Views of Bangladeshi Medical Students’ on teacher’s evaluation.

Khan MKA¹*, Talukder MHK², Alam MKK³, Choudhury MAU⁴, Hoque MM⁵, Akhter N⁶.

ABSTRACT

Teacher evaluation (TE) is systematic, periodic evaluation of a teacher with respect to his/her performance on job and his/her potential for development. This descriptive type of cross sectional study was conducted to explore the views of the students regarding the ways and means for implementing medical teachers’ evaluation in Bangladesh. Study period was from July 01, 2022 to June 30, 2023, conducted at four governments and four non-government medical colleges selected conveniently. Medical students were enrolled conveniently. Total sample size was 866 medical students. Data were collected through self-administered semi-structured questionnaire from students. Study revealed that majority of the students (95.4%) were in favor of TE. Majority (85%) students were in favor of anonymous evaluation and 49% students opined for both offline or/and online and 40% for offline evaluation. Areas to be evaluated are teacher’s teaching performance and depth of knowledge, communication with students, classroom control, quality of teaching materials with a number of other areas. Sources of information for TE, in order to preferences are student, trained evaluator, senior teacher, self and peer with highest weightage given to students rating. Study recommended that TE should be initiated, within the course, anonymous, may be from multiple sources.

Keywords: Teacher evaluation, Medical education, Medical students, Bangladesh.

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Introduction

The responsibility of the medical teacher is to train the medical students in such a way that they become a productive member of the health care workforce and are competent enough to improve the health indices of the general population¹. Delivery of medical education is quite different and complicated, comparing any other graduate courses in the

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universities\textsuperscript{2}. Acknowledging the ultimate goal in mind, planned and implemented reforms have been predominantly targeted toward improving teaching-learning and assessment strategies in medical education, so that the intended learning objectives of the course can be effectively accomplished\textsuperscript{1}. Conventional role of the medical teacher as ‘information provider’ has undergone immense changes in recent years. Now they have to play the role as facilitator, curriculum planner, course developer, resource material creator, student assessor, mentor, program evaluator and so on. So the teachers require to update themselves and coop with the changes to meet the demand of the rapidly expanding horizon of medical education.

The quality of teaching-learning process at medical college depends mainly on infrastructure that includes competent personnel, optimal teaching space and equipment in accordance with existing standards and norms, where faculty remains the cornerstone of overall academic performance. Teacher evaluation (TE) and faculty development training strengthens further academic excellence in teaching learning process\textsuperscript{3}. Meaningful evaluation provides high quality professional development for every teacher based on country standards and identified needs of students and teachers. TE is systematic, periodic evaluation of a teacher with respect to his/her performance on job and his/her potential for development. Effective monitoring and evaluation of teaching is essential, to assess the strength of medical teachers and those aspect of the practices that could be further developed, for the improvement of teaching.

TE in medical colleges is an important aspect of maintaining the quality of the delivered training and thereby the vision to produce a competent medical graduate\textsuperscript{4}. For this reason, many medical schools have searched for ways to effectively and constructively evaluate performances of their teachers\textsuperscript{5}. Furthermore, as the teachers are the most important elements of the education systems, designing an appropriate and suitable evaluation system for evaluating their performance can be supposed as a significant indicator for the whole education process\textsuperscript{6}. Teachers should be evaluated in all domains relevant to their teaching objectives; these include knowledge, clinical competence, teaching effectiveness and professional attributes. It notifies them about their duties and
responsibility assigned, and traits, qualities and characteristics desired and identify potential employees for growth and prosperity in various aspects. Different findings on the topic of teaching effectiveness and different methods of evaluating teachers’ performance, has been conducted in different institutions at different parts of the world. To provide an adequate and unbiased evaluation program, evidence or data can be collected from students, colleagues, and chairs, or from faculties on their own. Students ratings have been dominated as the primary and almost only measure of teaching performance in many countries as they are the direct recipients of the instruction and can offer important insights regarding the learning and assessment process and how teaching can be improved. Evaluation of teaching by students identifies areas where teaching can be improved.

There is paucity of formal policy or guideline for medical TE in Bangladesh. With an increasing number of medical colleges both in governments and non-government sector, there is also an increasing demand of medical teachers. Without quality teachers, quality education is unattainable. Recently Director General Medical Education has started a pilot program of student evaluation of teachers in 32 governments and non-government medical colleges, receiving the result of this pilot program it will be implemented in all medical colleges. More over study conducted in Bangladesh regarding views of medical teachers and students on TE, its potential use and misuse and barriers, both in medical education and dental education, all have concluded that TE is required and important, but none could design a means to implement it in medical education in Bangladesh. So this study was designed with the objectives to find out the views of the medical students of Bangladesh, toward teacher evaluation, the ways and means for implementing it, regarding its necessity, timing, frequency and different teacher evaluation sources and areas to be evaluated.

### Methodology

This descriptive type of cross sectional study was conducted over twelve months from July 01, 2022 to June 30, 2023 in conveniently selected four governments and four non-government medical colleges, out of which four were situated within Dhaka city and four outside Dhaka city. All students of the selected medical colleges...
were the study population. Students present during the period of data collection and willing to participate in the study were included in the study. Students who failed to return the filled-up questionnaire timely, incomplete filling or inconsistency of filling were excluded from the study. Conveniently selected 866 medical students of different phases had participated in the study. Data were collected through a self-administered semi-structured questionnaire, which was developed and finalized after pre-testing with students of another medical college, other than the study area. Most of the responses in the questionnaire were collected at a 5-point Likert scale, with the rating Strongly Disagree-1, Disagree-2, Neither disagree nor agree-3, Agree-4, Strongly agree-5. In addition, some of the responses were in the form of single best answer and 5 responses were in percentages regarding weightage given to the different sources of information of TE. Prior permission from the respective authority of medical colleges and informed consent from the students were taken and anonymity as well as confidentiality of obtained information were ensured. They were free to participate or not to participate in the study. Ethical clearance was obtained from IRB of Center for Medical Education, Mohakhali, Dhaka. Opinion received were kept confidential and anonymous and identity of the respondent were also kept confidential. After collection of the completed questionnaire, they were thanked for their co-operation.

Data were checked and edited after collection, and then coded, processed and analyzed by computer software SPSS-25 for Windows and Microsoft Xcel. Frequency and percentage were calculated for quantitative data and mean and SD were calculated of the level of agreement on Likert’s scale, and mean of agreements were further converted in to percentage out of 5, highest point in Likert’s scale. All the data were presented in tables and figures as appropriate.

Results

A total of 866 students of different phases of 4 governments and 4 non-government medical colleges of Dhaka city and outside Dhaka city were enrolled in the study. Among them majority (253, 29%) of the respondent students were from 2nd phase, followed by 3rd phase (215, 25%), then 1st and 4th phase was 23% each (197&201). Majority 500 (58%) of the participant
students were female. Among them 196(22.6%) students were from non-government medical colleges of Dhaka city and 115(13.3%) were from outside Dhaka city; 232(26.8%) were from governments medical colleges of Dhaka city and 323(37.3%) were of outside of Dhaka city;

Table 1: Distribution of the views of students about the different issues related to teachers’ evaluation (n=866)

<table>
<thead>
<tr>
<th>Statement related to teacher evaluation</th>
<th>Frequency (%) of level of agreement</th>
<th>Mean ± SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>A well-organized teacher evaluation is necessary for improvement of medical education. (n=865)</td>
<td>SDA = 1</td>
<td>8(1.0)</td>
</tr>
<tr>
<td>Teacher evaluation can maintain a standard academic environment. (n=865)</td>
<td>DA = 2</td>
<td>2(0.2)</td>
</tr>
<tr>
<td>It should be implemented in all public and private medical colleges. (n=866)</td>
<td>NDNA = 3</td>
<td>6(0.7)</td>
</tr>
<tr>
<td></td>
<td>A = 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SA = 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>± SD</td>
<td></td>
</tr>
<tr>
<td>Agreement on 5-point Likert scale, with the rating SDA = Strongly Disagree, DA = Disagree, NDNA = Neither disagree nor agree, A = Agree, and SA = Strongly agree. From table 1, it was found that out of 866 medical students of different phases, the mean agreement on different issues related to the general aspects of teacher evaluation, out of 5-point Likert scale were within 4.57 to 4.77.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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From the above Pie diagram (Figure-1), among the 860 respondent students, majority 66% students replied that evaluation should be carried out within the course, 290 students (34%) replied that teacher evaluation should be carried out at the end of the course.

**Figure 1:** Distribution of students view on timing of teachers evaluation

From the above Pie Diagram (Figure-2), majority (85%) students opined that teacher evaluation by the students should be anonymous.

**Figure 2:** Distribution of students on the mode of teacher evaluation (n=858)
Form the above Pie diagram (Figure-3), majority (74%) students opined that teacher evaluation should be both on knowledge of the teacher as well as teaching performance.

Above Pie Diagram (Figure-4) shows that about 49% (417) medical students opined that options for teacher evaluation should be both in online and offline as per availability of resources, 40% opined, it should be offline, and only 11% students opined that online evaluation should be appropriate.
### Table-2: Distribution of the views of students regarding areas of teaching performance those can be included in teacher evaluation (n=866)

<table>
<thead>
<tr>
<th>Areas of teaching performance can be included in teacher evaluation</th>
<th>Frequency (%) of level of agreement</th>
<th>Mean±SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching skill (n=863)</td>
<td>SDA=1  DA=2  NDNA=3  A=4  SA=5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4(0.5)  5(0.6)  9(1.0)  240(27.9)  604(70.0)</td>
<td>4.72±1.776</td>
</tr>
<tr>
<td>Class room performance as a manager (n=862)</td>
<td>7(0.8)  6(0.7)  32(3.7)  332(38.5)  485(56.3)</td>
<td>4.49±0.681</td>
</tr>
<tr>
<td>Explaining the topics with examples (n=861)</td>
<td>4(0.5)  1(0.1)  21(2.4)  209(24.3)  626(72.7)</td>
<td>4.69±0.572</td>
</tr>
<tr>
<td>Communication skill of the teachers (n=861)</td>
<td>8(0.8)  6(0.7)  16(1.9)  233(27.1)  598(69.5)</td>
<td>4.63±0.650</td>
</tr>
<tr>
<td>Class room control (n=861)</td>
<td>11(1.3) 5(0.6)  39(4.5)  360(41.8)  446(51.8)</td>
<td>4.42±0.723</td>
</tr>
<tr>
<td>Unbiased assessment (n=863)</td>
<td>15(1.7) 14(1.6) 71(8.2)  233(27.0)  530(61.5)</td>
<td>4.45±0.848</td>
</tr>
<tr>
<td>Quality of teaching materials (PowerPoint presentation, use of white board/black board, handouts) (n=859)</td>
<td>9(1.0)  21(2.4)  43(5.0)  321(37.4)  464(54.0)</td>
<td>4.46±1.591</td>
</tr>
<tr>
<td>Ensuring friendly environment for the students (n=857)</td>
<td>3(0.4)  4(0.5)  25(2.9)  287(33.5)  537(62.7)</td>
<td>4.62±1.478</td>
</tr>
<tr>
<td>Providing feedback to students (n=863)</td>
<td>13(1.5) 6(0.7)  41(4.8)  337(39.0)  466(54.0)</td>
<td>4.43±0.751</td>
</tr>
<tr>
<td>Contribution to students support system (n=857)</td>
<td>2(0.2)  8(0.9)  41(4.8)  284(33.1)  522(61.0)</td>
<td>4.54±0.655</td>
</tr>
<tr>
<td>Use of audio-visual materials (n=863)</td>
<td>2(0.2)  15(1.7) 57(6.6)  249(28.9)  540(62.6)</td>
<td>4.52±0.717</td>
</tr>
</tbody>
</table>

Agreement on 5-point Likert scale, with the rating SDA = Strongly Disagree, DA = Disagree, NDNA = Neither disagree nor agree, A = Agree, and SA = Strongly agree.
From table-2, it was found that out of 866 medical students, the mean agreement on different issues related to areas of teaching performance that can be included in teacher evaluation, like teaching skill, class room performance as a manager, explanation of the topics, communication skill, class room control, unbiased assessment skill, quality of teaching material, ensuring friendly environment with the students, providing feedback, contribution to students support system, and use of audio-visual materials were within 4.42 to 4.72.

### Table-3: Distribution of the views of students regarding the sources of information those can be used in teacher evaluation (n=866)

<table>
<thead>
<tr>
<th>Sources of information to be used in teacher evaluation</th>
<th>Frequency (%) of level of agreement</th>
<th>Mean ±SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating by students (n=864)</td>
<td>SDA=1 7(0.8)  DA=2 11(1.3)  NDNA=3 48(5.6)  A=4 318(36.8)  SA=5 480(55.5)</td>
<td>4.45±0.730</td>
</tr>
<tr>
<td>Rating by peer (Colleagues) (n=859)</td>
<td>SDA=1 67(7.8)  DA=2 79(9.2)  NDNA=3 223(26.0)  A=4 322(37.4)  SA=5 168(19.6)</td>
<td>3.52±1.138</td>
</tr>
<tr>
<td>Rating by trained evaluator (n=858)</td>
<td>SDA=1 16(1.9)  DA=2 35(4.1)  NDNA=3 105(12.2)  A=4 380(44.3)  SA=5 322(37.5)</td>
<td>4.12±0.903</td>
</tr>
<tr>
<td>Rating by senior teacher (Principal/ Vice principal/ departmental head) (n=861)</td>
<td>SDA=1 43(5.0)  DA=2 63(7.3)  NDNA=3 146(17.0)  A=4 337(39.1)  SA=5 272(31.6)</td>
<td>3.85±1.098</td>
</tr>
<tr>
<td>Rating by self (Teacher himself) (n=860)</td>
<td>SDA=1 79(9.2)  DA=2 101(11.8)  NDNA=3 111(12.9)  A=4 347(40.3)  SA=5 222(25.8)</td>
<td>3.62±1.241</td>
</tr>
</tbody>
</table>

Agreement on 5-point Likert scale, with the rating SDA = Strongly Disagree, DA = Disagree, NDNA = Neither disagree nor agree, A = Agree, and SA = Strongly agree.

From (table-3) the above table, it is found that students prefer the following sources of teacher evaluation in order of preferences are students rating, trained evaluator rating, senior teacher rating and self-rating and put least preference to peer rating.
Table-4: Weightage given by the students to different sources of information used for teacher evaluation (n=866)

<table>
<thead>
<tr>
<th>Sources of information for TE</th>
<th>Students</th>
<th>Mean(±SD)³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating by student (n-863)</td>
<td></td>
<td>51.05±23.81</td>
</tr>
<tr>
<td>Rating by peer/colleagues (n-849)</td>
<td></td>
<td>9.73±7.97</td>
</tr>
<tr>
<td>Self-rating (n-855)</td>
<td></td>
<td>10.82±11.45</td>
</tr>
<tr>
<td>Rating by trained evaluator (n-853)</td>
<td></td>
<td>16.39±13.53</td>
</tr>
<tr>
<td>Rating by senior teacher (Principal/ Vice principal/HOD) (n-852)</td>
<td></td>
<td>12.34±10.41</td>
</tr>
</tbody>
</table>

³ = All responses were given in percentage. Respondents can put zero 0 to 100% to any source.

From the above table (Table-4), it is found that students put highest weightage to students rating (51.05%), followed by trained evaluator rating (16.39%), senior teacher rating (12.34%), self-rating (10.82%), and peer rating (9.73%).

Discussions

This descriptive type of cross sectional study, conducted from June 22 to July 23 over one year in 4 governments and 4 non-government medical colleges with defined inclusion and exclusion criteria with the objectives of exploring the views of the students regarding the ways and means for implementing medical teacher evaluation (TE) in Bangladesh. A total of 866 medical students of different phases of both Dhaka city and outside of Dhaka city were enrolled in the study.

Regarding students’ views on issues related to general aspects of teacher evaluation (Table-1), the mean of agreement was within 4.57 to 4.77 on 5-point Likert scale. Converting the mean in to percentage, 95.4% students agree that a well-organized TE is necessary for improvement of medical education and 91.4%-92% students agree that TE should be implemented in both governments and non-government medical colleges and can maintain standard academic environment. It is found that students of the medical colleges are already highly motivated regarding the need of a TE

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system for them, which is similar to the study conducted by Shahana among 1400 Bangladeshi medical students, where 90.9% students were in favor of TE in their medical colleges\textsuperscript{15}. El-Sayed et al. found in their study at Oman Medical College, most (58.85\%) students felt that teachers used information of evaluation to improve the course, to revise assessment and evaluation methods (54.16\%), and to promote learner-centered teaching (41.65\%) to improve the overall learning environment, and they were also satisfied with the opportunity to evaluate teacher (52.60\%)\textsuperscript{16}.

Regarding the timing of evaluation (Figure-1), majority (66\%) students replied that evaluation should be carried out within the course and rest at the end of the course. Majority students (85\%) opined for an anonymous teacher evaluation ((Figure-2). Afonso et. al. in their study found statistically significant difference between the open and anonymous evaluations of TE, with faculty receiving lower scores on the anonymous evaluations. The author suggested for the use of anonymous evaluation method as a more accurate reflection of teaching performance\textsuperscript{17}. El-Sayed et al. in a study at Oman Medical College, found that majority (60.40\%) of the students strongly felt that TE should be conducted mid-term rather than at the end of the academic year\textsuperscript{16}. Aburawi et al. suggested that it should be more rather than less frequent during the course, so that teachers would be more likely to make changes during the course, rather than at the end. In this way, the students themselves would be benefitted from any changes rather than the next cohort of students. Another group of students commented that evaluation should take place immediately following the final examination so that both the teachers and the assessment itself could be evaluated\textsuperscript{18}.

Majority (74\%) students opined that teacher (Figure-3) evaluation should be both on knowledge of the teacher as well as teaching performance. Kamran found in his study that teachers’ adequate knowledge about the course is the most crucial factor in teaching skills, and 92\% opined that it played a great role in the teacher assessment process\textsuperscript{19}. Sepahi et al. found 51.1\% of students mentioned the teacher’s knowledge and proficiency of course subject as the most effective factor; and 47.1\% believe that teacher’s efforts in conveying course materials and students’ realization of course materials i.e. teaching skill are the second
most important factor in TE, which is similar to our study. Vahabi et al. in a study on 384 medical students in Kurdistan University of Medical Sciences, found that the most effective factors for TE were knowledge on subject’s matter, teacher’s ability to convey lesson, capability of class control and fair assessment.

About 49% (417) medical students opined that options for TE (Figure-4) should be both online and offline as per availability, 40% opined, it should be offline, and only 11% students opined that online evaluation should be appropriate. Rosenberg et al. concluded that Web-based evaluation system had a compliance rate between 81%–92%. Web-based evaluation systems appear to be easy to use, can preserve anonymity, and are capable of producing high compliance rates, but lack of access to computer or mobile phone and internet facility may be the drawbacks in this system. But study by Aburawi et al. found that student participation in online evaluation has steadily declined to below 30%, similar to our study.

Medical students’ views on areas of teaching performance that can be included in TE (Table-2) are teaching skill, classroom performance as a manager, explanation of the topics, communication skill, class room control, unbiased assessment skill, quality of teaching material, ensuring friendly environment with the students, providing feedback, contribution to students support system, and use of audio-visual materials, mean agreement were within 4.42 to 4.72 out of 5. Converting mean to percentages, it is evident that 88.4% to 94.4% students agree with the above performance can be included in teacher evaluation. El-Sayed et al. in a study conducted at Oman Medical College, found that students agreed to the following are valid criteria for evaluating a teacher’s ability: being a content expert (71.35%), ability to hold students’ attention (83.85%), promoting critical thinking (77.08%), effectively using audio-visual equipment (78.65%), encouraging and motivating students (77.08%), and demonstrating an enjoyment of the participant (81.77%). Sepahi et al. in their study, found recommended areas of evaluation are, teacher’s teaching skills, teacher’s personal characteristics, physical features and time of course presentation and quality of evaluation process are important respectively. In scope of teaching skills,
knowledge and scientific proficiency of the course subject, effort in transferring course materials, and teacher’s manner of expression and course planning and arranging have a high and relatively same importance for the students. Diversity in existing views is common because criteria of a good teacher undergo a variety and diversity considering different educational, socio-cultural, and economic conditions.

Regarding students’ views on sources of TE (Table-3), converting the mean agreement in to percentage, in order of preferences, sources are students rating (89%), trained evaluators rating (82.4%), senior teachers rating (77%), self-rating (72.4%) and peer rating (70.4%). Similarly, students put highest weightage (Table-4) to students rating (51.05%) followed by trained evaluator rating (16.39%), senior teacher rating (12.34%), self-rating (10.82%), and peer rating (9.73%). Raoufi et al. in their study on 420 students, found that 42% participants confirmed necessity of evaluation of teaching quality of faculty members by students. Aslam in his study showed numeric students rating can be used in the institution as a regular evaluating method of teaching faculty but Dibehban et al. in their study found that quantifying the result of evaluation does not result in the quality of performed work. Bastani et al. found in a comparison between the different methods, self-rating had the highest rank whereas students’ learning rates and student rating were ranked second and third, respectively. This difference may be due to socio cultural difference.

**Conclusion**

Students are highly motivated regarding the necessity of teacher evaluation, that can be done at any time within the course, anonymously, may be offline or online, both on teacher’s knowledge and teaching skill. Source of information with weightage assigned in order of preferences are students rating, trained evaluators rating, senior teachers rating, self-rating and peer rating. Areas for evaluation are teaching skill, class room performance, depth of knowledge, quality of teaching material, unbiased assessment, and other parameters also.

**Recommendations**

1. Medical teachers’ evaluation may be started, anytime within the course, anonymous, offline or online, both on teacher’s knowledge and teaching skill and should be anonymous, may be from multiple sources.
2. Sources of teachers’ evaluation may be included, in order of preferences are, students rating, trained evaluators rating, senior teachers rating, self-rating and peer rating with highest weightage put to students rating.

3. Areas to be evaluated are teacher’s teaching performance and depth of knowledge, communication with students, classroom control, quality of teaching materials with a number of other areas.

Limitations
This study was performed in only a few government and non-government medical colleges of Dhaka city and outside of Dhaka city, selected by convenient sampling methods. Students were also enrolled conveniently those who were present during the time of data collection. Opinion of all the students could not be collected. Time period of the study was also limited. Results of this study do not reflect the opinion of the students of the whole country as study places and sample size were limited.

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12. Personal Correspondence with Director, Research, Publication and Curriculum Development. 01 March. 2023.


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