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MAKING MEDICAL TRAINING IN OBSTETRICS & GYNAECOLOGY MORE PATIENT-CENTERED BY USING BEDSIDE TEACHING.

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ABSTRACT

Introduction: Bedside teaching is a form of small group teaching carried out at the bedside of the patient. It has been a traditional patient centered clinical teaching modality for quite a long time. With recent advancements in radiological technology, its use has now become a very restricted in clinical setting which is a growing concern. The prime objective of this study has been to assess the impact of patient-centered bedside teaching on overall performance of medical under-graduates and also to evaluate the perception regarding tutor's bedside teaching methods. **Place AND Duration of Study:** It was a 3-month study starting from 1st January to 31st March 2018 done in correspondence with Obstetrics and Gynecology Departments of Sir Ganga Ram Hospital, Lahore, Pakistan. **Study Design:** It is an observational descriptive comparative study. **Material and Method:** 80 Final Year MBBS students having Obstetrics and Gynecology rotation were selected. They were further divided into two groups of 40 students each. 5 Obstetrics and 5 Gynecology cases were selected and taught to both the groups, the Group I by delivering a simple lecture in a conference room (non-patient-centered) and the Group II by using bedside patient techniques (patient-centered). The data collected was subjected to a SPSS version 20 for analysis. The Mean and Standard deviation of the score of the written exam and the OSCE was calculated and compared between the two groups using Chi-Square Test. P-value <0.05 was considered as significant. The frequencies and percentages for the responses to the bedside teaching questionnaire were also calculated. **Results:** The mean scores of the group I (taught in conference room) and group II (taught at bedside) were compared. There was no statistical difference between the total mean scores of the written MCQs& SAQs exam between the two groups (25.567 ± 4.56 and 26.879 ± 6.78 respectively). However, there were statistically significant differences in OSCE scores between the two groups with a mean score of 21.876 ± 5.643 of group I and 31.879 ± 7.98 of group II, giving a p-value of 0.02 using Chi-Square test. There was a positive feedback of the students regarding the bed-side teaching modality of the tutor. **Conclusions:** This study highlighted the importance of implementation of Patient Centered Bedside Teaching in improving exam scores of the Obstetrics & Gynecology in undergraduates as well as their training regarding clinical practice. The tutors were able to deliver the knowledge of different Case presentations more efficiently on the bedside of the patient, however the consent of patient should be sought and the study needs to be substantiated in different settings. Hence, there is need to increase the trend towards this traditional method of teaching which will ensure production of competent healthcare professionals.

KEYWORDS: Bedside Teaching (BST), Obstetrics and Gynecology, Clinical Training of Undergraduates.

INTRODUCTION

Bedside teaching is defined as a specialized form of Training of Undergraduate Students in Small Groups that is conducted at the bedside of a patient, where the patient as well as the student has an active role in the learning process.[1] Bedside teaching was first introduced by Sir William Osler who worked as Physician-in-Chief at John Hopkins University, where he introduced Clerkship system for students in clinical practice. He stressed more on teaching clinical skill of medicine at bedside of the patient in contrast to giving lectures in a theatre.[2]

Back in the 1960s, bedside teaching had gained great popularity. According to a study conducted by Reichmann F in 1964 covering 9 medical schools, 75% of the clinical teaching was done in the presence of a patient.[3] Unfortunately this trend was slowly taken over by other multimedia techniques. Now-a-days, clinical teaching is limited to hospital corridors and conference rooms, providing the undergraduates very less opportunities to encounter real patients.

A study conducted in 1997 concluded that bedside teaching was reduced from a good percentage to only 16% which raised great concerns over the poor clinical skills of the fresh graduates.[4] In this modern era the undergraduates are taught by conducting a particular case study on a patient with more concern on specific diagnostic investigations of the patient rather than giving them expertise in the skills of history taking and basic physical examination. A thorough history and correct physical examination has been shown to provide the right diagnosis in 73 % to 90% of cases.[5] In the last decade, there has been recorded a huge increase in the number of laboratory tests and certain imaging modalities for the diagnosis of clinical problems faced by patients.[6] This has led to decreased interest in clinical evaluation of the patient with corresponding decrease in bedside teaching and giving medical students an opportunity to enhance their clinical expertise.

Even in the field of Obstetrics and Gynecology, the senior doctors as well as the junior residents prefer to conduct an ultrasonography of a patient presenting with a certain issue, rather than performing a detailed physical examination to reach a particular diagnosis.[7] This may be due to an increased advancement in certain laboratory and radiological imaging modalities as well as an increase in patient to doctor ratio in every hospital which puts burden on a doctor, so it is impossible to have a detailed history as well as physical examination in a limited amount of time.[8]

Bedside teaching modality is one of the fundamental core strategies followed by almost every Clinical Training Setup of medical undergraduates.[9] It not only develops appropriate skills of doctor-patient communication, physical examination and critical reasoning in the medical students but also emphasizes on the practice of medical ethics and plays a vital role in instilling a professional behavior in them.[10] This gives a good opportunity to students to become vocal and nurture their clinical skills as they closely observe their tutor, utilizing all their energy and building a strong clinical aptitude as well as a good long term memory towards clinical skills. In contrast to this, using multimedia techniques to demonstrate clinical cases in a lecture theatre or conference room does not ensure proper understanding of the common clinical scenarios and their practical dealing as there is no interaction with a real patient.[11] However, some doctors believe that patients might object to or feel uncomfortable with bedside teaching and demonstration and a conference room provides a more comfortable environment to the students as well as the tutor, where he/she can have full control over the students and a large group of students can be taught, thus consuming less time but compromising the clinical expertise of the students.[12]

Sir Ganga Ram Hospital is the teaching hospital of Fatima Jinnah Medical University. Every year, a batch of more than 300 female doctors graduates from this university. The undergraduate medical students receive clinical training during the last 3 years of medical course. The students are rotated in all the clinical fields including Obstetrics and Gynecology, where they receive core knowledge regarding the different clinical scenarios of Obstetrics and Gynecology. The clinical teaching strategies adopted by the senior doctors vary from bedside techniques to lecture room demonstrations. Hence, there is a need to search for a teaching technique most suitable for the students in order to ensure their optimal clinical training. There is also need to compare the two teaching methods. To the best of authors' knowledge, no such study has been conducted in the university/ hospital. Therefore, this study was carried out to compare the bedside teaching technique with the lecture theater teaching method and find out the more effective method of the two.

OBJECTIVES

1. To evaluate the learning experience of Bedside Teaching and Conference room teaching by the students and compare the two.
2. To assess the perception of Medical Undergraduates regarding the effectiveness of tutor's Bedside teaching method.

METHODOLOGY

Study Design: an observational descriptive comparative study.
Setting: Obstetrics and Gynecology Units I-IV of Sir Ganga Ram Hospital, Lahore.
Duration of Study: 3 months (1st January 2018 to 31th March 2018).
Sample Size: 80 Final year MBBS students.
Sampling Techniqe: Convenient Sampling.
Data Collection Procedure: The Obstetrics and Gynecology department of Sir Ganga Ram Hospital comprises of four units. There are 20 students in a batch in each unit at a time receiving clinical training as part of their clinical rotations. Every batch of students has a clinical rotation of 2 weeks with each unit and at the end of each rotation they have to sit in an exam comprising of a written evaluation comprising 15 multiple choice questions and 5 short essay questions and an OSCE (Observed/Objective Structured Clinical Examination), consisting of 10 stations. The students were divided into two groups of 40 students. Group I was taught 5 Obstetrics cases and 5 Gynecology cases by means of lecture in conference room and the Group II was taught

the same cases at bedside of the patient (following patient-centered technique). The classes were given for 12 days after which a 2-day clinical ward assessment text was taken from the students, OSCE on first day and written Exam on the next. A bedside teaching questionnaire was distributed amongst the students taught by bedside teaching method to evaluate the technique. It comprised of 15 questions and the respondents were asked if they agreed or disagreed with the statements. The questionnaire was adapted from a similar study conducted by L. GREEN-THOMPSON in 2008 which was a pilot study conducted at a South African university for the staff evaluation and student experience of bedside teaching. The total score of the ward assessment was 40 (15 marks for MCQs and 25 marks for SEQs) for the written exam and 50 marks for the OSCE.

Data Analysis Procedure

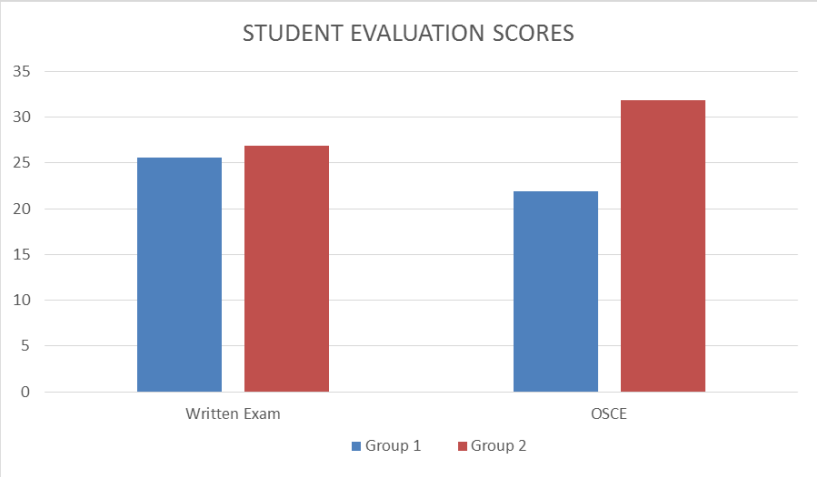
The data collected was subjected to a SPSS version 20 for analysis. The Mean and Standard Deviation of score of the written exam and the OSCE was calculated and compared between the two groups using Chi-Square Test. P-value <0.05 was considered as significant. The frequencies and percentages for the responses to the bedside teaching questionnaire were calculated.

RESULTS

The overall response rate was 100%. No student was absent from the ward assessment as it was a part of the final evaluation of the undergraduate in their last professional examination.

All the respondents were females as FJMU is a medical university for women.

The comparison of the total mean score of written exam and OSCE is given in graph 1 and table 1.



Graph 1: Student Evaluation Scores.

Table 1: Student Evaluation Scores.

	SCORES (Mean ± SD)	
(Group I) (BST)	**Written Exam**	**OSCE**
	25.567 ± 4.56	21.876 ± 5.643
(Group II) (Conference Room)	26.879 ± 6.78	31.879 ± 7.98
P-value	0.078	0.02

There was no Statistical difference between the total mean scores of the written exam between the two groups with p value more than 0.05. In contrary to this, the comparative results of OSCE scores were significant with a P-value of 0.02.

The frequencies and the percentages of the responses to the Bedside Teaching Questionnaire are given in table 2.

Table 2: Responses to the Bedside Teaching Questionnaire.

Questions	Responses			
	Yes		No	
	n	%age	n	%age
1. Did the doctor introduce himself to the patient?	76	95%	04	5%
2. Was patient's consent taken for bedside teaching?	57	71%	23	29%
3. Did the doctor take proper history of the patient?	72	90%	08	10%
4. Was teacher helpful in history taking?	68	85%	12	15%
5. Did the doctor do proper physical examination of the patient?	71	89%	09	11%
6. Was the patient properly draped during examination?	68	85%	12	15%
7. The teacher demonstrated the steps of physical examination.	76	95%	04	5%
8. The teacher has command on physical examination skills.	79	98%	01	2%
9. The students were motivated during the session.	69	86%	11	14%
10. Were there opportunities for questions and feedback?	68	85%	12	15%
11. Were students challenged?	56	70%	24	30%
12. Were ideas properly communicated?	65	82%	15	18%
13. The patient was cooperative.	71	89%	09	11%
14. Is the place appropriate for tutorial?	70	88%	10	12%
15. Bedside teaching was more informative.	75	94%	05	6%

DISCUSSION

95% of the students said that the tutors properly introduced themselves to the patient, 71.25% said that proper consent from the patient while 85% responded by saying that the patient was properly draped during the examination.

Getting introduction, obtaining informed verbal/written consent and allowing minimum body exposure during physical examination of the patient are all parts of medical ethics and these can only be learned through practice on real patients. Thus, BST should be the format for the tutor to demonstrate everyday clinical scenarios to medical students.[20]

90% said that the doctor took proper history from the patient and 85% believed that the teacher was helpful in properly teaching the skills required for history taking.

This skill enables a clinician to reach the correct diagnosis, which on average is seen in 73% of the cases, even reaching 90% in few clinical scenarios.[21,29] obtaining a well-structured history is a hall mark of BST.[22]

88.75%, 95% and 98.75% said that the doctor performed proper physical examination on the patient, demonstrated all the steps properly and had full command over it, respectively.

This skill can only be learnt on real-life patients. However, now-a-days, simulation is believed to be an effective tool for learning these skills.[23,30] None the less, certain pathological conditions are impossible to simulate, learning with the "Patient" in hand as the only suitable learning modality.

88.75% said that the patients were co-operative. It is often assumed that bedside teaching is assumed as burden to the patients, but the reality is contrary to this belief. Researches show that the patients are generally very satisfied with bedside teaching with 77-85% of the patients actually enjoying the BST sessions.[24]

Only 87.5% perceived the hospital wards as appropriate for BST. This can be attributed to the increased patient load in the hospitals and decreased space for accommodating them. This decreases the potential respectability of patients for bedside rounds.[25]

93.75% perceived BST as more informative and believed it to be more effective with regards to different aspects of clinical teaching.[26,27] The trend of BST is losing its charm and is decreasing day by day and if strategies to overcome this decline are not sought; it may lead to production of incompetent medical personnel. This can be achieved by changing the attitude of medical teaching faculty and introducing reforms of educational intervention and properly structured bedside teaching technique.

The study ensues the importance of training of medical students at the bedside of the patient. There is not only learning at the part of a medical student but also an ease for the tutors to correlate different clinical scenarios of usual clinical practice to students.[28,29,30] Hence, it has become a requirement in medical institutions to inculcate such bedside teaching techniques in the curriculum which is beneficial for the medical students in future medical practice**.** Bedside Teaching was a very effective way of giving an opportunity to the undergraduates to acquire and enhance their skills regarding clinical practice, however due to increase patient load and recent advances in radiological techniques in public as well as private setups the tutors as well as the students find it difficult to inculcate it in their regular curriculum.

CONCLUSION

This study concludes the improvement of test results with Bedside Teaching. The tutors were able to deliver the knowledge of different case presentations more efficiently through Bedside Teaching. Hence, there is need to increase the trend towards this method of teaching which will ensure production of Competent Healthcare Professionals.

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