Original Research Article

Campus Teaching of Clinical Dermatology Compared to Hospital Teaching to Medical Students of University of Almaarefa – Riyadh – Saudi Arabia

Abstract

Introduction: Clinical teaching is the cornerstone of medical student teaching and training. Undoubtedly, the objective teaching is of great benefit to the students; on the other hand, many offenders let the hospital-based teaching lose this objectivity. **Aim**: The goal was to assess clinical teaching outcomes on campus and in hospitals. **Methods:** This is a descriptive and retrospective study. The students' results in the final clinical part of the dermatology examination have been used as a comparative indicator. The means of the final examination results were calculated for all students who sat for dermatology exams from 2013 to 2016, stratified by campus group (2013–2014) and hospital group (2015–2016). **Results:** The means for both groups have been calculated and compared. The P-value showed a significant statistical difference between the two groups, which is supported by calculating the coefficient of variation to cancel the effect of inequality in students' numbers between the two groups. **Conclusion:** Regardless of the differences, it is clear that classrooms teaching using real, selected cases and projected case scenarios are extremely promising under well-prepared conditions.

Keywords: **Clinical teaching, Dermatology teaching, Campus vs hospital teaching**

Introduction:

Clinical instruction in real-world environments is essential for medical students' education. All clinical academicians concur that hospital-based clinical instruction for medical students has no equivalent replacement (1). It will introduce students to the potential factual conditions in which they may soon be engaged (1).

On the other hand, as Ibry concluded from his exhaustive thematic analysis of numerous relevant articles, many authors consider that clinical education in its contemporary context is varied, unpredictable, and immediate, and lacks continuity (2). Dermatology is not an exception; nonetheless, it is mostly practiced as an outpatient speciality, which is easily replicated in college classrooms. Frequent student complains about spending time in dermatological clinics while waiting to see patients who, in many instances, declined to be teaching cases or were unsuitable for teaching. In 2015, coincidentally, the local health authorities suspended medical and health allied student training in government hospitals. As a result, this was the deciding factor that prompted us to begin what we had already discussed in the clinical department board: teaching our students inside the college in selected standardized patients for certain courses, including dermatology, in order to overcome the aforementioned challenges.

Dermatology teaching and student assessment at Almaarefa College of Medicine: In the 2013–2014 academic year, dermatology classes were introduced for the first time,. The dermatology course, which is a seventeen-day block, is taught twice per semester to both female and male level five students (four times per year). Actual contact days amount to thirteen. The distribution of the seventeen days was as follows: Three days of clinical hospital-based instruction in the tertiary referral hospital King Fahad Medical City in Riyadh. Ten days based on college lectures Four days have been scheduled for examinations. During the 2015-2016 academic year, we accomplished the dermatology course learning objectives (CLOs) via lectures, student presentations, clinical projection scenarios, and real-life dermatologic patients. CLOs were distributed to students during the initial orientation session. The clinical scenarios consisted of seven sessions where differential diagnoses and clinical reasoning approaches were utilized. The clinical scenarios centered on gathering a patient's medical history and conducting a

dermatological examination. Therefore, we utilized the thirteen days of contact hours using a very adaptable and flexible schedule.

From 2013 until the time this study was conducted, neither the evaluation instruments nor the mark distribution for students had been altered. The final test consists of the following sections:

1. OSCE-based clinical case scenarios evaluate the cognitive, psychomotor, and behavioral abilities of thirty students.
2. The slide presentation (spotters) assessed skill competencies and psychomotor accomplishments, and 40 points were awarded.
3. Multiple-choice questions (MCQs) largely evaluate the subject of knowledge and are worth 30 points. In this study, we aimed to analyze and compare the two types of experiences (campus and hospital) by analyzing the performance of the students on their final clinical exams.

Methods:

This was a retrospective descriptive study that included level five students from four semesters, namely semesters 131, 132, 141, 151, 152, 161, and 162. The total number of students was 459, divided into two groups according to their clinical teaching place: the hospital-based group (semesters 131, 132, 142) and the campus-based group (semesters 151, 152, 161, 162). We took their results in the clinical part of the final examination as a performance indicator of the students' clinical skill achievement. The final examination comprises three case scenarios (long cases) and twenty spotters, testing the cognitive, psychomotor, and communication learning domains; the marks for this part are 70, 30, and 40, respectively. The

knowledge domain was tested by the best single correct answer out of 30. The mean of clinical results for all students in each academic year was calculated as shown in Table 1, which gave an inclusive trace. The results of both groups have been compared and analyzed as they appear in Table 2. Analysis included means, standard deviations, P-values, and the coefficient of variation calculation using SPSS version 20.

Results:

Table 1: the mean of the final clinical examination section results for the medical students at Almaarefa faculty of Medicine from 2013 to 2016

The Academic Year	Average of the scored marks out of 70 marks
2013	61
2014	62
2015	57
2016	56

Table 2: The comparison of final Results of Clinical Examination between the Hospital and Campus Groups

Students Groups	Students No.	Minimum marks obtained	Maximum marks obtained	Mean of marks for group	Std. Deviation	The coefficient of variation
Hospital-based	**140**	**42.00**	**70.00**	**61.8929**	**6.09717**	**9.9%**
Campus-based	**369**	**32.00**	**70.00**	**57.0352**	**6.88464**	**12.1%**

P-value = 0.036

Discussion:

As an indicator variable, we compared hospital and campus groups based on the clinical portion of the final examination's average mean score. There were four academic years enrolled (Table 1). The hospital-based group's mean scores were marginally higher than those of the campus-based group, keeping with Pine's (3) observation that learning in a clinical context has a substantial effect on professional practice. Pine believed that environmental relevance and active participation stimulated learners in the hospital. Examining the results of students in both groups reveals that the commonly held idea that teaching in a hospital is

vastly superior to teaching in a classroom is not totally accurate. Our finding is corroborated by the opinions of Spencer and Slotnic (4-5), who noted that for the instruction of undergraduate students, particular preparations within hospital clinics must be made as isolated clinics, which is not achievable in the majority of our hospitals. Teaching in hospital settings typically occurs during consultations with patients, during which the patients are frequently criticized; a significant number of these patients are not interested in participating in teaching sessions. The second table supported our observation and conclusion. The p-value verified the existence of a statistical difference in favor of the hospital-based group between the two groups, but this difference is not particularly significant.

Conclusion and Recommendations:

These two experiences led us to the conclusion that, despite the importance of clinical teaching in hospitals, campus-based teaching using carefully selected cases in appropriate settings and with appropriate adjustments can provide better results in terms of time-saving and focused dermatology instruction. We advocate developing a database of validated, standardized cases and utilizing simulated individuals to represent actual hospital patients.

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