

ORIGINAL ARTICLE

Evaluation of student's perception of operation theatre learning.

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ABSTRACT... Objective: To evaluate the perception of final-year medical students of operation theatre learning. **Study Design:** Quantitative & Cross Sectional. **Setting:** Quaid-e-Azam Medical College, Bahawalpur. **Period:** 01-10-2021 to 31-12-2021. **Methods:** All final year MBBS students of this college were involved in the study. The questionnaire was prepared, the variables were selected and the Likert scale was used. The data was collected from the students and then the data was analyzed on SPSS version 23. **Results:** Two hundred & seventy medical students of final year MBBS class from Quaid-e-Azam medical college took part in this study. 69.7% of students were female and 30.3% of students were male. 67.68% of students disagreed that the space around the operation table was sufficient. 71.1% of students agreed that operation theatre learning was helpful in the examination. 71.5% of students agreed that I have a better internal motivation in operation theatre learning. **Conclusion:** The students become motivated with learning in the operation theatre. Operation theatre learning offers the medical students to build clinical cognitive recollection by joining in the perceptible sensation of live pathologies with pictorial images and vocal learning and then listening.

Key words: Operation Theatre Learning, Operating Room Teaching, Surgical Teaching of Medical Students, Teaching Surgical Competency.

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INTRODUCTION

The Operating theatre is an unfamiliar & disturbing milieu for inexpert medical students and may be considered unfriendly and unattractive for them. The role of tutors in such circumstances should be to inspire the medical students to interact and to avail themselves of the learning opportunity. The medical students in the operation theatre are in the learning environment so the environment should also be encouraging for interaction and participation.¹ The old saying of 'See one, do one, teach one has no place in the health care system nowadays.² The patients have the right to expect the best level of health care from the medical professionals.

There are many learners in the operation theatre and junior learners like medical students are encouraged. The junior learners should not feel hopeless and helpless in competition with the senior learners. The medical students are required to understand and learn the procedures along their professional curve. Techniques that are used every day by the professionals like scrubbing up, gowning, and gloving can be seen to be strange and difficult

to learn by the medical students. The learning of all the learners whether junior or senior is valuable. The best teachers recognize the impact of good learning at all levels in their team.³

The operation theatre is an essential part of a hospital. It is potentially an amazing place to learn different skills, see the operative finding of disease in real patients. It is believed that the learning environment, which is essential for effective student learning, should be learner-friendly.⁴ A perfect learning milieu is demarcated as one in which the educational requirements of the students are fulfilled.⁵ Teaching and learning in the operation theatre have likely to boost the knowledge by serving the medical students to join in the theory of the concepts with operative findings.⁶ The medical students are encouraged to reproduce their learning in operation theatre in a well-structured means and to develop expressive replication.

I was interested to search out how operation learning was perceived by my students. As a clinical teacher, I focus on and interpret the students' experiences

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of operation theatre learning. The students are part of the learning process.⁷ This was a quantitative study, which has evaluated the student's perception of operation theatre learning of final year medical students of Quaid-e-Azam medical college.

METHODS

This was a quantitative study for evaluating the student's perception of operation theatre learning. The paradigm was post-positivist. The duration of the study was three months from 01-10-2021 to 31-12-2021. The study was conducted in Quaid-e-Azam medical college/Bahawal Victoria hospital, Bahawalpur. All the students studying in the final year MBBS of Quaid-e-Azam medical college were included in this study. All those students who were in other years of MBBS were excluded from the study.

Questionnaire Development

The questionnaire was developed and validated by the following sequence. I looked for the validated questionnaire in the literature for guidance. The STEEM questionnaire guidance can be used to grade the educational milieu in the operation theatre.⁸ The variables were selected by a discussion with the peers according to the operation theatre learning context. I tested these variables on a group of house officers by the talk aloud method. A pilot study was done on a group of final year students by the different sequence of variables. The features of individual variables were analyzed. The variables were counter-checked. The variable was modified, deleted, added, and made explicit according to the pilot study. After the development of instrument/performa, the variable was recorded and the Likert scale (from strongly agree, agree, neutral, disagree, and disagree) was used, for the whole final year MBBS class. (Annexure I)

Data Collection

I collected the data from the final year MBBS class when the attendance was maximum. I explain about the study and then the performa. Then the performa was distributed among the students and they were given sufficient time to fill it. After that, the performa was collected from the students.

Data Analysis

The data were processed on SPSS version 23. The data were analyzed and interpreted in the form of frequency.

Ethical Contemplations

The ethical endorsement (letter no: 317/DME/QMC/Bahawalpur dated 02-03-2020) was established from the internal ethical review committee of Quaid-e-Azam medical college Bahawalpur. The students were acquainted with the questionnaire before their clinical rotation and a rationale for the study was also described. Students were then asked to participate in this study and informed consent was obtained. They were also informed that participation was voluntary and they would fill out the questionnaire on the last day of their rotation. The questionnaire would be circulated and collected by the coordinator. The questionnaire was premeditated to be returned anonymously but demanded a little general information about gender, name, and roll number of participants. The participants were also guaranteed confidentiality and anonymity.

RESULTS

Two hundred & seventy medical students of the final year MBBS class participated in this study. One hundred & eighty-seven were female and eighty-three were male students. The following theme emerged from the data.

52.6% of students agreed that adequate space was available in the operation theatre but 67.68% of students disagreed that the space around the operation table was sufficient. 25.2% of students comment that I was able to see the operation. 50% of medical students agreed that the surgeon gave a brief description before every operation. 73.7% of students agreed that the surgeon answered the question during the procedure. 57.8% of students agreed that the surgeon explained the anatomical landmarks. 63% of students agreed that the surgeon explained the operative findings. 58.9% of students agreed that the surgeon also explained the operative procedure. 50% of the students agreed that the surgeon encourage the interactive class. 48.9% of students agreed that we understood and memorized the operation. 71.1% of students agreed that operation theatre learning was helpful

in the examination. 71.5% of students agreed that I have a better internal motivation in operation theatre learning (table no: 1). 53.3% of students agreed that I never felt that my time was wasted in the operation theatre. 76.7% of students agreed that I felt operation theatre was an amazing place to learn (Table-II). 38.5% of students agreed that the paramedical staff has a helping attitude.

TABLE-I**I have a better internal motivation in OT learning**

	Frequency	Percentage
Strongly agree	193	71.5%
Neutral	50	18.5%
Strongly disagree	27	10%
Total	270	100%

TABLE-II**I feel that OT is potentially an amazing place to learn**

	Frequency	Percentage
Strongly agree	205	75.9%
Neutral	40	14.8%
Strongly disagree	25	9.3%
Total	270	100%

DISCUSSION

This quantitative study improves my understanding of the perception of medical students of final year MBBS class toward learning and teaching in the operating theatre. The medical students identify the operation theatre as a suitable workplace and have an amazing environment to learn skills. The learning milieu has an effect on the student's presentation and a good learning environment has been associated with increased student efficiency.^{9,10} A good learning milieu fulfills the corporal, emotional, societal & educational components of the whole training schedule. This plays an important role in the proficient and ethical development of the students.¹¹ Looking into my study the final student's observations of the environment in the operating theatre showed that 52% agreed that the space in the operation theatre was adequate and only 11.5% agreed that the space around the operation table was sufficient to see the procedure. 25% of students agreed that they were able to see the procedure. To overcome this obstacle, the telescope can be placed on the operating table which can project the whole

operation for the students looking in a classroom. The successful use of a head camera displays the operative procedure for student viewing in case of open surgeries. The use of such strategies may be restricted due to restricted resources and variable attitudes of surgeons. There is an adverse impact on the enjoyment and education of the students if their visualization is neglected.¹²

The friendly & assisting attitude of the theatre staff is one of the important key features for an operation theatre learning milieu. Fernando and colleagues reported 74% of students felt the attitude of theatre staff was friendly and they were approachable for help in their learning.¹³ Knight and colleagues in a questionnaire-based study of UK medical students on a neurosurgical rotation. They noted in their study that 78.6% of students felt welcome in operation theatre & 67.7% agreed that the neurosurgical theatre session was beneficial.¹⁴ In my study, 38.5% agree & strongly agree that the operation theatre staff has a helping attitude. The difference between this study and the international studies can be due to lack of facilities & professionalism and gender discrimination. These findings in my study were similar to a local study of interior Sindh.¹⁵

Surgeons & their pupils are engaged in an unremitting go-ahead process of teaching and learning. Both are observing the behavior of each other. Educational experiences showed the major role of interpersonal factors such as willingness to learn and teach among the teacher & student. The special attention to preoperative briefing, intraoperative teaching, showing the important anatomical landmarks, and operative findings to the medical student and trainee resident.¹⁶ In our study, the medical student's perception of supervision showed that 50% agree & strongly agree about the preoperative briefing of the procedure. 73.7% agree & strongly agree about the question & the answer during the operation was helpful. The majority of the medical students agreed that the surgeon showed the operative findings, anatomical landmarks and discussed the operative procedure.¹⁷

In our study, 53.3% of students agreed & strongly agreed that they never feel that their time was wasted in the operation theatre. The operation theatre is an

amazing place to learn was agreed upon & strongly agreed by 76.7% of students. In focus group studies, the medical students have a sensation that the time consumed in operation theatre was not beneficial. One student expressed his opinion, "Standing in the operation theatre for 4 hours is a waste of time, it's futile".¹⁸ An intervention was proposed in a study by McIntyre and colleagues, they used teleconferencing with a cluster of third-year medical students. The students and the faculty member was in the classroom. They were watching live operation through an audiovisual link with a question & answer capability during surgery. One faculty member was dedicated to teaching during the session whereas the surgeon focused on the operation.¹⁹

In our study, 71.5% of medical students agreed & strongly agreed that they felt better internal motivation in operation theatre learning. The majority of medical students in this study agreed, that operation theatre learning was helpful in the final exam. Best and dedicated surgical teachers are always welcomed & appreciated for their effort to teach and develop skills in challenging places like operation theatre.²⁰ Hampton and colleagues, in a focus group study of faculty (gynecology & obstetrics and surgery) and medical students, approved that evolving the basic medical knowledge was a fundamental portion of the operation theatre learning experience. The faculty emphasized that "the medical students should be expert in basic knowledge before coming to operation theatre because it is a reinforcement of knowledge in operation theatre."²¹

In my study, the surgeon took a keen interest in coaching & learning medical students and tried to develop operating skills in them. The medical students were satisfied with operation theatre learning and the behavior of the teachers. The fact emphasized in the literature was that the faculty members should be aware of the learning goals of the medical students and the residents. The faculty identify the inconsistency between the learning goals and perception of residents and medical students.²² The faculty should have an interest in teaching & learning of the learners for the development of surgical skills.

This study has also weaknesses like other research

studies. The main problem identified with this research was a quantitative study. The huge bulk of data was obtained rapidly and economically with the help of this questionnaire type of performance. The comeback rate is also inconstant, when it decreases less than 50%, it is problematic to categorize whether the reply established was demonstrative of the sample or not.²³ Some students have evaluated the operation theatre learning negatively. Then they did not return the performance.

CONCLUSION

Operation theatre learning provides medical students with valuable opportunities to develop clinical cognitive recall by integrating tactile experiences of disease with visual observation and verbal instruction. It enables students to witness real-time clinical decision-making and the management of actual surgical complications. However, some students encounter difficulties in observing procedures and experience inadequate mentorship within the operating theatre environment. Addressing these challenges is essential to reduce negative emotional responses and to enhance the overall educational value of operation theatre learning.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

1	Sheikh Atiq-ur-Rehman: Data collection.
2	Usman Mahboob: Methodology, data analysis.
3	Muhammad Ishaq Khan: Data entry.