Original Article

Comparison of Self-Assessment and Students' Perspective Regarding Teaching Effectiveness of Medical Teachers

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ABSTRACT

Objective: The objective of this study is to compare the teaching effectiveness of medical teachers from a teacher's self-evaluation perspective and student's evaluation of teaching effectiveness.

Study Design: Cross-sectional study

Place and Duration of Study: This study was conducted at the Department of Operative Dentistry, Foundation University College of Dentistry and Hospital, Islamabad for one-month March to April 2021.

Materials and Methods: This study was conducted in Foundation University College of dentistry FUCD of Fauji Foundation University. This study was a cross-sectional study of 1-month duration. 200 dental students from all four years of BDS and 20 medical teachers were selected through non-purposive convenience sampling. Teaching effectiveness was assessed first from 20 teachers and then similar teachers were evaluated by 200 dental students (10 students evaluated 1 teacher). For self- evaluation of teaching effectiveness, the validated tool "Self- assessment Instrument for teacher evaluation (SITE)" was used and filled by teachers. For student's evaluation of teaching effectiveness, the tool "Evaluation of teaching performance (CEID)" was used and filled by 200 students from all 4 years of BDS.

Results: Teachers rated their teaching more effective with a mean score (M=120) than students. The result was significant statistically. With respect to 60% cut-off score, all the teachers (100%) rated themselves as effective teachers.

Conclusion: Teachers think that their teaching effectiveness is more as compared to students perception evident by results. This reflects evaluation and communication gap between teachers and students. Therefore, there is a need of development of evaluation system with evaluation tool of 360-degree vision either six monthly or yearly in which students should be the major stakeholders for teachers evaluation. Other than that Faculty development program and workshops should be made part of curriculum.

Key Words: Teaching effectiveness, Self-evaluation of teaching, student Feedback, Medical teachers, Teacher's evaluation

Citation of article: Aamer S, Anwar FS, Abbas B, Zara B, Farhan F, Zafar S. Comparison of Self- Assessment and Students' Perspective Regarding Teaching Effectiveness of Medical Teachers. Med Forum 2021;32(4):146-150.

INTRODUCTION

Teacher effectiveness is evaluated through a prescribed and systematic method of teacher appraisal system. It is mandatory for teachers to meet the certain set criteria of teaching which helps to identify effective and ineffective teachers[1]. In literature, various concepts have been used regarding the effectiveness of teaching.

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Received: April, 2021
Accepted: April, 2021
Printed: May, 2021

Effective teaching is based on characteristics of a teacher, teaching processes and teaching outcome. Effective teachers aid their students to cultivate a healthy body, mind and improve their performances. Nonetheless, there is consensus on certain characteristics of effective teaching. These include preparation of the course content, subject expertise, guiding throughout the process of learning, unbiased assessment plans for students, organization and management skills during class, having better communication skills, indulgent behavior, act as a mentor and use blend of teaching aids properly[2]. Teaching effectiveness of a teacher is assessed to improve student's performance and for promotion.

Literature supports differences regarding the perception of teaching effectiveness by students and teachers. According to students, effective teacher has good communication skills, easily available, always support students and make teaching and learning process more exciting and pleasant during class to reduce monotony

and pressure in the classroom[3]. However, teachers consider essential to maintain high set standards for students, give more importance to enthused students to make them lifelong self-directed learners. Students can assess their teachers in an undesirable way. It is observed that the assessment of teaching effectiveness is also effected by other reasons.

Teachers evaluation can be influenced by many factors like students own interest in particular subject, difficulty level of the subject, requirement of the course and motivation of students[4]. Sometimes more weightage is given to written students evaluation of teachers, which leads to lack of interest at teacher's level to take feedback from students. Occasionally student's evaluation of teachers is considered deceptive, prejudiced, and unacceptable.

Students play a vital role in education process therefore there is an utmost need to include student's perception of effective teachers in evaluation process of teachers to improve the standards of education. In many institutes, student feedback is a key element in assessment system[5]. Literature supports that teachers are inclined to adopt only those teaching strategies which leads to good student's feedback. Hence, students' feedback should not be the only medium of evaluating teachers and the process of education. To maintain the balance between the required characteristics of an effective teacher the job of teachers are becoming very challenging with time[6].

Ideally, information from numerous ways should be utilized to evaluate teacher's efficiency rather than trusting single source. It will give a broad, holistic and clear findings regarding teacher's performance. Variable opinions are present in literature regarding the student's evaluation of faculty performance, use of feedback from students and lack of self-evaluation of teachers to improve quality of teaching[7].

The present study was conducted to compare self-evaluated and students- reported teaching effectiveness of the medical teachers. Earlier studies conducted on evaluation of teaching effectiveness from students and teachers' perspectives have been found in management and pure sciences. Dental education that is highly competitive and challenging, studies on this area are less in Pakistan[5]. The objective of this study was to compare self-evaluated, and student reported teaching effectiveness of medical teachers.

MATERIALS AND METHODS

The study was conducted at Foundation University College of Dentistry, Islamabad. The college was selected for its infrastructure, courses and approachability to the participants for rating of elective teacher for one year starting from 10th Feb 2020 to 10th Feb 2021. Twenty dental teachers were selected for the study and ten dental students of the respective teachers each, a total of two hundred students participated in the study, from four years of BDS. Ten dental students had to rate one teacher each, who was currently teaching them. Sampling technique was Nonprobability convenient sampling. Participants were selected depending upon their availability and willingness for the study. The inclusion criteria was all the BDS qualified dental teachers (both male and female), currently working in Fauji Foundation Dental College having Minimum teaching experience of 1 year and dental students of the respective teachers from all 4 years of BDS. Whereas teachers who are teaching in colleges in specialties other than dental like medical, rehabilitation, nursing etc. & dental teachers not currently teaching or having experience of <1 year were excluded from the study.

The study was briefly introduced to the participants and required instructions provided. A consent form was also signed from all participants. Twenty faculty members were contacted, depending upon their availability and willingness to participate in the study, whose students had to rate them. These teachers were provided with a pre-validated "Self-assessment Instrument for Teacher Evaluation(SITE)[2].

Students of 1st, 2nd, 3rd and 4th year BDS participated in the study, depending upon their availability. They were provided a pre-validated questionnaire regarding evaluation of teaching performance CEID [Centro de Estudios e Investigaciones Docentes][8]along with the criteria for rating different aspects of the teacher's effectiveness. It was confirmed that faculty members were not present at the time of rating and researcher was available for any query. Ten students had to rate one teacher. The rating was anonymous, and names of the raters were not required. Confidentiality of data received from the participants was guaranteed.

Two tools were used to measure teacher effectiveness. In "Self-assessment Instrument for Teacher Evaluation (SITE)"[2], the items are constructed for self-evaluation of teachers. Evaluation of teaching performance of the teachers is rated by students using CEID [Centrode Estudiose Investigaciones Docentes (Center for Teaching Studies and Research)] questionnaire [8].

Self-assessment Instrument for Teacher Evaluation (SITE): The instrument was designed by Muhammad Akram, et al. The scale consists of a total of 28 items. The items were rated on five points Like rt scale with response categories of never, rarely, sometimes, often, always. Knowledge of the subject, teaching lessons and planning, assessment, environment for learning and communication were the aspects of teaching assessed through test items. The reliability coefficient of the scale was high(α=.94)[2]

Evaluation of teaching performance (CEID) using students rating scale:

The instrument, CEID [Centro de Estudios e Investigaciones Docentes (Center for Teaching Studies and Research)] questionnaire was developed by

Moreno-Murcia, Torregrosa and Pedreno in 2014. It was used to rate teaching performance by the students. The scale consists of 28 items assessed three major areas i.e., planning of lessons, development, and assessments. The items were rated on five points like rt scale with response categories of never, rarely, sometimes, often, always. The reliability coefficient of the scale was 0.94 For analysis of data SPSS version 21 was used. Descriptive statistics were calculated in terms of frequencies, percentages and means. Descriptive statistics were calculated in terms of frequencies, percentages, and meas. Independent t test at 5% level of significance was applied to analyze the data. Two different scales were used to calculate teaching effectiveness for self-evaluated and students-reported teaching effectives. Percentages obtained from both scales were used to compare self-evaluated and students reported teaching effectiveness of medical teachers. A cut off score of 60% was taken as teacher effectiveness for each item i.e.,≥ 60% = teacher effective, <60% = teacher not effective.

RESULTS

There were total 20 teachers included in the study, who rated their teaching style using SITE questionnaire. Similarly, there were 200 students included in the study to evaluate teaching methodology of those 20 teachers, 10 students rated each of the 20 teachers.

Teacher's self-evaluation: There were 10 (50.0%) males and 10 (50.0%) female teachers in the study group (n=20). The mean teaching experience was 7.40±4.0 years, with minimum of 2 years of teaching experience and maximum of 16 years. Out of 20, 8 (40.0%) teachers had teaching experience of less than 5 years, while 12 (60.0%) had teaching experience of more than 5 years. There was no significant difference in teaching experience of male and female teachers i.e. 6.80±3.6 vs 8.00±4.4 p=0.519, respectively.

The mean score of SITE questionnaire was reported to be 120.15±8.2 by 20 teachers, with a range of 97 – 137. There was no significant difference found between mean scores of male and female teachers i.e. 119.60±10.2 vs 120.70±6.0 p=0.774, respectively. Similarly, no significant difference was reported between mean score and teaching experience i.e. 120.38±7.8 for <5 years teaching experience vs 120.00±8.81 for >5 years teaching experience (p=0.924) as given in Table 1.

With respect to 60% cut-off score, all the teachers (100%) rated themselves as effective teachers.

Student's evaluation for teachers: Ten students were selected to evaluate each teacher, so total 200 students were included in the study. There were 68 (34.0%) males and 132 (66.0%) females. There were 20 (10.0%) students from first year, 30 (15.0%) from second year, 50 (25.0%) and 100 (50.0%) were from third and fourth year of study. The mean score of CEID questionnaire was reported to be 107.19±17.0 by 200 students, with range of 41 - 130. No significant difference was observed between mean scores of male and female students i.e. 108.30±16.4 vs 106.61±17.3 p=0.510, respectively. Similarly, no significant difference was observed between mean scores of students of first, second, third and fourth year i.e. 103.5± 13.7 vs 104.8± 19.2 vs 106.6± 17.1 vs 108.9± 16.8 respectively (p=0.457) as given in Table 2.

Keeping in view the 60% cut-off score of effective teaching, it was found that 185 (92.5%) students rated teachers as effective, while 15 (7.5%) rated teachers as not effective as shown in table 3. A higher number of male students rated their teachers effective as compared to females i.e. 97.1% vs 90.2%, but the difference was not significant (p=0.079). On the other hand, significantly higher number of first (95.0%), third (94.0%) and fourth (95.0%) year students rated teachers as effective as compared to second year students (80.0%), p=0.046 as given in Table 4.

Comparison of student's and teacher's evaluation score: The mean score of teacher's self-evaluation was significantly higher than student's evaluation i.e., 120.1±8.2 vs 107.1±17.0 respectively (p=0.001).

Table No.1: Comparison of Teacher's self-evaluation score with gender and teaching experience

Teacher's Characteristics (n=20)		SITE score (mean±SD)	p-value
Total mean score		120.1±8.2	
Range		97 – 137	
Gender	Males (n=10)	119.6±10.2	0.774
	Females (n=10)	120.7±6.0	
Teaching Experience	<5 years (n=10)	120.3±7.8	0.924
	>5 years (n=10)	120.0±8.81	

Table No.2: Comparison of student's teacher-evaluation score with gender and year of study

Student's Characteristics (n=200)		CEID score (mean±SD)	p-value
Total mean score		107.19±17.0	
Range		41 - 130	
Gender	Males (n=68)	108.30±16.4	0.510
	Females (n=132)	106.61±17.3	
Year of Study	First year (n=20)	103.5± 13.7	0.457
	Second year (n=30)	104.8± 19.2	
	Third year (n=50)	106.6± 17.1	
	Fourth year (n=100)	108.9± 16.8	

Table No.3: Frequency/percentage of teachers with effective-teaching skills

	Teachers with effective teaching skills		p-value
	Yes (cut-off >60%)	No (cut-off ≤60%)	
Students (n=200)	185 (92.5%)	15 (7.5%)	0.205
Teachers (n=20)	20 (100%)	0 (0%)	

Table No.4: comparison of teachers with effective-teaching skills as reported by students

		Teachers with effective teaching skills		p-value
		Yes (cut-off >60%)	No (cut-off ≤60%)	
Students (n=200)	Gender • Male (n=68) • Female (n=132)	66 (97.1%) 119 (90.2%)	2 (2.9%) 13 (86.7%)	0.079
	Year of Study • First (n=20) • Second (n=30) • Third (n=50) • Fourth (n=100)	19 (95.0%) 24 (80.0%) 47 (94.0%) 95 (95.0%)	1 (5.0%) 6 (20.0%) 3 (6.0%) 5 (5.0%)	0.046

DISCUSSION

To eliminate bias, measurement of a teachers' effectiveness should be based on data from multiple sources and variable tools. The key stakeholders which include the teacher, the student and the educational institute, should be the primary sources of data[9]. The tools that can be employed may include questionnaires for self-evaluation of the teacher and formal and informal feedback from students through interviews and rating systems. In addition to this the institute can provide data though performance evaluation in the form of employee and administrator ratings and teaching portfolios. In the current study data from both faculty and students was used to measure effectiveness of the teachers. It was rated to be significantly higher by the faculty than the students. Similar results were reported in a study conducted in India where faculty members from medical and engineering colleges rated their teaching to be more effective as compared to that reported by their students. This may be attributed partly to lack of self-awareness on the teacher's part and collection of insufficient and irregular feedback from the students[10]. In order to improve this situation, the teachers need to allow for regular informal feedback from students and encourage them to give suggestions to better their teaching[11].

In the current study each teacher rated their teaching to be effective regardless of their years of teaching experience. However, when teaching experience was considered teachers with more than five years of experience rated their teaching to be more effective than those with less than five years of teaching experience. Research shows that relationship between years of teaching experience and teaching effectiveness is complex[12]. Positive association is reported particularly in initial years of teaching. However, in some cases as years of experience increases the level of interest of teachers wears off and they are not sufficiently motivated to keep up with the advancements in teaching and learning. This can be improved by continual learning and by making efforts to keep abreast with the current effective teaching and learning strategies[5] .

In our study statistically significant difference was found in self evaluated teaching effectiveness between males and females, where female teachers rated their teaching to be more effective. Findings of two different studies conducted in India show no statistically significant difference based on gender in both self-reported and student reported teaching effectiveness[13]. In contrast to this in a study conducted in USA student showed that teachers' gender affected the student's perception of effective teaching. In order to evaluate the gender bias reported in our study further research is needed with larger sample size and wider geographical inclusion.

Regarding characteristics of effective teaching, teachers in our study rated themselves in the areas of "they ensure students participation in the learning process" (88%) and "encourage students to interact respectfully" (88%). The characteristics of effective teaching reported in a study in Saudi Arabia were as follows; good communication skills (86.7%), honest (81.1%), students motivation (77.8%), organizes good lectures (76.7%) and expert on the subject (77%)[14].

In our study, students gave the highest scores to the following characteristics of effective teaching; teachers assess their students according to a criteria set in the subject curriculum (87.4%), keep a respectful relationship with the students (87.2%) and help students in practical application of their knowledge (87%). In a study conducted in India, students considered an effective teacher to have good communication skills, to be readily available to help and guide students, to approachable and to be able to make teaching and learning interesting and enjoyable in order to decrease boredom and stress in the class[15]**.**

CONCLUSION

A significant difference was found between self-evaluated and students- reported scores to quantify teaching effectiveness of medical teachers. The results can be utilized by other dental and medical institutions to identify the gap between teachers and students' perception of effectiveness of their teaching process and to recognize the areas that can be improved upon. Best judgment of teaching effectiveness can be done through student's performance in formative and summative assessments. Therefore, teaching effectiveness can be better judged through learning of their student. Although student's formal feedback in the evaluation of faculty members is controversial, however in formal personal feedback can build a rapport between teachers

and students. Teachers must be aware of their flaws in teaching performance and self-awareness training must be a part of faculty development programs. Moreover, the generalizability of the study can be increased by conducting the study in multiple institutions on a large sample size, particularly of the teachers.

Author's Contribution:

Concept & Design of Study:	Sidra Aamer
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Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

1. Kagema J, Irungu C. An analysis of teacher performance appraisals and their influence on teacher performance in secondary schools in Kenya. Int J Educ 2018;11:93–98.
2. Akram M, Zepeda S. Development and Validation of a Teacher Self-assessment Instrument Classroom Observations View project Locus of Control and Intention towards Adaptability of Entrepreneurship: Students' Perspective View project. researchgate.nethttps://www.researchgate.net/publication/316666627.
3. Anderson LM, Evertson CM, Brophy JE. An Experimental Study of Effective Teaching in First-Grade Reading Groups. Elem Sch J 1979;79:193–223.
4. Amin AA, Raba M. (CosmosImpact Factor), 2.532 (I2OR) InfoBase Index IBI Factor 3.86 Cite This Article: Ahmed Awad Amin Mahmoud Raba. Raba 2017;5.
5. Roy R, Reviews UHJ. undefined. Teacher Effectiveness: A Self-Report Study on Secondary School Teachers. academia.edu 2018.
6. Singh I, Jha A. Difference in Self-reported and Students-rated Teacher Effectiveness among Medical and Engineering Faculty Members: Need for Direct Informal Feedback. Am J Educ Res 2014;2:272–277.
7. Srikoom W, Faikhamta C, Hanuscin D. L. Dimensions of Effective STEM Integrated Teaching Practice. learntechlib.org vol. 4 https://www.learntechlib.org/p/209577/.
8. Moreno-Murcia JA, Silveira Torregrosa Y, Pedreño NB. Questionnaire evaluating teaching competencies in the university environment. Evaluation of teaching competencies in the university. learntechlib.org4, 2015;2254–7399.
9. Al-Mohaimeed AA. Medical faculty development: Perceptions about teachers' characteristics. J Taibah Univ Med Sci 2015; 10:405–410.
10. Moore S, Kuol N. Retrospective insights on teaching: Exploring teaching excellence through the eyes of the alumni. J Furth High Educ 2007;31:133–143.
11. Shi L. Native- and nonnative-speaking EFL teachers" evaluation of Chinese students" English writing. Lang Test 2001;18:303–325.
12. Shannon DM, Twale DJ, Moore MS. TA teaching effectiveness. The impact of training and teaching experience. J Higher Educ 1998;69: 440–466.
13. Islahi F. Who Make Effective Teachers, Men or Women? An Indian Perspective. Univers J Educ Res 2013;1:285–293.
14. Lee J, Choi H. What affects learner's higher-order thinking in technology-enhanced learning environments? The effects of learner factors. Comput Educ 2017;115:143–152.
15. Saini N, Sethi G, Sandhu PCAK. Undefined. Assessing the Student's Perception on Teacher's Characteristics for Effective Teaching. academia edu 2019.

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