

Original Article

Teachers' and Students' Views Regarding Acute Shortage of Teachers of Basic Subjects in Medical Colleges of Bangladesh

DOI: dx.doi.org



Tasnova Islam Chy^{1*}, Adhir Kumar Das², Bidhan Krishna Sarker³, Sonia Akter⁴, Rifah Rawnak Azad⁵, Afsana Naznin⁶

Received: 14 January 2024
Accepted: 27 January 2024
Published: 10 February 2024

Published by:
Sher-E-Bangla Medical College,
Barishal, Bangladesh

*Corresponding Author

Editor: Prof. Dr. HN Sarker



This article is licensed under a
[Creative Commons Attribution 4.0
International License](https://creativecommons.org/licenses/by/4.0/).

Available Online:
[https://bdjournals.org/index.php/planet/
article/view/423](https://bdjournals.org/index.php/planet/article/view/423)



ABSTRACT

Introduction: Teachers play a key role in student learning. In all phases of education, student achievement correlates with the quality of teachers. But teacher shortage in basic subjects is a great issue and this crisis is affecting the students as well as the whole medical education system. **Aim of the study:** This study aimed to assess the views of teachers and students about an acute shortage of teachers of basic subjects in medical colleges in Bangladesh. **Methods and materials:** This descriptive cross-sectional study spanned from January to December 2021, encompassing four medical colleges in Bangladesh, comprising two governments and two private institutions. The study included 456 participants, with 96 being basic subject teachers in medical colleges and 360 students in the 1st-3rd phases of the MBBS course. Data analysis involved the SPSS version 22.0 program. **Result:** The study found unanimous concern among teachers (100%) and students (82.22%) regarding a shortage of

(The Planet 2023; 7(1): 208-217)

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

teachers in basic subjects. Notably, 26.04% of teachers noted shortages in Pharmacology, while 27.1% identified deficiencies in Forensic Medicine and 26.04% in Anatomy. Lack of facilities was cited by 44.8% of teachers as the primary cause. In Pharmacology, 75% of students lacked sufficient teachers, with 88.33% feeling the medical college didn't meet their teacher needs. **Conclusion:** The study findings suggest that there is a shortage of teachers of basic subjects in medical colleges in Bangladesh. To address this issue, recommendations from both teachers and students in medical colleges are essential for devising effective solutions to mitigate these challenges.

Keywords: Acute shortage, Basic subjects, Teachers, Education, Medical colleges, Bangladesh

INTRODUCTION

The landscape of medical science is undergoing continuous transformation with new discoveries and evolving understandings. This shift in the definition and scope of health has precipitated rapid changes in medical education. In this dynamic environment, the role of the medical teacher has become increasingly crucial. Teachers have transitioned from being mere knowledge providers to becoming facilitators of learning [1]. Teaching is an intricate and demanding task, with a good teacher defined as one who effectively aids students in learning. Teachers contribute to this process in various ways, playing a pivotal role in student learning across all phases of education. The quality of teachers has a direct correlation with student achievement [2,3]. The multifaceted roles of teachers can be categorized into six areas, including being an information provider in lectures, a role model in formal teaching settings, a mentor and learning facilitator, a student assessor and curriculum evaluator, a curriculum course planner, and a creator of resource materials and study guides [4]. Students' satisfaction with their medical education can vary, as they may find some aspects aligning with their expectations while being dissatisfied with others related to teaching, interpersonal relationships, and the educational

environment [5]. Intrinsic satisfaction among medical students is often derived from daily interactions with teachers and the effectiveness of the learning experience. The fundamental purpose of teaching is to facilitate learning, necessitating teachers' understanding of student expectations and how these can be effectively addressed [6]. The issue of teacher shortage is not only significant but also expanding consistently. The situation is more critical than initially perceived, particularly when considering indicators of teacher quality such as certification, relevant training, and experience. The shortage is more acute than current estimates suggest [7]. This scarcity of teachers poses a threat not only to students and teachers but also to the entire education system. Insufficient numbers of qualified teachers and staff instability jeopardize students' ability to learn effectively. The frequent turnover of teachers not only drains economic resources that could be more efficiently utilized elsewhere but also poses challenges in establishing a robust reputation for teaching and professionalizing the field. This cyclic situation further exacerbates the existing shortage of teachers [8]. Choosing a career is a multifaceted decision influenced by various intrinsic and extrinsic factors. A study on career choices among medical

students in Bangladesh revealed that the majority aspire to specialize in established clinical specialties, while some consider immigration to other countries. Unfortunately, basic medical subjects are deemed less attractive, contributing to a significant shortage of teachers in medical colleges^[9]. As per the Directorate General of Health Services, there are significant vacancies in teaching positions across various basic medical subjects. The numbers reveal shortages in Anatomy (95 out of 308 posts), Physiology (78 out of 220 posts), Biochemistry (75 out of 191 posts), Forensic Medicine (78 out of 152 posts), Community Medicine (52 out of 176 posts), Pharmacology (60 out of 194 posts), Pathology (73 out of 227 posts), and Microbiology (68 out of 193 posts). Notably, certain Government medical colleges, such as Patuakhali Medical College and Sheikh Hasina Medical College in Jamalpur, lack subject specialist teachers for specific basic subjects in their MBBS programs^[10]. In light of these circumstances, this study seeks to evaluate the perspectives of teachers and students regarding the acute shortage of teachers in basic subjects within medical colleges in Bangladesh.

OBJECTIVE

General Objective

- To assess the views of teachers and students about an acute shortage of teachers of basic subjects in medical colleges in Bangladesh.

Specific Objectives

- To identify the present situation of lack of teachers of basic

subjects at different medical colleges.

- To know the possible reasons behind this teacher shortage.
- To sort out recommendations for solving this problem.

METHODS & MATERIALS

This descriptive cross-sectional study took place from January 2021 to December 2021 in four medical colleges, comprising two government institutions (Mymensingh Medical College, Mymensingh, and Cox's Bazar Medical College, Cox's Bazar) and two private institutions (International Medical College, Tongi, and Southern Medical College, Chattagram). A purposive selection method was employed to choose 456 study subjects based on specific inclusion and exclusion criteria. Of these, 96 were basic subject teachers, and 360 were students in the 1st-3rd phases of the MBBS course.

Inclusion Criteria

- Teachers of basic subjects of selected medical colleges.
- Students of 1st-3rd phases of MBBS course of selected medical colleges.
- Teachers who were presented at the time of data collection.
- Students who were presented at the time of data collection.
- Teachers and students who were interested in participating in the study as respondents.

Exclusion Criteria

- Teachers other than basic subjects.
- Respondents who did not give consent to participate in the study.

Data from teachers and students were separately recorded in questionnaires. The completed questionnaires, results from in-depth interviews with teachers, reviews of necessary documents, and collected data were analyzed at the Department of Pharmacology and Therapeutics, Dhaka Medical College, Dhaka. The analysis employed descriptive statistics, with qualitative data expressed in terms of frequency distribution and percentage. The Statistical Package for Social Science (SPSS) version 22.0 was utilized for data analysis. Ethical clearance for the study was obtained from the Ethical Review Committee (ERC) of Dhaka Medical College. Informed written consent was sought from participants in the four medical colleges, ensuring voluntary participation and strict confidentiality of both participant information and data was maintained throughout the study.

RESULTS

Table I: Distribution of the respondents (teachers) regarding the presence of a shortage of teachers of basic subjects in medical colleges (n=96)

Opinion	n	%
Yes	96	100.0
No	0	0.0
Total	96	100.0

Table I provides the distribution of respondents, who are teachers, regarding the presence of a shortage of teachers of basic subjects in medical colleges in

Bangladesh. The table includes a total of 96 respondents. Notably, all respondents (100%) expressed the opinion that there is indeed a shortage of teachers of basic subjects in medical colleges. None of the respondents indicated otherwise.

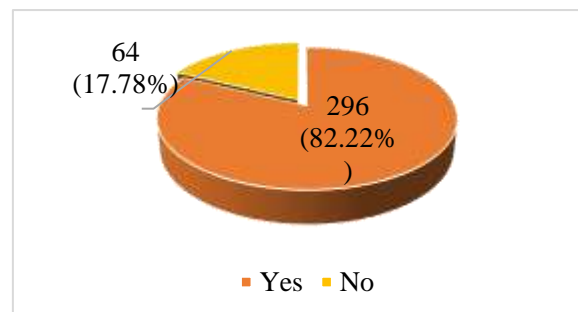


Figure 1: Distribution of the students by their opinions about the presence of teacher shortage

Figure 1 provides the distribution of students regarding the presence of a shortage of teachers of basic subjects in medical colleges in Bangladesh. 82.22% of the students expressed the opinion that there is a shortage of teachers, while 17.78% expressed the opinion that there is no shortage.

Table II: Distribution of the respondents (teachers) regarding their opinion about the subject-wise shortage of teachers (n=96)

Subjects	n	%
Forensic Medicine	26	27.1
Anatomy	25	26.04
Pharmacology	25	26.04
Pathology	7	7.29
Physiology	4	4.2
Anatomy & Forensic	4	4.2

Medicine		
Anatomy & Pharmacology	3	3.1
Anatomy, Forensic Medicine & Physiology	1	1.04
Forensic Medicine & Physiology	1	1.04
Total	96	100.0

Table II presents the distribution of respondents, who are teachers, regarding their opinions about the subject-wise shortage of teachers in medical colleges in Bangladesh. The table includes responses from a total of 96 participants. Respondents identified various subjects where shortages of teachers are perceived. Forensic Medicine emerged as the subject with the highest perceived shortage, with 27.1% of respondents indicating this. Anatomy and Pharmacology closely follow, each accounting for 26.04% of responses. Other subjects mentioned include Pathology (7.29%), Physiology (4.2%), Anatomy & Forensic Medicine (4.2%), Anatomy & Pharmacology (3.1%), Anatomy, Forensic Medicine & Physiology (1.04%), and Forensic Medicine & Physiology (1.04%).

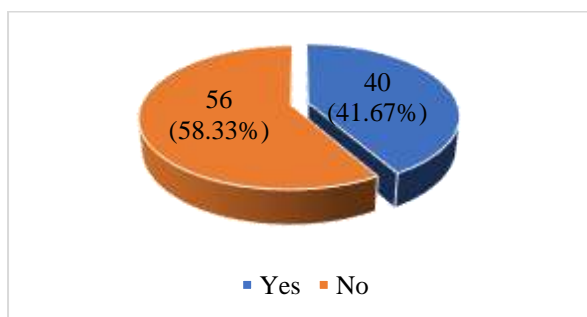


Figure 2: Distribution of the teachers about their opinions about the presence of sufficient teachers in the pharmacology department

The pie chart in **Figure 2** shows the distribution of teachers' opinions on whether there are sufficient teachers in the pharmacology department. Of the 96 respondents, 56 (58.33%) said yes, there are sufficient teachers, and 40 (41.67%) said no.

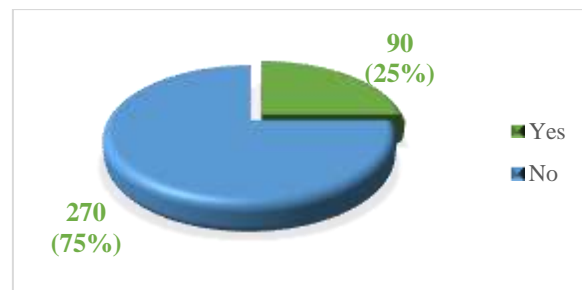


Figure 3: Distribution of respondents (students) by their opinion about the presence of sufficient teachers in the pharmacology department

The pie chart in **Figure 3** shows that 75% of respondents (270 students) said no, there are not sufficient teachers in the pharmacology department, while 25% (90 students) said yes.

Table III: Frequency distribution of reasons identified by teachers, behind a shortage of teachers in basic subjects (n=96)

Reasons for the shortage of teachers in basic subjects	n	%
Lack of facilities (standard salary, incentive, accommodation, promotion, transport, etc.)	43	44.8
Most of the medical students usually choose clinical subjects as their future career	18	18.8

Migration of teachers from Asian countries to the developed world	13	13.5
Poor quality of training	8	8.3
Poor working environment	7	7.3
Poor salary structure	5	5.2
Fewer job opportunities in the private sector	2	2.1
Total	96	100.0

Table III provides insight into the reasons perceived by respondents for the shortage of teachers in basic subjects within medical colleges in Bangladesh. A total of 96 respondents contributed to this survey. The most prevalent reason cited for the shortage of teachers is the lack of facilities, encompassing factors such as standard salary, incentives, accommodation, promotion opportunities, and transport, which accounted for 44.8% of responses. Additionally, 18.8% of respondents attributed the shortage to the tendency of most medical students to choose clinical subjects for their future careers. Migration of teachers from Asian countries to the developed world was identified as a contributing factor by 13.5% of respondents. Other reasons cited include poor quality of training (8.3%), poor working environment (7.3%), poor salary structure (5.2%), and fewer job opportunities in the private sector (2.1%).

Table IV: Distribution of the suggestions by teachers to solve this problem of acute shortage of teachers of basic subjects (n=96)

Suggestions by the teachers	n	%
Teachers should be	19	19.8

appointed in each basic subject according to BMDC guideline		
Incentive, the salary of the basic subject teachers should be increased	19	19.8
Postgraduation seats for basic subjects should be increased	18	18.8
Proper training and accommodation facilities should be provided to the teachers	12	12.5
Promotion should be given to teachers regularly according to their performance	7	7.3
A safe working environment should be ensured	6	6.3
Students should be motivated to choose basic subjects as their future career	6	6.3
A special team should monitor the private medical colleges	6	6.3
Proper allocation of teachers according to government order in the peripheral medical colleges	3	3.1
Total	96	100.0

Table IV outlines the distribution of suggestions provided by teachers to address the acute shortage of teachers in basic subjects within medical colleges in Bangladesh, based on responses from 96 participants. Various suggestions were put forth by the teachers to mitigate this issue. The most commonly proposed solution, endorsed by 19.8% of respondents each, includes appointing teachers in each basic subject according to Bangladesh Medical and Dental Council (BMDC) guidelines and increasing incentives and salaries for

basic subject teachers. Additionally, 18.8% of respondents suggested increasing postgraduate seats for basic subjects, while 12.5% advocated for providing proper training and accommodation facilities to teachers. Other suggestions include providing regular promotions based on performance (7.3%), ensuring a safe working environment (6.3%), motivating students to choose basic subjects as their future careers (6.3%), and implementing a special monitoring team for private medical colleges (6.3%). Lastly, 3.1% of respondents recommended proper allocation of teachers according to government orders in peripheral medical colleges.

Table V: Distribution of the teachers' opinions regarding facilities provided by the medical colleges (n=96)

Teachers' opinion about facilities provided by the medical colleges	n	%
Having all the facilities in medical college to complete the course		
Yes	24	25.0
No	72	75.0
The number of Subject specialist teachers is adequate		
Yes	18	18.8
No	78	81.3
Teaching hours are sufficient to complete the syllabus		
Yes	39	40.6
No	57	59.4
Fixed teachers are there to take lecture classes		
Yes	73	76.0

No	23	24.0
Fixed lecturers are there to take tutorial classes		
Yes	59	61.5
No	37	38.5
Teachers take extra classes according to the needs of the students		
Yes	36	37.5
No	60	62.5
Teachers can assess the students properly with a minimum number of teachers		
Yes	33	34.4
No	63	65.6
More teachers are needed to plan and participate in the formal examination of students		
Yes	67	69.8
No	29	30.2
More teachers are needed for effective curriculum planning and course organization		
Yes	65	67.7
No	31	32.3

Table V illustrates the distribution of teachers' opinions regarding the facilities provided by medical colleges, based on responses from 96 participants. The table provides insights into various aspects of facility provision and adequacy within medical colleges as perceived by the teaching staff. Among the respondents, 25.0% affirmed that all necessary facilities were available in their respective medical colleges to complete the course, while 75.0% disagreed. Similarly, only 18.8% believed that the number of subject specialist teachers was adequate, with 81.3% expressing the opposite view. Furthermore, 40.6% of respondents

considered the teaching hours sufficient to complete the syllabus, whereas 59.4% disagreed. The majority (76.0%) confirmed the presence of fixed teachers for lecture classes, while 24.0% indicated otherwise. Regarding tutorial classes, 61.5% stated the availability of fixed lecturers, while 38.5% disagreed. Additionally, 37.5% of respondents reported that teachers conducted extra classes as per student needs, while 62.5% disagreed. Furthermore, 34.4% believed that teachers could assess students properly with the current teacher-to-student ratio, while 65.6% disagreed. The need for more teachers for formal examination planning and participation was acknowledged by 69.8% of respondents, while 30.2% disagreed. Similarly, 67.7% agreed on the necessity of more teachers for effective curriculum planning and course organization, while 32.3% disagreed.

DISCUSSION

In this study, among 96 teachers, 100% of teachers and 82.22% of students acknowledged a shortage of teachers in basic subjects, aligning with Alamgir and Alam SA's findings (2018) reporting over 50% vacant positions for professors, associate professors, and assistant professors in some Bangladeshi medical colleges ^[11]. This shortage is consistent with Ananthkrishnan's report (2007) on the acute deficit of teaching manpower in Indian medical colleges, ranging from 20-33% across various departments. Despite teacher consensus, student agreement on the shortage was lower, with 80.6% recognizing the issue and 19.4% expressing no concern, potentially influenced by occasional classes

conducted by teachers from other departments ^[12]. In this study, teachers identified Forensic Medicine, Anatomy, and Pharmacology as basic subjects with a more acute shortage of teachers, aligning with the Directorate General of Health Services (DGHS) report from January 2021. The DGHS data indicated significant vacancies in these subjects, such as 17 out of 19 professor positions, 16 out of 19 associate professor positions, and 8 out of 28 assistant professor positions being vacant in Forensic Medicine. Similarly, Anatomy and Pharmacology showed notable vacancies across various professor, associate professor, and assistant professor positions ^[10]. In this survey, 58.33% of teachers and 75% of students expressed a lack of sufficient teachers in the Pharmacology department, leading to challenges in understanding crucial pharmacological topics. Teachers attributed the teacher shortage in basic subjects to various factors, with 44.8% pointing to inadequate facilities for teachers as the primary cause. This aligns with findings from a survey by Dipankar R. (2019), which highlighted similar suggestions ^[13]. Dr. Manoar Hossain, an assistant professor of Surgery at Khulna Medical College, emphasized the need for government investigation and improved opportunities for teachers, including promotion and higher education. Additionally, 18.8% of teachers noted that students often prefer clinical subjects for their future careers, consistent with a report by Dipankar R. in 2019 ^[13]. The study highlights a persistent shortage of teachers for basic subjects, attributed to students' reluctance to choose these subjects as majors, leading to insufficient production of teachers in those areas. This perspective aligns with a study on "Career

choices among medical students in Bangladesh" by Ahmed et al. (2011), revealing that students predominantly favored established clinical specialties due to broader job opportunities, finding basic medical subjects less appealing ^[9]. Furthermore, 13.5% of teachers in this study identified the migration of teachers from Asian countries to the developed world as contributing to the shortage, echoing findings in Ahmed et al.'s (2011) study, where a significant number of students expressed a desire to go abroad for practice, aggravating the shortage of medical teachers in medical colleges ^[14]. Addressing these challenges is crucial ^[15].

LIMITATIONS OF THE STUDY

The study, conducted in four medical colleges with a small sample size, may lack generalizability to the entire community. The absence of revisits for absent teachers and students during data collection raises concerns about representativeness. Data collected in a single visit may not fully capture the diverse perspectives. The use of closed-ended questions with binary responses ('yes' or 'no') introduces potential limitations in the depth and reliability of the survey outcomes, questioning the overall robustness of the findings.

CONCLUSION

The findings of this study highlight the urgency of addressing the shortage of teachers in basic subjects in medical colleges in Bangladesh. By implementing targeted recruitment strategies, fostering conducive working environments, and leveraging technological advancements, it is possible to mitigate the impact of this

shortage and, in turn, fortify the quality of medical education in the country.

FUNDING

No funding sources

CONFLICT OF INTEREST

None declared

ETHICAL APPROVAL

The study was approved by the Institutional Ethics Committee

REFERENCES

1. 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. *International Journal of Research in Medical Sciences*. 2017 Dec;5(12):5396.
2. Darling-Hammond L, Baratz-Snowden J. A good teacher in every classroom: Preparing the highly qualified teachers our children deserve. *Educational Horizons*. 2007 Jan 1;85(2):111-32.
3. Stronge JH. *Qualities of effective teachers*. Ascd; 2018 Mar 21.
4. Crosby RH. AMEE Guide No 20: The good teacher is more than a lecturer-the twelve roles of the teacher. *Medical teacher*. 2000 Jan 1;22(4):334-47.
5. Fontaine M. Student Relationship Management (SRM) in higher education: Addressing the expectations of an ever evolving demographic and its impact on retention. *Journal of Education and Human Development*. 2014 Jun;3(2):105-19.
6. Miah MA, Talukder MH. Expectation of students from their teachers in undergraduate Medical Education in selected Medical Colleges in Bangladesh. *Bangladesh Journal of Medical Education*. 2014 Apr 12;3(1):12-7.
7. Monem M, Baniamin HM. Higher education in Bangladesh: Status, issues

- and prospects. *Pakistan Journal of Social Sciences*. 2010;30(2):293-305.
8. García E, Weiss E. *The Teacher Shortage Is Real, Large and Growing, and Worse than We Thought. The First Report in "The Perfect Storm in the Teacher Labor Market" Series*. Economic policy institute. 2019 Mar 26.
 9. Ahmed, S.M., Majumdar, M.A., Karim, R., Rahman, S. and Rahman, N., 2011. *Career choices among medical students in Bangladesh*. *Advances in Medical Education and Practice*, 2, pp.51-58.
 10. DGHS, 2021. *Subject wise sanctioned, Filled, and Vacant Post Data Source: MIS (DGHS), Date on 12-Jan-2021*
 11. Ahmed SM, Majumdar MA, Karim R, Rahman S, Rahman N. *Career choices among medical students in Bangladesh*. *Advances in Medical Education and Practice*. 2011 Feb 14:51-8.
 12. Ananthakrishnan N. *Acute shortage of teachers in medical colleges: Existing problems and possible solutions*. *National Medical Journal of India*. 2007 Jan 1;20(1):25.
 13. Dipankar, R., 2019, Feb 03. *Acute teacher shortage hampers education*. *The Daily Star*. pp.2-3.
<https://www.thedailystar.net/city/news/khulna-medical-college-acute-teacher-shortage-hampers-education-1696672>.
 14. Majumder MA. *Medical education in Bangladesh: past successes, future challenges*. *Bangladesh Med J*. 2003;32:37-9.
 15. Rahman S, Talukder MH, Alam KK. *Activities of Medical Education Unit (MEU) in Medical Colleges of Bangladesh and some challenges faced*. *Bangladesh Journal of Medical Education*. 2019 Dec 25;10(2):12-8.