Original Article Open Access

Perception of Undergraduate Students about Bedside Teaching: Experience at a Private Medical College

Shazia Tazion[1*]

Sharif Medical & Dental College Lahore, Pakistan

ABSTRACT

Introduction: Bedside teaching is an essential tool for clinical skill demonstration in undergraduate medical education. Recently a shift away from bedside teaching is seen which can lead to a decline in students' clinical performance.

Objective: To understand the student perception of bedside teaching in undergraduate medical students of fourth and final year MBBS.

Methods: A cross-sectional study was done by online Google form of a validated questionnaire after taking permission from authors from 4th & 5th-year MBBS students of Sharif Medical and Dental College, Lahore in March 2023. The questionnaire tested the four domains which included the physical environment, the patient's comfort and attitude toward the patient, the teaching task of the teacher, and group dynamics. Each domain has further 5, 7, 9, and 4 questions using a Likert scale ranging from strongly agree, agree, unsure, disagree, and strongly disagree. Data was gathered and analyzed by SPSS 23 for obtained responses.

Results: The age range of the participants was between 20-25. The response rate was 90% for 4th year and 93 % for final year. The adequacy of the space and noisy place were barriers in the physical environment. Patient comfort and attitude toward the patient, and bedside teaching ethics were followed adequately. Regarding the teaching task the teacher, patient selection ahead, adequate time to practice a skill, and the teacher's observation during skill practice were areas where students were not much satisfied. About group dynamics, role in learning and clear role from the beginning were less satisfied areas.

Conclusion: Bedside teaching is an important skill to enhance clinical skill practice, communication skills, and management skills. The decline in bedside teaching can compromise patient management skills by future doctors. Appropriate steps should be taken to rectify the barriers to adequate provision of BST.

Keywords: Bedside Teaching, Student's Perception, Medical students, Consent

Doi: https://doi.org/10.53708/hpej.v6i2.2549

INTRODUCTION

William Osler said, "To study the phenomena of disease without books is to sail an uncharted sea, while to study books without patients is not to go to sea at all" (Narayanan and Nair, 2020).

There is a shift of teaching from teacher centered approach to student centered approach worldwide. Curriculum is shifting from traditional to modular with instructional strategies shifting from large group discussions to small group sessions, problem-based learning and case-based learning. In many undergraduate teaching institutions, this shift is slow. Bedside teaching is used to teach the psychomotor and affective domain in clinical settings (Narayanan and Nair, 2020). In clinical years, students take history and do necessary examination and then present the case to clinician. It is considered that bedside teaching is an important modality to teach and assess the knowledge, skill, communication skills, patient centered care and professionalism for undergraduate students which will help them to become a better professional in upcoming years (Gimson et al., 2019). Bed side teaching is done in inpatient morning ward round and formal rounds during ward setting.(Ohta and Sano, 2022) However, during recent years there is a shift away from bedside teaching and it was pronounced during COVID 19 Pandemic due to social distancing. Nowadays, students value the importance of patient encounter, but they prefer to learn away from the bedside. Theory of self-determination which is a motivational theory is applicable on bedside teaching. Autonomy, relatedness and competence are three factors which leads to increase internal motivation of students (Ratelle et al., 2022).

Several studies have explored about patient satisfaction with bedside round with equivocal results (Gamp et al., 2019). Bedside teaching in the context of patient has several benefits including raising their confidence on service, rapport building and get an understanding about their disease process (Ramackers et al., 2020).

During bedside teaching, good teaching climate, clear format, and adaptation according to student's level are essential elements. During bedside round self-reflection and self-directed learning is encouraged for student (Ramackers et al., 2020). Bedside teaching contributes in enhancing the clinical expertise, collaboration, communication, health advocacy and professionalism. Better clinical skill decreases the need for unnecessary investigations (Van Dam et al., 2021). A lot of distracters are there during bedside teaching, patients, attendants, doctors, nurses, and paramedical staff. Place may be noisy which make learning environment difficult to manage (Haddon Mullins et al., 2020). It is the duty of tutor to make the learning environment comfortable for the learner (Sarwar et al., 2020 Yi et al., 2019).

It will be interesting to know the student's satisfaction regarding effectiveness of bedside teaching which will help us to improve the teaching strategies particularly for bedside teaching.The aim is to understand the student perception of bedside teaching in undergraduate medical students of fourth and final year MBBS.

Rationale of this study is to find out the satisfaction and effectiveness of bedside teaching from the student's point of view and explore the perception of students in providing the required skill acquisition in undergraduate students.

*Correspondence
Shazia Tazion
Email address: drtazion@yahoo.com
Affiliation: *Sharif Medical and Dental College Lahore*
Received: January 15, 2023 **Revised: April** 11, 2023
Accepted: August 18, 2023 **Available online:** November 30, 2023

METHODS

It was nonprobability purposive sampling with a sample size of 197 students. Consent was taken from students for participating in the study. Data was collected from students of fourth and final year MBBS. Ethical approval was taken from institutional ethical approval board with letter no. SMRC 292-23 dated 17-3-23. Online google forms about perception of student regarding bedside teaching was shared with students of fourth and final year MBBS through WhatsApp groups. Instrument adopted was a structured validated questionnaire for bedside teaching after taking consent from the author via email. Questionnaire was evalauting the four domains which include physical environment with 5 questions, patient's comfort and attitude toward patient with 7 questions, teaching task of teacher with 9 questions and group dynamics with 4 questions with 5-point Likert scale from strongly agree, agree, unsure, Disagree and strongly disagree. Data was gathered and analyzed by SPSS 23 for obtained responses. Data was entered, cleaned, and analyzed using SPSS version 23. Frequency tables were generated for all variables. For quantitative variables such as age etc. Means were calculated. Qualitative variables were expressed in frequencies and percentages.

RESULTS

Age range of the participants were between 20-25 years with 67 students (n= 78%) in the age range of 23 year. 69 boys and 111 girls. Ninety students of 4th year MBBS out of 100 students and 90 students of final year out of 97 responded to the google form. Response rate was 90% for 4th year and 93 % from final year. In physical environment, comfortable temperature was there according to 132 (73%) students while 28(15%) disagree. No disturbance by noise was reported by 114 (63%) students and disagreed by 42 (23%). Adequate space to stand and observe all activities was agreed by 117 (65%), and 43 (24%) students disagreed. Adequate number of students was agreed by 119 (66%) and disagreed by 36 (20%) as shown in Table 1.

About patient comfort and attitude toward patient, 170 (94%) students agreed that informed consent was taken from the patient while 2 (1%) disagrees. Introdroduction to patient was agreed by 148(82%) and disagree by 13%(7%). We maintained privacy of patient was agreed by 155(86%) and disagree by 10(6%). All findings were explained to patient was agreed by 132 (73%) and disagreed by 19 (11%). We responded to patient's questions was agreed by 162 (90%) students but disagreed by 5 (3%). We were sympathetic to patient and paid attention to his comfort and emotions, 159 (88%) agreed while 4 (2%) disagree. We thanked patient for his participation, 162 (90%) agree and 8 (4%) disagree as shown in Table 1.

Regarding teaching task of teacher, patient was selected ahead was agreed by 124 (69%) students and 22 (12%) disagree. Teacher observed us during interview of patient, 138 (77%) students agree while 23 (13%) disagree. Teacher observed us during clinical examination was agreed by 141 (78%) and disagree by 23 (12%) students. I had adequate scope to practice skills was agree by 112 (62%) and disagree by 30 (17%). Teacher always assisted me in skill practice was agreed by 135 (75%) and disagreed by 26 (14%) students. Teacher encouraged us to think during discussion, 153 (85%) students agree while 11 (6%) disagree. Constructive feedback was given by the teacher was agreed by 153 (85%) and disagreed by 7 (4%) students. Teacher summarized the session effectively was agreed by 152 (84%) and disagreed by 8 (4%).Teacher started and finished class on time 159 (88%) agreed and 6 (3%) disagree as shown in Table 1.

Regarding group dynamics, I was clear about our group role in learning 113 (63%) students agree and 9 (5%) disagree. I was clear of my role right from beginning was agreed by 118 (66%) and disagree by 11(6%). I actively participated throughout the class was agreed by 126 (70%) and 11 (6%) disagree. We have finished every task in time 131 (73%) students agree while9 (5%) disagree as shown in Table 1.

Table 1: Student's perception about bed side teaching onsidering different domains of physical environment, patient's comfort, Teaching task and group dynamics.

Physical environment	**Yes (n)**	**No**
Comfortable temperature	132 (73%)	28 (15%)
No disturbance by noise	114 (63%)	42 (23%)
Sufficient light	157 (87%)	15 (8%)
Adequate space to stand and observe all activities	117 (65%)	43 (24%)
Adequate number of students	119 (66%)	36 (20%)
Patient's comfort and attitude towards patient		
Informed consent	170 (94%)	2 (1%)
I was introduced to patient properly	148 (82%)	13 (7%)
We maintained privacy of patient	155 (86%)	10 (6%)
All findings were explained to patient	132 (73%)	19 (11%)
We responded to patient's questions	162 (90%)	5 (3%)
We were sympathetic to patient and paid attention to his comfort and emotions	159 (88%)	4 (2%)
We thanked patient for his participation	162 (90%)	8 (4%)
Teaching task of teachers		
Patient was selected ahead	124 (69%)	22 (12%)
Teacher observed us during interview of patient	138 (77%)	23 (13%)
Teacher observed us during clinical examination	141 (78%)	23 (12%)
I had adequate scope to practice skills	112 (62%)	30 (17%)
Teacher always assisted me in skill practice	135 (75%)	26 (14) %
Teacher encouraged us to think during discussion	153 (85%)	11 (6%)
Constructive feedback was given by teacher	153 (84%)	17 (4%)
Teacher summarized the session effectively	152 (84%)	8 (4%)
Teacher started and finished class on time	159 (88%)	6 (3%)
Group Dynamics of the class		
I was clear about our group role in learning	113 (63%)	9 (5%)
I was clear of my role right from beginning	118 (66%)	11 (6) %
I actively participated throughout the class	126 (70%)	11(6%)
We have finished every task in time	131 (73%)	9 (5%)

DISCUSSION

In 1964, BST accounts for 75% of teaching time which declined to 16% in 1978 and it is far lower today because of saturated environment with technology (Narayanan and Nair, 2020). The estimated time spent on bedside varies between 15-25%. There is violation of patient's right, less hospital stay, rapid turnover and use of ambulatory care setting are also the contributors in decline of bedside teaching (Yi et al., 2019). According to the theory of situated cognition, learning is inseparable from doing. Acquisition of new knowledge depend on the context of where knowledge is applied. This theory favors that learning is enhanced in the presence of actual patient (Ratelle et al., 2022). BST leads to enhanced clinical reasoning skills, problem solving and evidence-based practices which are needed to become a better clinician (Yi et al., 2019). Regarding physical environment, most of the students responded positively except for the adequacy of the space during bedside teaching and noise in the surrounding. This problem exists as our clinical wards are busy with patients, doctors and paramedics, A lot of academic and clinical activities are happening alongside that place become noisy and less adequate for students. These findings are also favored by a study done in Services Hospital by Sarwar et al (Sarwar et al., 2020). Local context is also important in this regard as our hospital are busy and crowded as well. It is the responsibility of teacher to manage the issues of noise and space constraints to get maximum benefits from bedside teaching. These finding were supported by a study done by Viswanathan Narayanan in which class size and time constrains were considered as barrier to bedside teaching.

Regarding patient comfort and attitude toward patient students were satisfied with informed consent, patient privacy, introduction, sympathetic attitudes and thanking the patient (Nazir et al., 2023). Bedside teaching ethics were followed adequately. These finding were favored by a local study by Sarwar et al (Sarwar et al., 2020). Where failure to explain finding to the patient was the only domain where students were not satisfied. Our finding contradicts with a literature review done by Vishwanthan Narayanan who found erosion of BTS ethics (Narayanan and Nair, 2020). Various studies on the perspective of faculty and patients have been done in addition to the student perspectives with varying results. Regarding teaching task of the teacher, patient selection ahead, adequate time to practice skill and teacher's observation during skill practice were areas where students were not much satisfied. These findings are also favored by the study (Sarwar et al., 2020) and Patient selection prior to session and giving adequate time to each student to practice the skill should be encouraged (van Dam et al., 2021). Faculty training and incentive to the faculty are solutions offered in some studies (Narayanan and Nair, 2020). Rapid patient turnover, patient's autonomy, and time constraints on the part of clinicians are considered obstacle in the adequate provision of bedside teaching (Shamim, n.d.). Simulation based knowledge is increasing used in undergraduate medical education, which can be used as an adjunct not as a replacement of bedside teaching (Narayanan and Nair, 2020). Students' humiliation during bedside teaching was reported as a reason of dissatisfaction in one study (Ratelle et al., 2022).

Regarding group dynamics most of the students were satisfied except for role in learning and clear about their role from the beginning were two areas where students were less satisfied. These findings are in contrast to a study where students were not satisfied because of lack of equal opportunity to participate (Sarwar et al., 2020). This difference can be explained by the number of students in private and public sector hospitals of Pakistan. Group size of clinical rotation up to 50 students as compared to 20-25 students in public vs private sector hospital poses difficulty in maintaining group dynamics. Tutors should encourage equal student participation promoting less confident and shy students to get involved in clinical teaching. A systematic review and meta-analysis done by Gamp et al (Gamp et al., 2019) and Ratelle et al (Ratelle et al., 2022) found that BST leads to improved learner satisfaction, clinical reasoning skills and better communication skills. There was a positive correlation among bedside teaching and better grades of student which was confirmed by Sarwar et al (Sarwar et al., 2020). Yi et al, 2019 suggested BST as a valuable educational tool with high student satisfaction (Yi et al., 2019). Provision of bedside teaching should be a must rather than may be Gimson et al., (2019).

The variability and inconsistency in the quality of bedside teaching is a challenge which was highlighted (Gimson et al., 2019) while lack of standardization of teaching practices during ward round is another challenge (Haddon Mullins et al., 2020). which leads to variable experience of learner. Bedside teaching needs skilled educators and may not be feasible in every clinical context. Further research can explore the strategies for standardization and optimized teaching practices, address challenges and evaluate its long-term impact on learner outcomes.

CONCLUSION

Bedside teaching is an important skill to enhance the clinical skill practice, communication skills and clinical reasoning abilities. Decline in bedside teaching can compromise patient management skills by future doctors. Appropriate steps should be taken to rectify the barriers in adequate provision of BST. Overall learning experience of the learners can be enhanced by rectifying the issues of BST.

ACKNOWLEDGEMENT

Dr Shahid Iqbal, Head of Department of Community Medicine for his support throughout the article writing procedure.

DECLARATION OF INTEREST

The author declares no conflict of interest.

REFERENCES

Gamp, M., Becker, C., Tondorf, T., Hochstrasser, S., Metzger, K., Meinlschmidt, G., Langewitz, W., Schäfert, R., Bassetti, S., and Hunziker, S. (2019). Effect of Bedside vs. Non-bedside Patient Case Presentation During Ward Rounds: a Systematic Review and Meta-analysis. In Journal of General Internal Medicine (Vol. 34, Issue 3, pp. 447–457). Springer New York LLC. https://doi.org/10.1007/s11606-018-4714-1

Gimson, A., Javadzadeh, S., and Doshi, A. (2019). Bedside teaching: Everybody's but nobody's responsibility. Advances in Medical Education and Practice, 10, 357–359.

Haddon Mullins, C., Roderick, A., Deaver, J., and Willig, J. (2020). Contemporary practice of standardised bedside teaching rounds. In Clinical Teacher (Vol. 17, Issue 5, pp. 483–488). Blackwell Publishing Ltd. https://doi.org/10.1111/tct.13228

Mansoor, A. F., Saeed, B., and Khan, M. A. (2023). History Taking As Formal/Informal Assessment Method: A Perspective Of Healthcare Professionals. Journal of Positive School Psychology, 188-201.

Nazir, A., and Malik, Z. (2023). Stress and coping skills among undergraduate medical students-a cross sectional study. Pakistan Postgraduate Medical Journal, 34(02), 73-76.

Narayanan, V., and Nair, B. R. (2020). The value of bedside teaching in undergraduate medical education: a literature review. MedEdPublish, 9, 149. https://doi.org/10.15694/mep.2020.000149.1

Ohta, R., and Sano, C. (2022). Bedside Teaching in Rural Family Medicine Education in Japan. International Journal of Environmental Research and Public Health, 19(11). https://doi.org/10.3390/ijerph19116807

Ramackers, W., Stupak, J. V., Marcheel, I. L., Tuffs, A., Schrem, H., Fischer, V., and Beneke, J. (2020). Regression analyses of questionnaires in bedside teaching. BMC Medical Education, 20(1). https://doi.org/10.1186/s12909-020-02295-y

Ratelle, J. T., Gallagher, C. N., Sawatsky, A. P., Kashiwagi, D. T., Schouten, W. M., Gonzalo, J. D., Beckman, T. J., and West, C. P. (2022). The Effect of Bedside Rounds on Learning Outcomes in Medical Education: A Systematic Review. In Academic Medicine (Vol. 97, Issue 6, pp. 923–930).https://doi.org/10.1097/ACM.04586

Sarwar, S., Aleem, A., and Nadeem, M. A. (2020). Bed side teaching: Student's perception and its correlation with academic performance. Pakistan Journal of Medical Sciences, 36(6), 1–6. https://doi.org/10.12669/pjms.36.6.2120

Shamim, A. Bedside teaching: An indispensible tool for enhancing the clinical skills of undergraduate medical students.

Van Dam, M., Ramani, S., and ten Cate, O. (2021). An EPA for better Bedside Teaching. Clinical Teacher, 18(4), 398–403. https://doi.org/10.1111/tct.13346

AUTHOR'S CONTRIBUTION

1. **S.T.**: Created concept and design of the research, prepared initial draft, collected data, interpreted the results and generated discussion and conclusion.