



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

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Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

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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

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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.

1. INTRODUCTION

In addition to academic classes, university students in health care education programs do clinical practicums in a learning environment. In the majority of health-related occupations, clinical practicums are regarded as crucial to professional competency. Programs in medicine, for instance, consider clinical practicums as an integral part of the curriculum [1].

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 [2].

It will introduce students to the potential factual conditions in which they may soon be engaged [2]. On the other hand, as Ibray 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 [3]. Dermatology is not an exception; nonetheless, it is mostly practiced as an outpatient specialty, 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.

1.1 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.

2. 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 509, divided into two groups according to their clinical teaching place: the hospital-based group (semesters 131, 132, 141) and the campus-based group (semesters 151, 152, 161). 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.

3. RESULTS

The total number of students was 509 divided into two groups, campus and hospital group Table 1. The mean of clinical results for all students in each academic year was calculated as shown in Fig. 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 which was 61.89 for

hospital- based group and 57.03 for campus-based group with standard deviations 6.09 and 6.88 respectively then the variability has been estimated by calculating the coefficient of variation which were small for the both groups; 9.9% for the hospital group and 12.1% for the campus group. P-value was 0.036.

4. DISCUSSION

As an indicator variable, we compared hospital and campus groups based on the clinical section's mean average score on the final examination. Four academic years of enrolment were represented (Fig. 1). In accordance with Pine's findings, the hospital-based group's mean scores were marginally higher than those of the campus-based group [4]. The observation that clinical learning has a considerable impact on professional practice. Pine believed that environmental relevance and active participation in the hospital stimulated learners. According to Benner et al. the hospital disciplines of medicine, surgery, pediatrics, obstetrics, and psychiatry determine the learning objectives for health practitioners.

Table 1. Numbers of students based on their training sites

Students Training Site	Numbers of Students
Campus-based	140
Hospital-based	369
Total	509

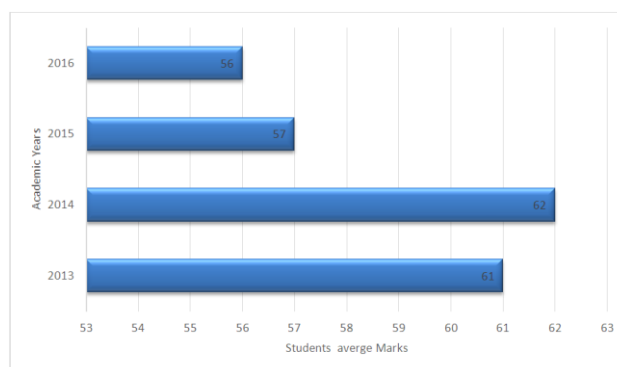


Fig. 1. The mean of the final clinical examination section results for the medical students at Almaarefa faculty of Medicine from 2013 to 2016

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

Group	Mean of marks	SD	CV
Hospital	61.89	6.09	9.9%
Campus	57.03	6.88	12.1%

P-value = 0.036, CV: The coefficient of variation. SD: Standard deviation

This paradigm is closely related with hospital-based apprenticeship orientations to learning and is viewed as somewhat antiquated in today's complex and ever-growing health care system [5]. Examining the results of students in both groups demonstrates that the popularly held belief that teaching in a hospital is substantially superior to classroom education is not an absolute fact. Spencer and Slotnic [6,7] concur with our conclusion, stating that for the training of undergraduate students, hospital clinics must be set up as separate clinics, which is not feasible in the majority of our hospitals. Teaching often takes place in hospital settings during consultations with patients, during which the patients are regularly criticized; a considerable majority of these patients are not interested in engaging in teaching sessions. The second table supported our judgment and observation. The p-value (0.036) indicated the existence of a statistically significant difference between the two groups, favoring the hospital-based group. Our end result was consistent with that of Brown et al., who reported that there is a severe paucity of clinical practicum chances for medical students. It is likely that available placements are in fields that exclusively provide care for patients with significant diseases, as opposed to dermatology, which is overcrowded with medical students and faces financial and staff constraints [8].

5. CONCLUSION AND RECOMMENDATIONS

These two experiences led us to the conclusion that, despite the necessity of clinical teaching in hospitals, campus-based teaching using carefully selected cases in appropriate settings and with appropriate adaptations can deliver better time-saving and concentrated dermatology education. We believe it would be optimal to create a database of validated, standard cases and substitute simulated individuals for actual hospital patients.

CONSENT

It is not applicable.

ETHICAL APPROVAL

After submitting a detailed application defining the objectives and methods, the institution's ethics committee at Almaarefa University granted ethical permission for the study.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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