Research Article

Students’ and Teachers’ Perceptions of Factors Leading to Poor Clinical Skill Development in Medical Education: A Descriptive Study

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Background. Our study was taken up to explore the possible factors influencing poor performance of undergraduate students in clinical skill demonstration. Aims. Identification of factors leading to poor clinical skill development in undergraduate medical students. Settings and Design. This is an observational study. Methods and Material. The study population comprised the undergraduate students and teachers of the Department of Medicine. All were provided with structured questionnaires who responded anonymously which were then interpreted with the help of software statistical calculator. Results. Of the 145 students, only 57 (39.3%) actually attended medicine ward. The major factors that the students reported were large groups of students around a patient (94.74% ± 4.67), inadequacy of information in books of clinical medicine (78.9% ± 8.53), overcrowded unclean wards (73.7% ± 9.2), lack of practice of clinical methods at home (50.8% ± 10.4), and timing of classes (42.1% ± 10.3). Teachers cited poor attendance of students to wards (76.2% ± 17.1), poor condition of wards and lack of separate enclosures to teach (100%), and large groups around a single patient (66.67% ± 17.9). Conclusions. Absenteeism of students, overcrowding of wards, and lack of uniformity of study materials were prime factors.

1. Introduction

Clinical medicine seems to have taken a back seat nowadays. With the advent of newer, more sophisticated investigations, our dependence on clinical examination is gradually diminishing. This trend seems to be percolating into the students’ community as well. It is a well perceived fact that present day undergraduate students are relatively weaker in clinical skill development in sharp contrast to their theoretical knowledge. Whether this is due to lacunae in the existing clinical teaching learning process is not known. An Australian cross sectional study with 152 teachers reported bedside clinics as an effective means of teaching but cited noisy ward, time constraint, and lack of patient as probable hindrances [1]. Another western study among final year students found greater confidence in physical examination in Dominican Republic students than American students [2].

According to a study from Delhi in 2003, learner absenteeism was directly connected with poor achievement while low achievers were chronically absent [3]. Sadly such reflective works are conspicuous by their absence in our large country. Therefore this study was taken up to throw some light on the students’ perspective as well as teachers’ point of view regarding bedside teaching.

2. Objective

Identification of factors leading to poor clinical skill development in undergraduate medical students.

3. Subjects and Methods

This observational descriptive study was carried out in the Department of Medicine, in NRS Medical College, for
duration of 3 months. The study population comprised the undergraduate students of 8th-9th semester who attended wards during that period and teachers of the department of medicine. All were provided with structured questionnaires (separate for each group). Both the students and teachers responded anonymously to the questionnaires which were then interpreted with the help of appropriate statistical tools. The 21 teachers of the department were divided into two groups A and B. Group A had teaching experience less than 10 years, while group B had experience greater than 10 years. This was done to find out whether there was any significant difference of opinion among the senior and junior teachers on similar issues using the Fischer’s Exact test (software statistical calculator).

Positive and negative responses in the questionnaires were expressed as percentages of the total and arranged in descending order. The major unfavorable factors leading to poor clinical skill development in our hospital and most patients cooperate these factors. However, they conceded that there was a large variety of cases in our hospital and most patients cooperate while being examined.

According to teachers the principle unfavorable factors were (Table 1)

(1) poor attendance of students to wards, 76.2% ± 17.1, (2) poor condition of wards and lack of separate enclosures to teach 100%, (3) large groups around a single patient (students tend to crowd in the classes of favorite teachers only), 66.67% ± 17.9.

The teachers find the time of clinical classes convenient and there is a large variety of cases to be taught.

There was no significant difference of opinion between teachers of groups A and B.

5. Discussion

The most remarkable finding in this study was the miserable attendance (39.3%) of the students to the wards. The teachers unanimously agreed that this was the single most important factor leading to poor clinical skill development in our students. Handling patients in the wards and observing clinical methods being demonstrated by the teachers are vital in learning clinics. According to a study from Delhi in 2003, learner absenteeism was directly connected with poor achievement while low achievers were chronically absent [3]. The author stresses on counseling by support groups of family, peer, faculty, and psychologist to counter absenteeism.

The students cited large groups (20–25) around a teacher as a hindrance to proper learning. Though the administration had divided students

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**Table 1: Responses of teachers.**

<table>
<thead>
<tr>
<th>Question number</th>
<th>Yes% ± SD</th>
<th>No% ± SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>23.8 ± 16.17</td>
<td>76.2 ± 16.17</td>
</tr>
<tr>
<td>Q2</td>
<td>33.33 ± 17.9</td>
<td>66.66 ± 17.9</td>
</tr>
<tr>
<td>Q3</td>
<td>95.2 ± 8.13</td>
<td>4.8 ± 8.13</td>
</tr>
<tr>
<td>Q4</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Q5</td>
<td>85.7 ± 13.3</td>
<td>14.3 ± 13.3</td>
</tr>
<tr>
<td>Q6</td>
<td>38.1 ± 18.44</td>
<td>61.1 ± 18.44</td>
</tr>
<tr>
<td>Q7</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Q8</td>
<td>90.5 ± 11.14</td>
<td>9.5 ± 11.14</td>
</tr>
<tr>
<td>Q9</td>
<td>61.9 ± 18.4</td>
<td>38.1 ± 18.4</td>
</tr>
</tbody>
</table>

**Table 2: Responses of students.**

<table>
<thead>
<tr>
<th>Question number</th>
<th>Yes% ± SD</th>
<th>No% ± SD</th>
<th>To some extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>88 ± 6.79</td>
<td>3.5 ± 3.84</td>
<td>8.5 ± 5.83</td>
</tr>
<tr>
<td>Q2</td>
<td>38.6 ± 10.17</td>
<td>42.1 ± 10.31</td>
<td>19.3 ± 8.24</td>
</tr>
<tr>
<td>Q3</td>
<td>94.74 ± 4.67</td>
<td>0</td>
<td>5.25 ± 4.66</td>
</tr>
<tr>
<td>Q4</td>
<td>43.86 ± 10.37</td>
<td>5.4 ± 4.7</td>
<td>50.8 ± 10.4</td>
</tr>
<tr>
<td>Q5</td>
<td>21 ± 8.51</td>
<td>50.8 ± 10.44</td>
<td>28.2 ± 9.4</td>
</tr>
<tr>
<td>Q6</td>
<td>3.6 ± 3.8</td>
<td>78.9 ± 8.53</td>
<td>276 ± 9.34</td>
</tr>
<tr>
<td>Q7</td>
<td>73.7 ± 9.2</td>
<td>12.3 ± 6.87</td>
<td>14 ± 7.25</td>
</tr>
<tr>
<td>Q8</td>
<td>45.6 ± 10.4</td>
<td>3.5 ± 3.8</td>
<td>51 ± 10.44</td>
</tr>
<tr>
<td>Q9</td>
<td>82.4 ± 7.9</td>
<td>10.5 ± 6.4</td>
<td>7 ± 5.33</td>
</tr>
</tbody>
</table>
in groups of ten, they tend to accumulate in the
groups of their favorite teachers. They (students)
opine that there is lack of uniformity in teaching
standards and even suggest periodical assess-
ment of teachers’ scholastic prowess as well.

Unclean, overcrowded wards, a constant feature in our setup,
have been pointed out by both the students and teachers as a
major distraction. This view has been echoed in the works of
others as well [1].

Notably, books on clinical methods (i.e., Macleod’s Text-
book of Clinical Medicine, Hutchison’s Textbook of Clinical
 Medicine) have been blamed for being incomplete and
contradictory. In a novel study in UK, the authors reviewed
routinely available texts of clinical musculoskeletal exam-
ination and concluded that the current texts available to
 medical students and junior doctors do not provide sufficient
information regarding the assessment of patients [4].

Students also agree that lack of practice on their part and
at times inability to fully grasp the lessons lead to problems.
According to a study in California, poor performance in
 comprehensive assessments often indicates underlying de-
ciencies in cognitive ability, communication skills, or pro-
fessionalism. The challenge of remediating these deficien-
cies late in medical school calls for earlier identication and
intervention [5]. However the students only are not to be
blamed. One Californian study found that the teachers had
modest confidence in remediating clinical skill deficieny of
4th year students [6].

A lot of work in the Western world is being aimed at
improving this state of affairs. It is well documented that
better clinical evaluation methods are to be designed for the
betterment of poor performance [7]. Practice based learning
exercises that incorporated feedback to students may hold the
key to the deadlock [8].

The importance of valid and reliable assessment of
student competence and performance is gaining increased
recognition. A formative assessment tool that reliably pre-
dicts performance in the summative setting would be of value
to both students and teachers. In this context the utility of the
team objective structured bedside assessment (TOSBA),
a novel ward-based formative assessment tool in predicting
student performance in the final clinical examination has
been brought to notice. In a particular study web-based
video clips, consisting of instruction in 77 elements of the
physical examination, were created using Microsoft Windows
Moviemaker software. A significant improvement in medical
student performance occurred after implementing web-
based instructional video [9]. Such facilities are a distant
dream for our students, and there is no harm in hoping that
web-based clinical learning will be part of the curriculum in
the days to come.

A prospective means of curtailing absenteeism can be a
mandatory minimum 75% attendance for a student to sit for
the final examination.

Our study suffers from certain limitations. Sample size
was too small and also nonresponse rate was found too high.
Multivariate logistic regression would have been the better
statistical test of significance.

6. Conclusion

Factors for poor clinical skill development are manifold and
complex. Absenteism of students from wards is a prime fac-
tor. Others include unfavourable ambience of the wards, too
many students around a single teacher, and lack of uniformity
of study materials. Minor issues include inadequate practice
of clinical methods and timing of classes. However further
work is needed to unearth the reasons for absenteeism of
students, which holds the key to a possible solution to this
problem.

Conflict of Interests

There is no conflict of interests in this study.

References

[1] B. R. Nair, J. L. Coughlan, and M. J. Hensley, “Impediments to
bed-side teaching,” Medical Education, vol. 32, no. 2, pp. 159–
162, 2002.

American and Dominican Republic students,” Teaching and


available textbooks contain adequate information about mus-
culoskeletal examination skills for medical students?” Medical

D. M. Irby, “Student performance problems in medical school
clinical skills assessments,” Academic Medicine, vol. 82, no. 10,

E. Hauer, “Remediation techniques for student performance
problems after a comprehensive clinical skills assessment,”

Parcel, and J. C. Guckian, “An objective measure of clinical
performance,” The American Journal of Medicine, vol. 83, no. 1,

[8] M. Srinivasan, K. E. Hauer, C. Der-Martirosian, M. Wilkes,
and N. Gesundheit, “Does feedback matter? Practice-based
learning for medical students after a multi-institutional clinical
performance examination,” Medical Education, vol. 41, no. 9,

G. McElvaney, “Team Objective Structured Bedside Assessment
(TOSBA): a novel and feasible way of providing formative
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