

# Barriers and Suggestions of Present Teaching Learning Status of ‘Allied Subjects of Surgery’ in Undergraduate Medical Education of Bangladesh: Teachers view

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## Abstract

**Background:** Effective teaching learning is one of the most important component of better outcome in medical education. We need to improve the present situation of teaching learning of ‘Allied Subjects of Surgery’ in undergraduate medical education of Bangladesh.

**Methods:** This was descriptive cross-sectional study. The study was conducted from January 2021 to December 2021. A self-administered semi-structured questionnaire was administered to collect data from 160 teachers of Surgery and its Allied Subjects. Convenience sampling technique was adopted for selection of eight medical colleges and the respondents were selected from the colleges.

**Results:** Most of the respondents (>90%) opined that the main barriers of teaching learning of ‘Surgery and Allied Subjects’ were inadequate learning instruments, theories learned more than practical skills and inadequate evening clinical teaching. The main suggestions of the respondents (>90%) to improve the teaching learning status were there should be adequate provision of hands on learning with sufficient number of learning instruments and clinical teaching should be taken in ward, outdoor and emergency.

**Conclusion:** We should give adequate emphasis for adequate clinical teaching in clinical places and proper hands on learning with sufficient number of teaching learning instruments to improve the teaching learning process of Allied Subjects of Surgery in undergraduate medical education of Bangladesh.

**Keywords:** Allied Subjects of Surgery, Barriers and suggestions of teaching learning, Undergraduate Medical Education of Bangladesh

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## Introduction

Quality of medical education, performance of medical students and graduates and provision of effective health care are interrelated where the quality of medical education is getting compromised in Bangladesh day by day

Clinical teaching is the teaching and learning focused on and usually directly involving patients and their problems.<sup>1</sup> Clinical teaching lies at the heart of medical education.<sup>2</sup> At undergraduate level, medical and dental schools strive to give students as much clinical exposure as possible.<sup>3</sup> Common problems found with clinical teaching are as follows: lack of clear objectives and expectation; focus on factual recall rather than on development of problem solving skills and attitudes; teaching pitched at the incorrect level, usually too high; passive observation instead of active participation of learners; inadequate supervision and provision of feedback; little opportunity for reflection and discussion;

informed consent not sought from patients; lack of respect or privacy and dignity of patients and lack of continuity with the rest of the curriculum.<sup>4</sup>

A survey of students' perceptions of 'good' and 'bad' teaching concluded that teachers' interpersonal behavior, how carefully they prepare and plan their teaching and ability to run their session well, determine their worth as clinical teachers.<sup>5</sup>

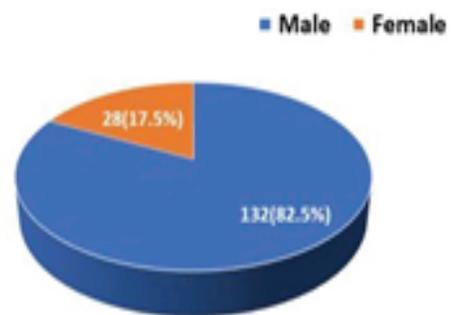
Challenges of Undergraduate Surgical Education are lack of standardized undergraduate surgical curricula and learning objectives, overreliance on student and educator motivation, discrepancy between theoretical and practical learning, lack of human resources for undergraduate surgical education. The main barriers to surgical education at medical school identified were the lack of standardized surgical curricula with mandatory learning objectives and the inadequacy of human resources for surgical education. To address the worldwide need for a bigger surgical workforce, specific attention must be paid to improving undergraduate surgical education. Solutions proposed include the event of a typical surgical curriculum with learning outcomes appropriate for local needs, the incentivisation of surgical educators, the incorporation of targeted online and simulation based teaching, and the use of technology.<sup>6</sup>

According to MBBS curriculum, 2012 Allied Subjects of Surgery are Orthopedics, Radiology, Radiotherapy, Transfusion medicine, Anesthesia, Neurosurgery, Pediatric Surgery, Urology, Burn Plastic Surgery, Emergency & casualty, Dentistry, Ophthalmology and Otolaryngology. It was believed that due to lack of different facilities the teaching and learning of Allied Subjects of Surgery are relatively neglected at undergraduate level reducing the competency of MBBS doctors in Bangladesh to manage the basic surgical problems in practical field. We need to identify the barriers and the way to overcome the barriers of present teaching learning status of 'Allied Subjects of Surgery' in undergraduate medical education of Bangladesh to improve the situation

## Methods

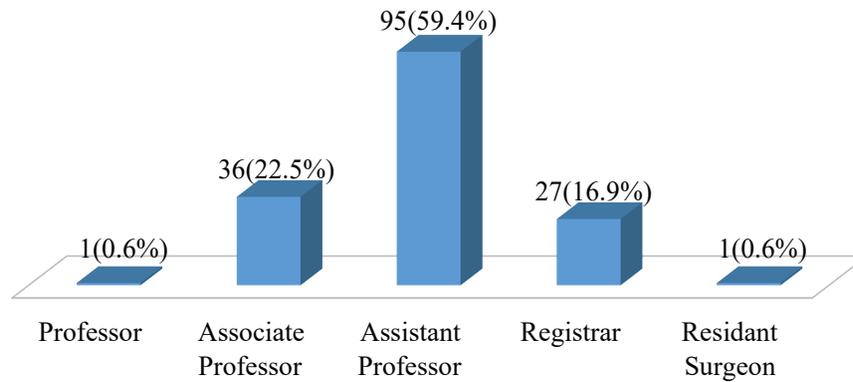
This descriptive cross-sectional study was conducted from 01 January 2021 to 31 December 2021 (01 year). Convenience sampling technique was adopted to collect data from 160 teachers of Surgery and its Allied Subjects from selected eight medical colleges of Bangladesh after getting permission from the concerned authorities and respondents. Their comments were collected in a self-administered semi structured questionnaire. The questionnaires were distributed among the teachers of Surgery and its Allied Subjects and were collected with the responses face to face; in some cases these were collected by online procedure due to restrictions in COVID 19 pandemic situation. Data cleaning, editing and coding were done and analyzed by using SPSS software program version 26. Decrease practice of evening and morning clinical teaching, lack of learning instruments, theories are learned more than practical were the important selected barriers and some important suggestions identified were clinical teaching should be taken in clinical place, provision of hands on learning, sufficient instruments should be available for proper clinical teaching for the improvement of teaching and learning of different subjects of Surgery and its Allied Subjects in MBBS. This was approval from Institutional Review Board (IRB) of Centre for Medical Education of Bangladesh (CME) as a part of thesis of Masters in Medical Education (MMEd).

## Results



**Figure 1** Distribution of teachers by their gender (n=160)

Figure 1 the pie chart shows out of 160 respondent teachers' 82.5% were male and 17.5% were female.



**Figure 2 Distribution of the teachers by their designation (n=160)**

Figure 2 the bar diagram shows out of 160 teachers, maximum (59.4%) were Assistant Professor, 22.5% were associate Professor, 16.9% were Registrar, 0.6% were Resident Surgeon and only 0.6% were Professor.

**Table 1 Opinions of teachers about the barriers of teaching and learning of different subjects of Surgery and its Allied Subjects in MBBS course (n = 160)**

Barriers	Frequency*	Percentage*
Inadequate practice of evening clinical teaching	154	96.3%
Inadequate learning instruments	144	90.0%
Theories are learned more than practical	132	82.5%
Inadequate practice of morning clinical teaching	80	50.0%
Inadequate number of teacher	50	31.3%
Less cooperation of staff	50	31.3%
Inadequate number of patient	49	30.6%
Learning is hampered due to excess number of student	21	13.1%
Some teachers cannot instruct properly	19	11.9%
Sometimes classes were not held	7	4.4%

\*Multiple response

About the barriers of teaching and learning of different subjects of Surgery and its Allied Subjects in MBBS course (table 1) maximum teachers (96.3%) opined that 'evening clinical teaching was inadequate'. Above 80% of the teachers opined about 'inadequate learning instruments' and 'theories are learned more than practical'. Above 30% of the teachers opined about 'inadequate practice of morning clinical teaching', 'inadequate number of teacher and inadequate number of patient'. About 10% to 20% of teachers opined about 'learning is hampered due to excess number of student' and 'some teachers cannot instruct properly'. Few (4.4%) teachers opined that 'sometimes classes were not held'.

**Table 2 Suggestions of teachers to improve the teaching and learning status of different subjects of Surgery and its Allied Subjects in MBBS course (n = 160)**

Suggestion	Frequency*	Percentage*
Clinical teaching should be taken in ward, outdoor and emergency	153	96.2%
Provision of hands on learning	152	95.6%
Sufficient instruments should be available for clinical teaching	151	95.0%
Follow the curriculum as much as possible	111	69.8%
Clinical teaching can be taken in outreach centers	89	56.0%
Sufficient number of patient should be available	58	36.5%
Sufficient free beds should be available for the patient specially in non-government medical college	56	35.2%
Give importance of the subjects according to basic health needs of the country	50	31.4%
Increasing number of teacher	49	30.8%
More classes should be taken by the senior teachers	27	17.0%

\*Multiple response

About the suggestions of teaching and learning of different subjects of Surgery and its Allied Subjects in MBBS course (table 2) maximum teachers (96.2%) opined that clinical teaching should be taken in ward, outdoor and emergency. Above 90% of the teachers suggested about provision of hands on learning and sufficient instruments should be available for clinical teaching. Above 50% of the teachers suggested to follow the curriculum as much as possible and to take clinical teaching in outreach centers. Above 30% of the teachers suggested that sufficient number of patient should be available, give importance of the subjects according to basic health needs of the country and to increase the number of teacher. Few teachers (17%) suggested that more classes should take by the senior teachers.

## Discussion

In this study, (figure 1) among 160 teachers of Surgery and its Allied Subjects there were 132 (82.50%) male teachers and 28 (17.50%) female teachers. From this data we see the general trend of teachers of Surgery and its Allied Subjects by their gender in Bangladesh.

Out of total respondents teachers (figure 2), maximum (59.4%) were Assistant Professor, 22.5% were associate Professor, 16.9% were Registrar, 0.6% were Resident Surgeon and only 0.6% were Professor. Here the participation of mid-level teachers were maximum. Probably this results were due to easy accessibility and availability of mid-level teachers.

The main barriers (table 1) of teaching learning of Surgery and its Allied Subjects were inadequate evening clinical teaching (96.3%), inadequate learning instruments, less practical learning than theories. Some teachers also opined that inadequate practice of morning clinical teaching, inadequate number of teacher and patient, less cooperation of staff are important barriers. Inadequate evening and morning clinical teaching is related to the excess clinical and surgical practice of surgeons. In a study of UK, Technology Enhanced Learning (TEL) which required sufficient modern instruments and skills (hands on learning) has been shown to reduce learning time, improve knowledge retention and enhance student engagement, especially amongst digital learners<sup>7</sup> In a study of Malmö University,

Sweden common problems found with clinical teaching are as follows: lack of clear objectives and expectation; focus on factual recall rather than on development of problem solving skills and attitudes; teaching pitched at the incorrect level, usually too high; passive observation instead of active participation of learners; inadequate supervision and provision of feedback; little opportunity for reflection and discussion; informed consent not sought from patients; lack of respect or privacy and dignity of patients and lack of continuity with the rest of the curriculum<sup>4</sup>.

From the above discussion it was found that main barriers of teaching learning of Surgery and its Allied Subjects were inadequate evening clinical teaching which probably due to their hurry and interest in performing different surgical procedures rather than teaching. In a study of UK the increasing clinical and academic commitments for surgeons leave little time for teaching. This is very true for surgeons working in low and middle-income countries. These commitments cause less protected teaching time, with adverse consequences for surgical education of medical students<sup>8</sup>. In another study the quality of medical education is getting compromised in Bangladesh due to inadequate hospital facilities and lack of teachers, libraries and laboratories. Many medical colleges have none to teach the basic and para-clinical subjects for the MBBS students. According to a report about 50 per cent or more positions of medical teachers are currently vacant at government and private medical colleges<sup>9</sup>.

The main suggestions (table 2) given by the teachers (>95%) were clinical teaching should be taken in ward, outdoor and emergency; also provision of hands on learning and sufficient instruments and scope for proper clinical teaching. On the other hand some teachers suggested to follow the curriculum as much as possible and to take clinical teaching in different outreach centers. Few number of teachers opined that learning is hampered due to excess number of student and some teachers cannot instruct properly where few of them suggested that more classes should be taken by the senior teachers. To form an efficient partnership between surgeons and students to deliver the simplest surgical teaching for the advancement of the students may be a challenge for medical schools and surgeons.<sup>10</sup>

## Conclusion

The main barriers of teaching learning of Surgery and its Allied Subjects were inadequate evening clinical teaching, inadequate learning instruments and less practical learning than theories. The most important suggestion were to improve the teaching learning of Surgery and its Allied Subjects are clinical teaching should be taken in ward, outdoor and emergency, provision of hands on learning and sufficient instruments should be available for clinical teaching.

## Recommendation:

We should give adequate emphasis on proper clinical teaching in clinical places, adequate hands on learning with sufficient instrument and provision of adequate teachers to improve the teaching learning of Allied Subjects of Surgery in undergraduate medical education of Bangladesh

## Contributions of Authors:

1. Dr. Mohammad Mohibur Rahman: Concept, Methodology, Data collection and Analysis, Manuscript writing
2. Prof. Dr. Kazi Khairul Alam: Concept, Methodology, Manuscript revising
3. Prof. Dr. Mohammed Shadrul Alam: Manuscript writing and revising, Methodological advice
4. Prof. Dr. Md. Abdal Miah: Manuscript revising
5. Dr. Mohammad Abu Sayeed Talukder: Manuscript revising
6. Dr. Thanadar Tamjeeda Tapu: Manuscript revising
7. Dr. Kazi Fardana Mostary: Data collection and compiling
8. Dr. Neela Barman: Manuscript revising

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## Conflict of Interest:

The authors declare that they have no competing interests.

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