lodging as paying guests (PG) or in the hostel). The records of first-year MBBS students admitted from 2019 to 2022 were analyzed to obtain information regarding NEET-UG scores, residential status, and percentage of marks at the first-year university examination. Based on the residential status students were divided into two groups viz students staying at home ('Home Group') and students staying in the hostel or PG accommodations ('Non-home Group'). 52 students were enrolled in the home group and 50 in the non-home group. Students were selected for the study using a random sampling method using a random number generator. First-year university results were used to assess academic performance. NEET-UG scores were used to assess the past academic performance of students before entering the MBBS course. Personal identifying information of any individual student was not collected or revealed and student confidentiality was maintained throughout the study. No student was contacted for any information during this study. Waiver of consent of the students was obtained from the Institutional Ethics committee before the start of the study. Using the independent t-test, the percentage marks from

these two student groups' first-year university exams were compared. The same t-test was used to compare the NEET-UG scores of the two groups. P-values less than 0.05 were considered statistically significant.

RESULTS

The NEET-UG score of both groups was compared using the two-sample independent t-test and results are given in [Table 1].

A P-value of 0.2019 suggests that, at the time of admission to the medical college, there was no discernible difference between the two student groups' prior academic performance.

The two-sample independent t-test had been employed to contrast the percentage marks earned by every group in the first-year university examination. The results are displayed in [Table 2].

A P-value of 0.0000406 implies that there was a significant difference in academic performance in the first-year university examination between both groups of students with those staying in the home environment performing better than their counterparts staying in the college hostel or paying guest accommodations.

Table 1: Comparison of NEET UG Scores of Students Residing in Non-Home and Home Environments

Two-sided confidence interval 95%			
	Sample size	NEET-UG scores	
		Mean	Standard Deviation
Group 1- Non-home group	50	71.33	9.56
Group 2 - Homegroup	52	74.38	14.06
P-value = 0.2019			

Table 2: Comparison of Percentage Marks in the University Examination for First-Year Students Residing in Non-Home and Home Environment

Two-sided confidence interval 95%			
	Sample size	Percentage Marks obtained at the First Year MBBS University Examination	
		Mean	Standard Deviation
Group 1- Non-home group	50	60.6	9.5
Group 2 - Homegroup	52	67.6	6.8
P-value = 0.0000406			

DISCUSSION

The main objective of this investigation was to compare the academic achievement of first-year MBBS students living in home versus non-home environments. The outcomes revealed that students residing in home environments had significantly better academic performance than those residing in non-home environments.

Similar studies have been conducted in different countries and have yielded varying results. A 2010 study carried out in the USA found that first-year academic performance is not significantly impacted by the type of residence a student chooses during their college years in most institutions.^[1] Another study conducted in Kolkata involving undergraduate medical students showed that residents had a significant positive contribution to their score in the 2nd MBBS microbiology examination.^[2] A nursing

college study in 2017 in New Delhi showed better academic performance in hostel students and attributed this to less commuting time, participation in group study, and help from their fellow hostel mates.^[3] A more recent study in the USA in 2019 showed that commuters scored higher than residential students living on campus.^[4] A 2020 study conducted in a Pakistani medical college investigated the effects of both residence and emotional intelligence on students' academic performance. The researchers concluded that medical students' academic performance was positively impacted by living locally.^[5] A study in 2015 in Manipal, India studied the impact of different non-home environments on academic performance. They came to the conclusion that students who rented housing off campus performed worse academically and were more likely to abuse alcohol and other drugs than those who lived on campus.^[6]

CONCLUSION

It could thus be concluded that the effect of residential status on academic performance may vary from institute to institute and would depend on several variables including but not limited to socioeconomic and cultural factors, family background (medical or non-medical), facilities available in home and in non-home environments, adaptability of students to changing academic and non-academic environments and medium of instruction before medical education. Educational Institutions can carry out similar and further multi-variable and qualitative studies to identify all potential variables and their effect on academic performance. This will help to plan appropriate interventions to provide the most conducive environments for students to boost their academic performance.

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