

## ORIGINAL ARTICLE

## STUDENTS' PERCEPTION ABOUT THE CLINICO-ANATOMICAL CONFERENCES AS A TEACHING METHODOLOGY

Kanwal Saeed, Marina Baptist, Fatima Mukhtar\*

Department of Anatomy, \*Department of Community Medicine, Lahore Medical and Dental College, Lahore-Pakistan

**Background:** Anatomy has always been considered as an essential basis for clinical sciences. In recent decades there has been an increased trend towards incorporation of clinical problems in the teaching of anatomy. To promote clinical knowledge clinico-anatomical conferences have been conducted in our department for the last five years. This study has been undertaken to determine perception of medical students regarding these conferences and to formulate recommendations for their improvement based on feedback obtained from students. **Method:** A cross-sectional study was conducted from December 2013 to January 2014 at the Lahore Medical & Dental College (LMDC), Lahore. A sample of 200 students of first and second year MBBS classes was selected for the study through convenience sampling technique. A 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree) was used to determine students' perception about clinico-anatomical conferences, using a self-administered questionnaire. Data was analysed using SPSS-19.0. **Results:** Out of total 144 (72%) students were of the opinion that clinico-anatomical conferences were a good source of clinical knowledge, 126 (63%) opined that these conferences promoted understanding rather than memorization, 122 (61%) found them interesting, and 15 (30%) found improvement in their grades in the subject of anatomy after attending the conferences. **Conclusion:** The clinico-anatomical conferences were found interesting and reported to be a good source of clinical knowledge. It is recommended that these conferences should be conducted frequently, made interactive and patients should be presented as case studies during the conferences

**Keywords:** Clinico-anatomical conference, teaching methodology, anatomy, students' perceptions.

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## INTRODUCTION

Anatomy is foundation for clinical sciences. It is a crucial discipline of undergraduate medical training.<sup>1</sup> It provides comprehensive knowledge which is essential to develop sound and practical understanding in later years.<sup>2</sup> Traditional anatomy is teacher-centered with heavy emphasis on acquiring factual knowledge.<sup>3</sup> Over the years there has been a trend to make anatomy interesting, easy to understand and interactive to learn.<sup>4</sup>

The literature review that was conducted did not retrieve any study on clinico-anatomical conferences being as a teaching methodology for the subject of anatomy. However, other teaching methods have been used in the past. One study documented that the traditional teaching by lectures alone was an ineffective tool in promoting theoretical understanding of concepts and for the stimulation of students' critical thinking.<sup>5</sup> Other studies have found that dissection as a teaching tool promotes self-directed learning and 3-D awareness of anatomy. Another study done on problem based learning as a teaching tool in anatomy has shown that it produces more confident and practical-minded doctors, in addition to promoting independent learning.<sup>6</sup>

In the past senior faculty members at institutional level have evaluated curricula reviewing teaching methodologies, but rarely taken into account

the feedback from the students. Students' perceptions about the teaching techniques are important for improving the standards of medical education. Also a continuous feedback from students and introduction of innovative techniques are very essential to adapt to changing trends in teaching methodology.<sup>7</sup> This not only makes the subject more interesting for the students but also promotes better understanding and memorization.

Few studies are conducted in Pakistan, which focus on feedback obtained from medical undergraduate students regarding teaching methodologies.<sup>8,9</sup> At the Lahore Medical & Dental College an innovative teaching methodology of clinico-anatomical conferences is being used to teach the subject of anatomy for the last five years. The present study was therefore designed to determine the perception of medical students regarding the clinico-anatomical conferences and to formulate recommendations for improvement of these conferences based on feedback obtained from students.

## MATERIAL AND METHODS

Clinico-anatomical conferences are being conducted for the last five years for 1<sup>st</sup> and 2<sup>nd</sup> year MBBS students of Lahore Medical and Dental College (LMDC), Lahore. In these conferences two voluntary students are assigned clinically relevant topics

according to anatomical region under study. The surgeon at the Ghurki Teaching Trust Hospital, the hospital which is affiliated with LMDC is notified about these topics. These clinico-anatomical conferences are held once a month each for first and second year MBBS classes. Power point presentations are prepared and presented by the volunteering students. After the presentations by students, the surgeon gives his comments and introduces latest surgical techniques being used in the area under discussion. This facilitates vertical integration. Lastly, question and answer session is conducted to enhance students' learning.

A descriptive cross-sectional study was conducted from December 2013 to January 2014 at the LMDC. Ethical committee of LMDC accorded approval for the study. A sample size of 200 students of first year and second year MBBS classes was selected for study through convenient sampling technique. A structured questionnaire with one open-ended question was prepared and handed over to the students. Informed consent was taken from students before data collection. Students were provided with a friendly and comfortable environment during data collection, while in their respective practical groups. Data collection took a period of one week. A five point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree) was used to determine students' perception about clinico-anatomical conferences.<sup>9,10</sup> The data was recorded and analysed using the statistical package for social sciences version 19.

Data were described in terms of frequencies and percentages.

## RESULTS

The respondents of the study comprised 95 (47.5%) males and 105 (52.5%) females while an equal number of students were selected from both the first year 100 (50%) and second year 100 (50%) MBBS classes. The perception of medical students regarding the clinico-anatomical conferences was analysed on a 5-point Likert Scale, in which 5=strongly agree, 4=agree, 3=neutral, 2=disagree and 1=strongly disagree. One hundred and forty four students (72%) were of the view that clinico-anatomical conferences provided a good source of clinical knowledge, 126 (63%) reported that clinico-anatomical conferences promoted understanding rather than memorization, and 122 (61%) students found that clinic anatomical conferences were interesting. However, 60 (30%) students found improvement in their anatomy subject grades after attending these clinico-anatomical conferences. (Table-1)

Suggestions given by students for the improvement of these clinico-anatomical conferences are highlighted in table-2. Students were of the opinion that clinico-anatomical conferences should be made more interactive, a variety of clinical topics should be covered in clinico-anatomical conferences and that these conferences should be conducted more frequently. However, a few students proposed that the clinico-anatomical conferences be made brief.

**Table-1: Students perceptions regarding clinico-anatomical conferences**

Variables	Strongly agree 5	Agree 4	Neutral 3	Disagree 2	Strongly disagree 1
I attended the clinico anatomical conferences regularly	104 (52%)	60 (10%)	20 (30%)	8 (4%)	8 (4%)
I actively participated in the clinico-anatomical conferences	24 (12%)	54 (27%)	70 (35%)	26 (13%)	26 (13%)
The clinico-anatomical conferences motivated me to study hard	22 (11%)	65 (32.5%)	60 (30%)	28 (14%)	25 (12.5%)
I found clinico-anatomical conferences interesting	50 (25%)	72 (36%)	42 (21%)	14 (7%)	22 (11%)
Clinico-anatomical conferences provided a good source of clinical knowledge	42 (21%)	102 (51%)	36 (18%)	8 (4%)	12 (6%)
I am satisfied with clinico-anatomical conferences	26 (13%)	96 (48%)	46 (23%)	12 (6%)	20 (10%)
Clinico-anatomical conferences promoted understanding rather than memorization	42 (21%)	84 (42%)	46 (24%)	14 (7%)	14 (7%)
Clinico-anatomical conferences helped me to become an independent learner	26 (13%)	66 (33%)	64 (32%)	28 (14%)	16 (8%)
I prefer clinico-anatomical conferences to other methods of teaching	28 (14%)	70 (35%)	50 (25%)	30 (15%)	22 (11%)
I found improvement in my grades in the subject of anatomy after attending clinico-anatomical conferences	18 (9%)	42 (21%)	78 (39%)	35 (17.5%)	25 (12.5%)

**Table-2: Suggestions of students regarding improvement of clinico-anatomical conferences**

Students' suggestions
The frequency of clinico-anatomical conferences should be increased
A variety of clinical topics should be covered in clinico-anatomical conferences
The duration of the these conferences should be reduced
The clinico-anatomical conferences should be made more interactive

## DISCUSSION

The value of clinico-anatomical conferences is clearly appreciated by the students as is evident from the opinions of majority attending these conferences. This also shows students' interest towards the subject of Anatomy. The results of our study have shown that clinico-anatomical conferences are a good source of clinical knowledge; they promote understanding

rather than memorization and motivated students to study hard.

The literature review that was conducted did not identify any study on assessment of clinico-anatomical conferences as a teaching methodology in anatomy. However, researchers have reported other contemporary teaching methods for the subject of anatomy, which are preferred to traditional teaching methods.

This is evident from the work done by Barrows *et al* who have shown that clinically oriented anatomy teaching has been able to explain tougher concepts of anatomy in a more effective and friendly environment.<sup>11</sup> Similarly, Sabbagh *et al* have also documented that discussion on a clinical case facilitated in the learning of the subject of anatomy in addition to generating interest of the student.<sup>12</sup>

Consistent findings have been reported by Winkelmann.<sup>13</sup> His study reported that traditional lecture is not necessarily the most effective way to teach anatomy and that both teachers and students prefer other methods. Students are seen to prefer integrated methods used to teach anatomy instead of traditional methods.<sup>14</sup> However, Snelling *et al* have revealed results to the contrary; traditional teaching methods were seen to enhance students' learning.<sup>15</sup>

Results of our study have shown that only 30% students found improvement in their grades in the subject of anatomy after attending these conferences. The reason for a small proportion of students benefiting from these conferences may be that the curriculum of the Pakistan Medical & Dental Council lacks integration of basic and clinical science subjects. Therefore, the assessments are also developed in line with the curriculum, completely dissociated from the clinical subjects.

A change in the curriculum should be considered with emphasis on teaching clinically oriented anatomy to promote better understanding of human anatomy.

## CONCLUSION

The clinico-anatomical conferences were found interesting and reported to be a good source of clinical knowledge. It is recommended that these conferences should be conducted frequently, made interactive and a variety of clinical topics should be covered in these clinico-anatomical conferences.

## REFERENCES

1. Sugand K, Abrahams P, Khurana A. The anatomy of anatomy: a review for its modernization. *Anat Sci Educ* 2010;3(2):83-93.
2. Udaya KP, Madan S. Teaching methodology of Anatomy: a modern outlook. *Int J Cur Res Rev* 2013;5(4):130-4.
3. Wader JV, Kumbhar SS, Mankar DV. An appraisal of innovation in practical teaching in anatomic pathology - a students' and teachers' perspective. *J Med Sci* 2014;7(1):58-64.
4. Patel KM, Moxham BJ. The relationships between learning outcomes and methods of teaching anatomy as perceived by professional anatomists. *Clin Anat* 2008;21(2):182-9.
5. Sandhu S, Afifi TO, Amara FM. Theories and practical steps for delivering effective lectures. *J Community Med Health Educ* 2012;2(6):158.
6. Schmidt HG, Dauphinee WD, Patel VL. Comparing the effects of problem-based and conventional curricula in an international sample. *J Med Educ* 1987;62(4):305-15.
7. Ali IS, Khan M, Khan A, Shah MF, Ali G. Trainees' feedback on the prevailing teaching methods in postgraduate medical institute, Lady Reading Hospital, Peshawar, Pakistan. *J Coll Physicians Surg Pak* 2012;22(5):317-9.
8. Azer SA, Eizenberg N. Do we need dissection in an integrated problem based learning medical course? Perception of first year and second year students. *Surg Radiol Anat* 2007;29(2):173-80.
9. Jamieson S. Likert Scales: How to (Ab)Use them. *Med Educ* 2004;38(12):1217-8.
10. Norman, G. Likert scales, levels of measurement and the "laws" of statistics. *Adv Health Sci Educ* 2010;15(5):625-32.
11. Barrows HS, Tamblyn RM. *Problem-Based learning: an approach to medical education*. New York: Springer Publishing;1980
12. Sabbagh MA. Application of case discussions to improve anatomy learning in Syria. *Avicenna J Med* 2013;3(4):87-91.
13. Winkelmann A. Anatomical dissection as a teaching method in medical school: a review of the evidence. *Med Educ* 2007;41(1):15-22.
14. Bergman EM, Vleuten CPM, Scherpbier AJJ. Why don't they know enough about anatomy? A narrative review. *Med teach* 2011;33(5):403-9.
15. Snelling J, Sahai A, Ellis H. Attitudes of medical and dental students to dissection. *Clin Anat* 2003; 16(2):165-72.

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### Address for Correspondence:

**Dr. Kanwal Saeed**, Department of Anatomy, Lahore Medical and Dental College, Lahore-Pakistan.

**Cell:** +92 323 422 5122

**Email:** khalpaasl@gmail.com