Assessment of students' perceptions of educational environment in clinical wards of University hospitals at an Iranian Medical Sciences University

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Abstract

Educational environment have a significant impact on promote and enhance lifelong learning and continuing academic development. This study measures educational environment across undergraduate medical students of clinical phase at Guilan University of Medical Sciences (GUMS). We compared the perceptions of externs (years 4 and 5) and interns (years 6 and over) regarding educational environment. This cross-sectional study was conducted in clinical wards at university affiliated teaching hospitals by using Dundee Ready Education environment measure (DREEM) during summer 2011. Students were relatively satisfied towards the four sub-realms including total educational environment and learning, perceptions on teachers and atmosphere, and self- perceptions for academic. There was no significant difference between male and female students in educational environment subscales also between interns and externs. It also revealed problematic areas of learning environment in our clinical wards which enabled us to adopt some serious reform in teaching-learning activities.

1. Introduction

Clinical educational environment as perceived by the students is an important indicator for curricular change.(Varma et al., 2005) Educational environment as the spirit of teaching and learning activities is a major determinant of developing motivation in students.(Genn, 2001c) It would play an important role in academic achievement, satisfaction and success. However, learning is a relatively permanent change, in behavior of students in 3 domains of knowledge, attitude and Psychomotor.(Guilbert, 1991)

The learning environment has been defined as everything that is happening in the classroom or department or faculty or university(Genn, 2001b, Roff and McAleer, 2001). Measurement of the educational environment comprehensively assesses what is happening, or how things are in the medical school(Genn, 2001b). It is a way of assessing the nature of the educational practice of the medical school. It also provides a holistic, comprehensive, systematic, and detailed picture of the overall state of affairs in the education process(Genn and Harden, 1986). The World Federation for Medical Education (WFME) singled out the “learning environment” as one of the “targets” for
what it terms “the conduction of the evaluation of medical education programme.” (Genn, 2001a). Environment consist many important aspects, such as the quality of supervision (autonomy) (Kilminster and Jolly, 2000, Cottrell et al., 2002), the quality of teachers (Parsell and Bligh, 2001, Irby, 1978), and facilities and atmosphere (social support) (Rotem et al., 1996, Bleakley, 2002). The Standing Committee on Postgraduate Medical Education (SCOPME) stated that “…a working environment that is conducive to learning is critically important to successful training” (Parry et al., 2002).

Institutions in higher education are concerned with their quality which is perceived as the quality of learning environment. Surveys by using qualitative and quantitative tools are done. Henzi and colleagues investigated dental school learning environment by dental version of medical student learning environment survey and provided information for dental teacher. (Henzi et al., 2005) DREEM (Dundee ready Education Environment Measure) developed to change the curricula by quantitating educational environment, perceived by the students and unfortunately Haphazard and teaching by humiliation reported in clinical setting. (Lempp and sele, 2004)

The college of medicine at Guilan University of Medical Sciences was established in 1987. No study has so far been published with regard to the clinical learning environment in a undergraduate training program in this university. This study aims at investigating medical students’ perception of educational environment by using DREEM model.

1.1. Objectives

- To assess the overall clinical learning environment of undergraduate medical students.
- To compare the clinical environment between the medical externs and interns.

2. Method

In this observational descriptive study, variables consisted of 50 statements relating to a range of topics directly relevant to education climate constructed and validated by Roff et al (Roff et al., 2005). Items should be scored: 4 for Strongly Agree, 3 for Agree, 2 for Uncertain, 1 for Disagree, and 0 for Strongly Disagree. However, 9 of the 50 items (numbers 4, 8, 9, 17, 25, 35, 39, 48 and 50) are negative statements and should be scored 0 for SA, 1 for A, 2 for U, 3 for D and 4 for SD. The 50-item DREEM has a maximum score of 200 indicating the ideal educational environment as perceived by the registrar. Maximum possible scores were: Maximum possible scores were: Perception of Learning - 48, Perception of Course organisers - 44, Academic Self Perceptions -32, Social Self Perceptions-28, Perception of Atmosphere -48. The Persian validation of the PHEEM was performed by making 2 forward translations and 2 back translations. After cognitive debriefing of the translated version, the compiled translation was piloted by a group of 23 medical students and was found highly reliable with an alpha coefficient of 0.910. Study population consisted of all medical stagers and interns of Guilan University of Medical Sciences as at 01/07/2011. The total number of these medical students was 154. Data was collected in September 2011 (1/9/11 - 30/9/11) via a self-administered questionnaire (DREEM). Data was analyzed using SPSS (Ver. 18) and statistical analysis was done via one way ANOVA and student’s t test.

3. Results

The mean overall scores of the questionnaire was 107.94 (St=22.299) interpreting as More Positive than Negative. Mean with regard to Perception of Learning, Perception of Course organisers, Academic Self-Perception, Perceptions of Atmosphere and Social Self Perceptions was 25.55, 25.37, 17.66, 25.53 and 13.68 respectively. Mean total scores for females was 107.20(58%) and for male was 108.97(42%). There was no significant difference between all the subscales and gender (p>0.05) (Table1).

The statements representing Perception of Learning are as follows:

1. I am encouraged to participate in teaching sessions
2. The teaching is often stimulating
3. The teaching is registrar centred
4. The teaching helps to develop my competence
5. The teaching is well focused
6. The teaching helps to develop my confidence

<table>
<thead>
<tr>
<th>Sex</th>
<th>NO</th>
<th>Perception of Learning</th>
<th>Perception of Course organisers</th>
<th>Academic Self-Perception</th>
<th>Perceptions of Atmosphere</th>
<th>Social Perceptions</th>
<th>Self Perceptions</th>
<th>Total score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>90</td>
<td>25.22</td>
<td>24.53</td>
<td>18.53</td>
<td>25.89</td>
<td>13.62</td>
<td>0.58</td>
<td>108.97</td>
</tr>
<tr>
<td>Female</td>
<td>64</td>
<td>26.00</td>
<td>25.97</td>
<td>17.04</td>
<td>25.27</td>
<td>13.77</td>
<td>0.79</td>
<td>107.20</td>
</tr>
</tbody>
</table>

P value - 0.55 0.06 0.06 0.58 0.79 0.62

(* P<0.05 was significant)

7. The teaching is well focused
8. The teaching helps to develop my confidence
9. The teaching time is put to good use
10. The teaching over emphasizes factual learning
11. I am clear about the learning objectives of the course
12. The teaching encourages me to be an active learner
13. Long term learning is emphasized over short term learning
14. The teaching is too teacher centred

Mean scores obtained for Learning for intern and extern were 26.53 (51%), 24.49 (49%), respectively. that showed no significant difference. (figure1)

Following are the statements representing Perception of Course organisers:
1. The course organisers are knowledgeable
2. The course organisers espouse a patient centred approach to consulting
3. The course organisers ridicule their registrars
4. The course organisers are authoritarian
5. The course organisers appear to have effective communication skills with patients
6. The course organisers are good at providing feedback to registrars
7. The course organisers provide constructive criticism here
8. The course organisers give clear examples
9. The course organisers get angry in teaching sessions
10. The course organisers are well prepared for their teaching sessions
11. The registrars irritate the course organisers

Mean scores obtained for Perception of Course organisers for stages extern and intern respectively were 25.20(51%), 25.53(49%). (figure1)

The statements representing Academic Self-Perception are as follows:
1. Learning strategies which worked for me before continue to work for me now
2. I am confident about passing this year
3. I feel I am being well prepared for my profession
4. Last year’s work has been a good preparation for this year’s work
5. I am able to memorize all I need
6. I have learned a lot about empathy in my profession
7. My problem solving skills are being well developed here
8. Much of what I have to learn seems relevant to a career in healthcare
Mean scores obtained for Academic Self-Perception for stages extern and intern respectively were 16.54(51%), 18.70(49%). (figure1)

Following are the statements representing Perceptions of Atmosphere:
1. The atmosphere is relaxed during consultation teaching
2. The course is well timetabled
3. Cheating is a problem in this course
4. The atmosphere is relaxed during lectures
5. There are opportunities for me to develop interpersonal skills
6. I feel comfortable in teaching sessions socially
7. The atmosphere is relaxed during seminars/tutorials
8. I find the experience disappointing
9. I am able to concentrate well
10. The enjoyment outweighs the stress of studying medicine
11. The atmosphere motivates me as a learner
12. I feel able to ask the questions I want

Mean scores obtained for Perceptions of Atmosphere for stages extern and intern respectively were 24.57(51%), 26.41(49%). (figure1)

Following are the statements representing Social Self Perceptions:
1. There is a good support system for registrars who get stressed
2. I am too tired to enjoy this course
3. I am rarely bored on this course
4. I have good friends in this course
5. My social life is good

Figure 1: Mean scores in all subscales obtained from medical interns and externs.
6. I seldom feel lonely.
7. My accommodation is pleasant.

Mean scores obtained for Social Self Perceptions for stages extern and intern respectively were 13.59(51%), 13.76(49%). (figure 1)

4. Discussion

There has been growing interest and concern about the role of the learning environment in medical education. Educational environment is one of the most important factors in determining the success of an effective curriculum. (Abraham et al., 2008) The results presented herein revealed a mean overall score of 107.94 for the DREEM items. According to the practical guide of McAleer and Roff[21], a mean score between 101-150 indicates More Positive than Negative condition. In medical schools with a traditional system, scores are found to be below 120; however, in modern, student centered ones, the mean score is generally much higher. (Fidelma et al., 2006, Varma et al., 2005)

In a survey carried out at a medical school in England that used DREEM (Fidelma et al., 2006), the mean score was calculated as 124/200. In another investigation concerning eight teaching hospitals in Birmingham, England (Varma et al., 2005), the mean score was 139/200. These values were higher than in the present study. One explanation is that these Universities have modern systems, while the medical school of Guilan University has a traditional system.

In Our study No Significant Differences between stages in all subscale were observed, In addition, it did not show a statistically significant difference between males and females for the total score of DREEM. This is in agreement to that reported by Till from Canada (Till, 2004) but is contrary to that reported in a study carried out in Argentina in which a statistically significant difference between the sexes was found, with women in general more critical about the quality of teaching and the general climate of the school, especially in the areas of student participation in class and the authoritarian attitudes of teachers.

5. Conclusion

In conclusion, participants assessed the educational environment as average. Regarding the students' perceptions of learning, teaching was viewed negatively; regarding their academic self perceptions, there are many negative aspects; regarding their perceptions of the atmosphere, there are many issues that require change; and regarding the students' social-self perceptions, the school is not too bad. We proposed that this traditional education system revised and Simulation-based training and E-learning added to it. Therefore, improvements are required across all five domains of the educational environment.

References


