

# Effect of Teacher Shortage in Basic Subjects on Medical Education in Bangladesh

Tasnova Islam Chy<sup>1</sup>, Bidhan Krishna Sarker<sup>2</sup>, Shamima Nasrin<sup>3</sup>, Sonia Akter<sup>4</sup>, Rifah Rawnak Azad<sup>5</sup>, Afsana Naznin<sup>6</sup>

1. Assistant Professor and Head  
Department of Pharmacology and Therapeutics  
Southern Medical College and Hospital  
Chittagong, Bangladesh
2. Lecturer  
Department of Pharmacology and Therapeutics  
Sylhet MAG Osmani Medical College
3. Assistant Professor  
Department of Pharmacology and Therapeutics  
Ashiyan Medical College
4. Associate Professor  
Department of Pharmacology and Therapeutics  
Ashiyan Medical College
5. Medical Officer  
Department of Pharmacology and Therapeutics  
Dhaka Medical College
6. Lecturer, Department of Pharmacology and Therapeutics  
Dhaka Medical College

## Correspondence to:

Tasnova Islam Chy  
Assistant Professor and Head  
Department of Pharmacology and Therapeutics  
Southern Medical College and Hospital  
Chittagong, Bangladesh  
E-mail: rumkitasnova@gmail.com



Submission Date : 10 Dec 2024  
Accepted Date : 22 Jan 2025  
Published Date : 30 March 2025  
DOI: <https://doi.org/10.3329/jrpmc.v10i1.81563>

## Abstract

### Background:

Medical college teachers now not only provide information but also guide students to validate and identify key issues relevant to their future practice. However, a shortage of teachers in basic medical science subjects is a significant problem, impacting students and the entire medical education system.

### Objective:

This study aimed to assess the effects of teacher shortage in basic subjects on medical education in medical colleges in Bangladesh.

### Methods:

This descriptive cross-sectional study, conducted from January to December 2021 in four medical colleges (two government and two private) in Bangladesh, included 456 subjects. Of these, 96 were basic subject teachers in medical colleges, and 360 were students in the 1st to 3rd phases of the MBBS course. Descriptive statistics and SPSS version 22.0 were utilized for data analysis.

### Results:

In this study, all teachers (100%) and 82.22% of students expressed concerns about a shortage of teachers in their medical colleges. A significant portion of students (29.1%) believed that the shortage of teachers hindered the delivery of sufficient knowledge. Additionally, 23.05% of students reported disruptions in regular and practical classes due to the shortage of teaching staff. Among the 360 students, various suggestions were proposed, with 55.5% advocating for the appointment of more teachers in each basic subject, and 20.28% suggesting increased facilities for basic subject teachers.

### Conclusion:

The shortage of teachers in basic subjects within medical colleges in Bangladesh significantly hampers the quality of education, leading to a lack of sufficient knowledge among students. This shortage may also have implications for their practical classes and training in the institutions.

**Keywords:** Medical Education, Basic subjects, Teachers, Shortage, Effect

**Citation:** Chy TI, Sarker BK, Nasrin S, Akter S, Azad RR, Naznin A. Effect of Teacher Shortage in Basic Subjects on Medical Education in Bangladesh. J Rang Med Col. 2025 Mar;10(1):57-62. doi: <https://doi.org/10.3329/jrpmc.v10i1.81563>

## Introduction:

A shortage of teachers not only harms students but also affects educators and the entire education system. Insufficient qualified teachers and staff instability pose threats to students' learning abilities and reduce teacher effectiveness. The high turnover among teachers consumes economic resources that could be better utilized elsewhere.<sup>1</sup> This shortage also hinders the establishment of a solid teaching reputation and

professionalization, perpetuating the overall scarcity. In the field of medical education, significant changes have occurred, advocating integrated teaching, problem-based and community-based learning, and systematic curriculum planning.<sup>2-4</sup> Teachers are viewed as experts conveying knowledge to students through various educational strategies.<sup>5</sup> Teachers play a crucial role in imparting their overview or structuring the field of knowledge for students. A

study on teachers recognized for 'excellent teaching' revealed that, while not explicitly framing teaching as content transmission, these educators centered their approaches on disciplinary knowledge. Interactive methods, including lectures, were employed to convey this knowledge to students.<sup>6</sup> The role of assessing a teacher is perceived differently from other teaching roles, such as being an information provider, role model, facilitator, and curriculum planner. Teachers strive to assist students in diverse ways to achieve course goals.<sup>7</sup> The compromised quality of medical education has had a negative impact on the nation's health service, raising concerns among prominent figures in the medical community and an excess of medical colleges and a decline in medical graduates' interest in teaching, contributing to the shortage.<sup>8</sup> In Bangladesh, the scarcity of teachers compromises the quality of medical education, reaching a point where some colleges lack instructors for essential subjects in the MBBS curriculum.<sup>9</sup> Given the evolving landscape of medical science, this study seeks to evaluate the impact of teacher shortage in basic subjects on medical education in Bangladesh Medical Colleges.<sup>10</sup>

This study aimed to evaluate the impact of teacher shortages in basic medical sciences (such as Anatomy, Physiology, Biochemistry, Pathology, Pharmacology, and Microbiology) on medical education in medical colleges of Bangladesh. The study aimed to know about the views of both teachers and students on the shortage of teachers, assess the suggestions of students to solve this problem of acute shortage of teachers of basic subjects and to analyze the students' opinions regarding facilities provided by the medical colleges.

#### Methods:

This descriptive cross-sectional study was conducted in four medical colleges in Bangladesh, comprising two government medical colleges (Mymensingh Medical College, Mymensingh, and Cox's Bazar Medical College, Cox's Bazar) and two private medical colleges (International Medical College, Tongi, and Southern Medical College, Chattagram). The study spanned from January 2021 to December 2021. A purposive selection method was employed to choose 456 study subjects based on specified inclusion and

exclusion criteria. Among them, 96 were basic subject teachers (such as Anatomy, Physiology, Biochemistry, Pathology, Pharmacology, and Microbiology), and 360 were students in the 1st to 3rd phases of the MBBS course of selected medical colleges. One subject was randomly selected from 1st to 3rd phases of the MBBS course for detecting the topic-wise effects of teacher shortage (Pharmacology). Data from teachers and students were separately recorded in questionnaires. The completed questionnaires, findings from in-depth interviews with teachers, document reviews, and other data were analyzed at the Department of Pharmacology and Therapeutics, Dhaka Medical College. Descriptive statistics were employed for data analysis, expressing qualitative data through frequency distribution and percentage. Data analysis was conducted using Statistical Package for Social Science (SPSS) version 22.0. Ethical clearance was obtained from the Ethical Review Committee (ERC) of Dhaka Medical College. Informed written consent was obtained from participants in the four medical colleges, ensuring voluntary participation and strict confidentiality of participant information and data.

#### Results:

In this study, all surveyed teachers (100%) unanimously confirmed the existence of a shortage of teachers in their respective medical colleges, with 100% expressing a positive opinion on the matter. A significant majority of students (82.22%) affirmed the presence of a teacher shortage in basic subjects, while a minority (17.77%) expressed a contrary opinion on this matter (Table-I).

**Table-I: Distribution of the respondent's opinion regarding the presence of a shortage of teachers of basic subjects in medical colleges**

Respondent's Opinion	no. (%)
<b>Teacher's Opinion (N=96)</b>	
Yes	96 (100)
No	0(0)
<b>Student's Opinion (N=360)</b>	
Yes	296 (82.22)
No	64(17.78)

The prevailing sentiment among the majority of students (29.1%) is that the shortage of teachers hinders the adequate provision of knowledge. Additionally, 23.05% of students noted that the shortage of teaching staff often disrupts regular classes and practical sessions (Table-II).

**Table-II: Student's opinions on how teacher shortage affects the education process (N=360)**

Opinions	no. (%)
Sufficient knowledge cannot be provided to the students	105(29.1)
Regular classes and practical classes are often hampered	83(23.05)
Many important topics are not clearly understood by them	68(18.9)
In a pandemic situation, online classes are not satisfactory	39(10.8)
Proper assessment of the student is not possible	32(8.8)
Proper learning is hampered	22(6.1)
Less interaction with teachers	11(3.05)

Out of the 360 students surveyed, six types of suggestions emerged. A significant portion of students (55.5%) advocated for the appointment of more teachers in each basic subject, while 20.28% suggested an increase in facilities for basic subject teachers. A small percentage (1.11%) expressed a negative opinion regarding the opening of numerous new government and private medical colleges without proper planning (Table-III).

**Table-III: Student's suggestions to solve the problem of such a shortage of teachers (N=360)**

Suggestions	no. (%)
To appoint more teachers in each basic subject	200(55.5)
To increase the facility of the teachers of basic subjects	73(20.28)
Postgraduation seats for basic subjects should be increased	32(8.9)
Students should be motivated to choose basic subjects	30(8.3)
Teacher: student proper ratio should be maintained	21(5.8)
Should not open new medical colleges without a proper strategy	4 (1.11)

Regarding students' views on facilities provided by medical colleges, a significant majority (77.5%) expressed that they lack the necessary facilities to complete the syllabus within the allotted time. Additionally, 100% of students unanimously affirmed the need for more teachers to adequately

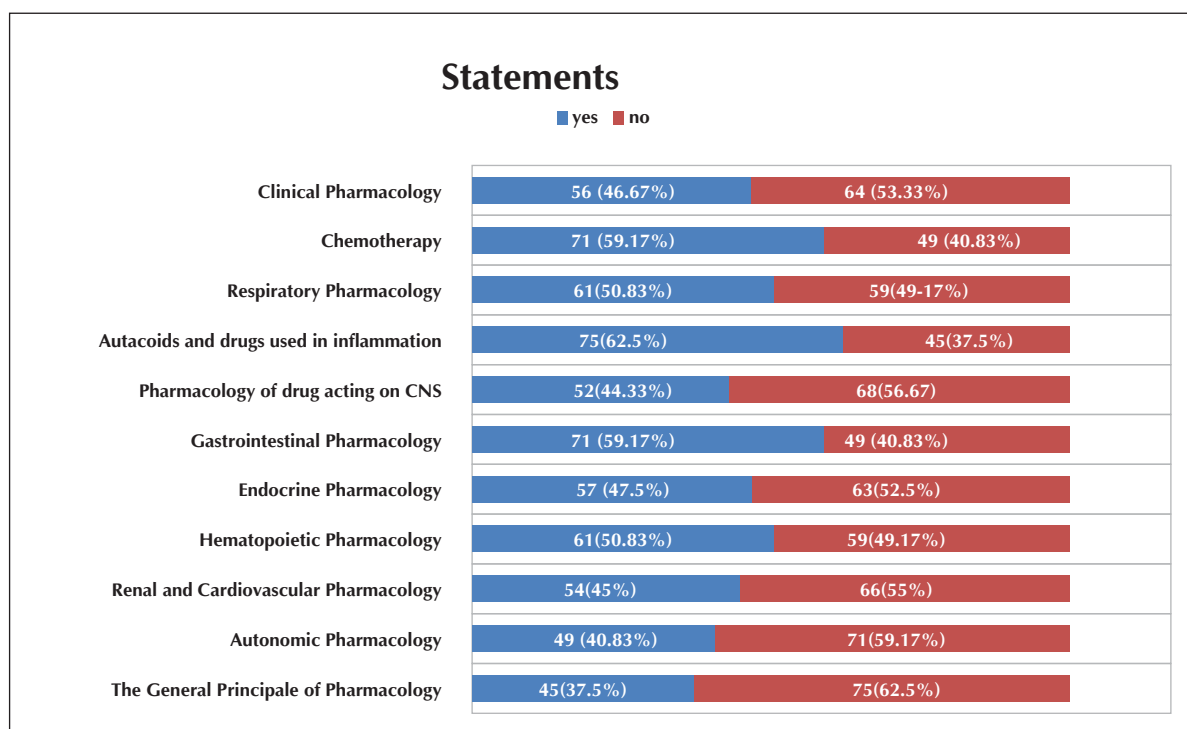
cover the syllabus. Furthermore, 88.33% of students stated that medical colleges do not provide teachers according to their specific needs (Table-IV).

**Table-IV: Students' opinions regarding facilities provided by the medical colleges**

Opinions	no. (%)
Having all the facilities in medical college to complete the course	
Yes	81(22.5)
No	279(77.5)
The number of Subject specialist teachers is adequate	
Yes	64(17.77)
No	296(82.22)
Teachers take classes regularly according to routine	
Yes	135(37.5)
No	225(62.5)
Fixed teachers are there to take lecture classes	
Yes	228(63.33)
No	132(36.67)
Fixed lecturers are there to take tutorial classes	
Yes	92(25.56)
No	268(74.44)
Teachers take extra classes according to the needs of the students	
Yes	69(19.17)
No	291(80.8)
Medical colleges provide teachers, giving importance to student's opinion	
Yes	42(11.7)
No	318(88.33)
More teachers are needed to complete the syllabus	
Yes	360(100.0)
No	0(0.0)

The Department of Pharmacology was randomly selected from all the subjects of 1st to 3rd phases of the MBBS course for detecting the topic-wise effects of teacher shortage.

A notable number of students (62.5% in the 3rd phase) reported a lack of clear understanding of crucial topics due to a shortage of teachers. Specifically, 62.5% of students in the 3rd phase stated they did not gain a clear idea about the general principles of pharmacology, while 53.33% expressed a deficiency in developing sufficient knowledge about clinical pharmacology (Figure-1).



**Figure-1: Distribution of the respondents (students) regarding the development of clear ideas about important pharmacological topics with minimum teaching staff (n=120)**

### Discussion:

This descriptive cross-sectional study focused on basic subject teachers and 1st to 3rd phases students in four selected medical colleges in Bangladesh. The study aimed to investigate the repercussions of the acute shortage of teachers in basic subjects within the country's medical colleges. Results showed unanimous agreement among 100% of teachers and 82.22% of students regarding the shortage of basic subject teachers. This finding aligns with a study by Alamgir and Alam SA (2018), which reported that over 50% of positions for professors, associate professors, and assistant professors are currently vacant in some government and private medical colleges in Bangladesh.<sup>11</sup> This aligns with a report by Ananthakrishnan indicating a severe shortage of teaching manpower in medical colleges in India, with a deficit ranging from 20-25% in most departments and reaching as high as 33% in specific areas. However, student perspectives on this issue differed from teachers. While 80.6% of students acknowledged a teacher shortage, 19.4% did not share this sentiment. The varying opinions among students might be influenced by occasional

classes conducted by teachers from other departments.<sup>12</sup> As noted, a significant number of students (29.1%) believe that the shortage of teachers hampers the provision of sufficient knowledge, and 23.05% stated that the scarcity of teaching staff often disrupts regular and practical classes. In pharmacology, a shortage of teachers has left a significant proportion of students (62.5% in the 3rd phase) struggling to grasp important topics. Specifically, 62.5% reported not having a clear understanding of the general principles of pharmacology, and 53.33% felt they lacked sufficient knowledge about clinical pharmacology. This echoes the findings by Goswami S et al in a similar study.<sup>13</sup> Regarding facilities provided by medical colleges, 77.5% of students believe they lack essential resources to complete the syllabus on time. All students (100%) expressed a need for more teachers to adequately cover the syllabus, and 88.33% felt that medical colleges do not provide teachers according to their specific needs. A study by Islam A et al highlighted multifaceted challenges in the health system, including a lack of public health facilities, a shortage of skilled workforce, inadequate financial resource

allocation, and political instability. The study emphasized the crucial need for dynamic and proactive stewardship to strengthen and enhance the overall health system.<sup>14</sup> The survey findings revealed a consensus among both teachers and students that the shortage of teachers is negatively impacting the education process, leading to a compromise in the quality of medical education. Students emphasized that the absence of qualified and subject-specialist teachers is impeding proper learning. The insufficient number of teachers also hinders the proper assessment of students. This aligns with a study by Uddin et al. (2020), which similarly highlighted the compromising effect of teacher shortage on the quality of medical education in Bangladesh. The study noted challenges in ensuring students' learning of optimal skills and attitudes, including instances where medical colleges lack instructors for basic subjects in the Bachelor of Medicine and Bachelor of Surgery (MBBS) program.<sup>15</sup>

#### Limitations:

This study, conducted in four medical colleges with a small sample size, may not fully represent the broader community. The absence of follow-up visits for teachers and students who were not present during data collection raises concerns about the representativeness of the collected data. Additionally, the use of closed-ended questions with limited response options may impact the reliability of the survey outcomes.

#### Conclusion:

This study emphasizes the severe impact of a shortage of teachers in fundamental subjects in medical colleges, adversely affecting the overall education quality. Students' insufficient knowledge poses a significant challenge, potentially impacting their practical performance in the workplace. The lack of educators not only undermines students' understanding but also hampers their ability to apply theoretical knowledge in real-world medical situations. Addressing this shortage is crucial for improving the educational experience and ensuring that medical graduates are well-prepared for their future careers. Urgent and strategic interventions are needed to strengthen the teaching faculty in medical colleges, establishing a more robust foundation for training the next generation of healthcare professionals.

**Funding:** No funding sources.

**Conflict of interest:** None declared.

#### References:

1. Garcha E, Weiss E. The teacher shortage is real, large and growing, and worse than we thought. *J Teach Learn Resour*. 2019;21(2): 1-19.
2. Harden RM, Sowden S, Dunn WR. Educational strategies in curriculum development: the SPICES model. *Med Educ*. 1984;18(4):284-97.
3. Harden RM. Approaches to curriculum planning. *Med Educ*. 1986;20(5):458-66.
4. Harden RM, Davis MH. AMEE Medical Education Guide No. 5. The core curriculum with options or special study modules. *Med Teach*. 1995;17(2):125-48.
5. Brown GA, Atkins MJ. Explaining in professional contexts. *J Teach Learn Resour*. 1986;1(1):60-86.
6. Johnston S. What can we learn about teaching from our best university teachers? *Teach High Educ*. 1996;1(2):213-25.
7. Boud D. Assessment and the promotion of academic values. *Br J Educ Technol*. 1990;15(1):101-11. doi:10.1080/03075079012331377621
8. Dipankar R. Acute teacher shortage hampers education. *The Daily Star*. 2019 Feb 03:2-3. <https://www.thedailystar.net/city/news/khulna-medical-college-acute-teacher-shortage-hampers-education-1696672>
9. Directorate General of Health Services (DGHS). Subject wise sanctioned, filled, and vacant post data. MIS (DGHS). 2021 Jan 12.
10. Adhikari A, Bhattacharya S, Indu R, Ray M, Waghmare L. Perception of medical teachers towards undergraduate medical theoretical assessment system in a medical college of West Bengal. *Int J Res Med Sci*. 2017; 5(12):53-96.
11. Alamgir M, Alam SA. Medical education quality in Bangladesh dips due to shortage of teachers, facilities. *New Age*. 2018 Jun 02:1-3.
12. Ananthakrishnan N. Acute shortage of teachers in medical colleges: existing problems and possible solutions. *Natl Med J India*. 2007 Jan-Feb;20(1):25-9.
13. Goswami S, Sahai M. Problems and challenges in medical education in India. *Eur J Contemp Educ*. 2015;11(1):31-37. doi:

10.13187/ejced.2015.11.31

14. Islam A, Biswas T. The health system in Bangladesh: challenges and opportunities. Am J Health Res. 2014;2(6):366-374. doi: 10.11648/j.ajhr.20140206.18
15. Uddin MN, Asaduzzaman AKM, Talukder MHK, Giti S. Quality of teaching-learning in undergraduate medical education in Bangladesh-Views of stakeholders. Bangladesh J Med Educ. 2020;11(2):34-42. doi: <https://doi.org/10.3329/bjme.v11i2.49248>