

Attributes of an Effective Clinical Teacher in Undergraduate Medical Education: Students' Perspective

Noor-i-Kiran Naeem , Haris Iqbal , Wajid Butt

ABSTRACT

Background: A good clinical teacher constitutes one of the major factors towards providing quality educational environment in the wards for medical students. Modern era has opened new domains for defining methods for clinical teaching as well as new roles for a clinical teacher. This study aims at exploring medical student' perspectives regarding attributes of an effective clinical teacher.

Methods: This mixed method study involved final year MBBS students of Aziz Fatima Medical and Dental College, Faisalabad from August 2018 to November 2018. Seventy-five medical students filled the Nursing Clinical Teacher Effectiveness Inventory (NCTEI) questionnaire after taking informed consent. This was followed by seven individual face to face interviews of students consenting for interview.

Results: Most important attribute for an effective clinical teacher was reported having good interpersonal skills (95.2%) followed by having skills of evaluation (90.7%), clinical competence (84.7%), good personality traits (83.2%) and teaching skills (81.1%). Students felt it most important to have a teacher who is approachable and with whom they can communicate easily.

Conclusion: In the present era of medical education, an undergraduate medical student expects his clinical teacher to be approachable, professional, a positive role model with good interpersonal and teaching skills.

Key Words: Attributes, Clinical teacher, undergraduate medical teacher.

Introduction

Undergraduate medical and allied health professional education aims at providing theoretical knowledge along with clinical experience in order to prepare the students for a professional role in domains including medicine, nursing and allied health sciences. The clinical exposure provided to these undergraduate students is paramount in acquiring new clinical skills¹. Clinical rotations in various disciplines prepare a medical student to apply his theoretical knowledge through critical thinking and clinical decision making and develop related clinical skills.² Teaching at bed side has been known to build not only clinical skills of the students but also enhance their values of medical ethics, professionalism as well as interpersonal skills.³ Role of clinical teachers remain paramount in this regard as they can facilitate the students by providing best possible learning experience in each clinical scenario. Time and again, multiple studies have

studies have demonstrated diversity of roles that a clinical teacher plays in a medical student's life.³⁻⁵ Not only a does a clinical teacher act as a knowledge and resource provider for the students, he also acts as a facilitator in learning along with role model for students.⁴ Study conducted by Cruess S et al demonstrated the role of positive role modeling of clinical teachers in a medical student's life.⁵ Positive role modeling can also lead to future career choices of medical students. The role of clinical teacher has further diversified with the advent of technology, opening new domains for defining the attributes of an effective clinical teacher which need to be explored.⁷ This study aims at exploring medical student's perspective of attributes of an effective clinical teacher in context of Pakistani setting.

Material & Methods

Objective

The primary aim of this study was to explore the perspectives of final year MBBS students regarding attributes of a good clinical teacher.

Research Question

What is the perspective of medical students regarding attributes of a good clinical teacher?

Study Design

This mixed method study employed the Sequential Explanatory Design in which Quantitative data was interpreted by using Qualitative results. The study was

Dr. Noor-i-Kiran Naeem,
Assistant Professor
Aziz Fatimah Medical and Dental College, Faisalabad
Dr. Haris Iqbal,
Consultant Ophthalmologist
Dr. Rehmatullah Hospital, Gojra
Dr. Wajid Butt,
ART coordinator
Australian Concept Centre, Lahore,
Correspondence:
Dr. Noor-i-Kiran Naeem
Email: noorikiran@yahoo.com

conducted at Aziz Fatimah Medical and Dental College, Faisalabad, over a period of four months from August 2018 to November 2018. Sampling technique was purposive involving final year MBBS students of Aziz Fatimah Medical and Dental College, Faisalabad. Participation was voluntary in the study.

Data Collection

Data collection tools used in the study was survey questionnaire followed by individual semi-structured interviews. Mixed method research allowed the researcher to get an overview of the issue under research through survey followed by in-depth discussion of the research topic through interviews. After taking permission from the colleges Institutional review board and institutional ethical committee, the Nursing Clinical Teacher Effectiveness Inventory (NCTEI) was distributed among hundred final year MBBS students. The NCTEI is a validated inventory with 47 items from five categories having reliability coefficients 0.89 for Teaching, 0.84 for Nursing Competence, 0.82 for Evaluation, 0.86 for Interpersonal Relationship, and 0.83 for Personality.⁸ Each item utilize a seven point Likert Scale.

An open ended option to include student's response regarding any additional attribute(s) of a good clinical teacher was also provided. The participants were also asked to rank the categories from being "most important" to "least important."

This was followed by in-depth individual, semi-structured interviews of seven consenting participants. The interviews aimed at clarifying the reasons for additional traits in the open ended question and to discuss the most highlighted characteristics through the inventory. Anonymity and confidentiality was maintained throughout and informed consent was taken from the participants.

Data analysis

Descriptive statistics were used to analyze demographic variables and determine the attributes of a good clinical teacher as perceived by medical students. The NCTEI questionnaire with its 48 teaching behaviors was ranked on a seven-point scale from 1 (never important) to 7 (always important). Mean scores were calculated for each behavior. In mean scores, higher scores showed more effective characteristics of a good clinical teacher. A comparison of means was then used to examine and rank the students, perceptions for five main categories of teaching ability, interpersonal relationship, personality traits, clinical competence, and evaluation. Category scores were obtained by summing scores of all items within a category. Category score was also compared

among the two genders to find out any statistical differences between the two groups by applying t-tests with significance level of 0.05.

For qualitative analysis, Atlas ti software was used to organize and analyze the data. The answers to open ended questions from the questionnaire were analyzed, coded and ranked into categories as described by the students. Similarly, the interviews were transcribed and analyzed through Atlas ti after member checking. Open coding was performed and themes generated via priori coding according to the conceptual framework (taking the NCTEI questionnaire categories). Inter-coder reliability was ensured during the process.

Results

Out of hundred medical students, seventy-five returned the study questionnaire making response rate of 75%. Table 1 shows the demographics of the participants involved. Interpersonal skills" was reported to be on the top of the list for a good clinical teacher, followed by evaluation, having clinical competence personality traits, and finally teaching skills. The table 2 shows the ranking of five main categories as perceived by students. The data was also organized to see separate responses from each gender. (Table 3) None of the categories were found significantly different among the genders.

Table 1: Demographics of participants returning questionnaires (N = 75)

		Number of participants (n=75)	Percentage (%)
Gender	Male	34	45%
	Female	41	55%
Age (in years)	24 years	26	35%
	25 years	45	60%
	26 years	4	05%

Table 2: Student's Ranking of Clinical teacher attributes (N=75)

	Ranking of clinical teacher attributes' category from most important to least important	Possible Score range		Mean \pm SD ratio	Proportion from maximum score
		Minimum	Maximum		
1	Interpersonal skills	7	42	40.0 \pm 4.49	95.2%
2	Evaluation	8	56	50.8 \pm 6.29	90.7 %
3	Clinical Competence	9	63	53.35 \pm 6.88	84.7 %
4	Personality traits	7	49	40.8 \pm 5.94	83.2 %
5	Teaching skills	7	119	96.55 \pm 9.59	81.1 %

Table3: Comparison of male and female student's responses in various categories for a good clinical teacher. (N=75)

Attribute of a good clinical teacher	Male n=34		Female n=41		p value
	Mean	SD ratio	Mean	SD ratio	
Teaching skills	94.5	10.12	98.6	9.06	0.068
Clinical competence	52.4	7.24	54.3	6.52	0.2360
Evaluation	51.0	6.26	50.6	6.32	0.7848
Interpersonal Skills	40.3	4.75	39.7	4.23	0.5648
Personality	41.2	5.12	40.4	6.76	0.5719

Note: The means and standard deviations reported here were calculated from a seven-point response set where 1 = not at all descriptive, 7 = very descriptive. Statistically significant at P value ≤ 0.05

Student's interviews validated the ranking of attributes as reported from the questionnaire. Students reported that an effective clinical teacher "*should always be approachable.*" Student 5 stated: "*There may be thousands questions in my mind that occur during ward rotation or in OPD, but I cannot find a teacher free and available to answer those for me. It is understandable that they are busy but they should also be there for us.*"

Another aspect that was put forward by students was demonstrating good professional behavior and providing positive role modeling. Student 6: "*If a teacher cannot give patient or attendant due respect, how can we feel comfortable with him?*" Having good communication skills was reported by all the students as an important attribute of an effective clinical teacher. Student 1: "*We would like to go to a teacher who explains to us the topics clearly....*"

Students further elaborated the role of a clinical teacher in "*pointing out important topics for examinations*" as well as "*correcting the clinical methods of the students by giving feedback on performance.*" When asked about clinical competence, Student 2 replied, "*I am always inspired by the teacher who is clinically competent as this was what I want to be in future.*"

Students commented about general personality traits when talking about attributes of a good clinical teacher. Student 1: "*I would like to go to a teacher who handles things in a methodical manner and schedule teaching for us.*"

Discussion

This research aimed at studying the students' perspectives about an effective clinical teacher. Most reported attributes for a clinical teacher have been studied in detail by various researchers.

Jahan et al demonstrated in their study that the most important characteristic which a teacher should possess was knowledge.⁹ Most studies had been performed by taking views of various stakeholders like students, teachers and nurses. Gary et al emphasized on students' opinions in their literature review about teachers having knowledge along with clinical competence to provide an effective learning experience to students.¹⁰ This is in

similarity to our study where students have reported effective teaching skills as a part of attributes of an effective clinical teacher. More studies on teachers' perspective on an effective clinical teacher have been done by Nidhi et al and Gary et al.^{11,12} According to Nidhi et al, teachers agreed on competencies like effective teaching skills, providing learning environment and role-modelling to be possessed in order to teach medical students.¹¹ Similarly, Dawn E. and Eli B. highlighted recognizing student abilities and good communication skills to be present for facilitating physiotherapy students.¹³

When discussing about ranking these attributes, most important attribute for an effective clinical teacher in our study was reported to have good interpersonal skills. This is in contrast to previous studies done that showed an effective teacher should demonstrate good teaching skills along with adequate clinical competence.^{3,4,8} Furthermore, studies done on medical education focused more on knowledge building role of teacher in contrast to studies related to nursing and other allied health sciences.¹⁴ For instance, Chulani et al discussed the attributes like enhancing team work along with knowledge to be pivotal and most important in a clinical teaching.¹⁴ This was in congruence to our study, though the role of developing skills of team work had been mentioned during interviews by students when they discussed about interpersonal skills.

Our results demonstrated a striking difference with many of the previous studies by ranking interpersonal skills as most important attribute for a clinical teacher. An explanation can be proposed that with evolving technology and improving standards of medical education, the role of a medical teacher has evolved with time. The Generation of today, commonly known as the "Millennial", is linked to each other via various modalities like internet and social media. They have grown to be in a virtual environment which is accessible to them at any time.

Similarly, when talking about attributes of a teacher, all medical students agreed on the teacher being approachable and available to them if they needed. A study done in Japan also demonstrated similar attribute of a medical teacher to have approachability and being able to provide sufficient support along with teaching skills.¹² Similarly, our study also demonstrated that students wanted a teacher who is approachable and who can provide effective feedback on their performance.

Limitations and Future Directions

This study was limited to a single, private medical school following a traditional curriculum. Future directions could include multi-institutional input with comparison between public and private sectors as well as between those with integrated and traditional teaching, keeping in mind, the changing trend in educational psychology for the Millennials. Attributes of clinical teacher from individual departments may also be explored and

compared for similarities and differences. Perspectives of faculty as well as patients and administrative staff can also be taken.

Conclusion

The present era of medical education emphasizes on students' expectations of a clinical teacher to be approachable professional, a positive role model along with having good interpersonal and teaching skills.

Conflict of Interest: None

Grant Support & Financial Disclosures: None

Acknowledgements

Special thanks to final year students who facilitated in data collection.

References

1. Šimunović VJ, Hozo I, Rakić M, Jukić M, Tomić S, Kokić S, et al. New Paradigm in Training of Undergraduate Clinical Skills: the NEPTUNE-CS project University School of Medicine. *Croat Med J*. 2010; 51(5):373-80.

2. Benner P, Hughes RG, Sutphen M. Clinical Reasoning, Decision making, and Action: Thinking Critically and Clinically. In: Chapter 6: Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Rockville (MD): Agency for Healthcare Research and Quality (US); 2008 Apr. Chapter 6.

3. Peters M, Ten Cate O. Bedside teaching in medical education: a literature review. *Perspect Med Education* [Internet]. 2014; 3(2):76–88. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24049043>.

4. Ramani S, Leinster S. AMEE Guide no. 34: Teaching in the clinical environment. *Med Teach* [Internet]. 2008; 30: 347–64.

5. Bates T, Poole G. Effective teaching with technology in higher education: foundations for success. *Jossey-Bass High adult Educ Ser* [Internet]. 2003;336. Available from: <http://books.google.com/books?id=wQ6dAAAAMAAJ&pgis=1>.

6. Cruess SR, Cruess RL, Steinert Y. Role modelling--making the most of a powerful teaching strategy. *BMJ*

[Internet]. 2008; 336(7646):718–21. <http://www.ncbi.nlm.nih.gov/pubmed/18369229>.

7. AlHaqwi AI, Taha WS. Promoting excellence in teaching and learning in clinical education. *J Taibah Univ Med Sci* [Internet]. 2015; 10(1):97–101. <http://www.sciencedirect.com/science/article/pii/S165836121500027X#bbib17>.

8. Knox JE, Mogan J. Important clinical teacher behaviours as perceived by university nursing faculty, students and graduates. *J Adv Nurs*. 1985; 10(1):25–30.

9. Jahan F, Sadaf S, Kalia S, Khan A, Hamza H Bin. Attributes of an effective clinical teacher: A survey on students' and teachers' perceptions. *J Coll Physicians Surg Pakistan*. 2008; 18(6):357–61.

10. Sutkin G, Wagner E, Harris I, Schiffer R. What makes a good clinical teacher in medicine? A review of the literature. *Acad Med*. 2008; 83(5):452–66.

11. Huff NG, Roy B, Estrada CA, Centor RM, Castiglioni A, Willett LL, et al. Teaching behaviors that define highest rated attending physicians: A study of the resident perspective. *Med Teach*. 2014; 36(11):991–6.

12. Kikukawa M, Nabeta H, Ono M, Emura S, Oda Y, Koizumi S, et al. The characteristics of a good clinical teacher as perceived by resident physicians in Japan: A qualitative study. *BMC Med Educ*. 2013; 13(1).

13. Ernstzen D, E B. The Roles and Attributes of the Clinical Teacher that Contribute to Favourable Learning Environments: A Case Study from Physiotherapy. *South African J Physiother*. 2012; 68(1):9–14.

14. Herath C, Zhou Y, Gan Y, Nakandawire N, Gong Y, Lu Z. A comparative study of interprofessional education in global health care: A systematic review. *Medicine*. 2017 Sep 96(38):7336.

Author's Contribution

Noor-i-Kiran Naeem: conceived, designed and data collection, analysis and manuscript writing.

Haris Iqbal : Data analysis, interpret results, review and final approval of manuscript.

Wajid Butt: Study designed , data collection ,writing manuscript , editing of manuscript.