

Investigation of Educational Climate in Major Clinical Wards in Iran University of Medical Sciences (IUMS) Based on DREEM Model

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Abstract

Background and purpose: The quality of educational environment as the spirit of curriculum has frequently been identified as crucial to effective learning. This study measures the educational environment in 4 major clinical wards at university affiliated teaching hospitals by using DREEM (Dundee Ready Education environment measure) model, and explored the opinions of medical staffs.

Method: This is a cross sectional study, using DREEM Questionnaire that is modified by national culture in 3 subscales including: perception of learning, perception of course organizers and perception of Atmosphere. Four major wards of General surgery, Pediatrics, Obstetrics- Gynecology and Internal Medicine in 4 different hospitals affiliated to the university was chosen. 53 medical staffs responded the Questionnaire by simple Random Sampling. Data analyzed by SPSS software and tests have done with 5% Alpha error. (Pilot study was done on 10 persons).

Results: Total scores of surgical wards (surgery and obstetrics-Gynecology) were significantly lower than non -surgical wards (pediatrics and internal medicine) (PV=0.015).

The overall mean score of modified DREEM questionnaire 119/140 (82.8% , 95% CI 78.8% to 88%). The mean score in 3 main subscales showed no significant difference in terms of gender and hospitals. Significant difference was observed in the subscale perception of Atmosphere. Pediatric ward got the best score and internal medical ward got the least score. (PV = 0.027)

Conclusion: The overall educational environment score of major clinical wards for undergraduate is excellent. Internal medicine ward got the least score in all three subscales that needs serious reform in teaching- learning activities. A curricular change seems mandatory.

Key words: DREEM, EDUCATIONAL ENVIRONMENT, CLINICAL WARDS, CLINICAL STAFF.

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Introduction

Clinical educational environment as perceived by the students is an important indicator for

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curricular change. (1)

Educational environment as the spirit of teaching and learning activities is a major determinant of developing motivation in students. (2)

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. (3)

Accountability to various stakeholder groups had

made the institutions ready to watch for quality of education and hence the need for applying performance indicators become more evident. (4) Teaching and learning in clinical setting is a matter of interest in medical schools and clinical attachments have strong influence in shaping the new doctors' competencies. Recent studies have shown that although teachers and students are educational partners but with different ideas about the clinical setting in terms of quality. (5) Qualitative studies have shown discrepancies between perceptions of students especially when they attach to clinical wards and hospital environment. It seems unhelpful for their learning, mostly because of the teachers' behavior. (6)

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. (7)

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. (8)

Clinical teachers are very important factor for learning process in wards. This study aims at investigating teacher's perception of educational environment by using DREEM model.

Methods

In this cross sectional study, DREEM questionnaire was used to measure educational environment. DREEM questionnaire was modified for teachers. Three subscales as elements of educational environment were administered to 53 clinical teachers in 4 major wards of Internal Medicine, General Surgery, Pediatrics and Obstetrics- Gynecology in affiliated hospitals of Iran university of medical sciences by simple Random Sampling.

Because of modification in DREEM subscales the mean score changed (appendix I) to maximum score of 140.

A pilot study was done to examine the reliability of questionnaire by using cronbach coefficient and face validity. Data analyzed by SPSS. (Alpha error rate of 0.05)

DREEM model and related subscales

Scale	Number of Questions	Maximum Score
Perception of Learning	12	48
Perception of course organizers	11	44
Perception of atmosphere	12	48
Total Score	35	140

Results

The mean scores of the questionnaire was 116/140 (82.8% , 95% CI 78.8% to 88%).

With use of One- Way Analysis of Variance (ANOVA), overall there was significant difference between mean scores of each subscale. (P value =0.000) (Fig 1)

Mean score showed no significant difference by gender. (table 1)

Mean score of teaching hospitals showed no significant difference (table 2).

Mean score of wards showed significant difference in "perception of atmosphere" and Internal medicine ward got the least score (108.6, 95% CI 105.8% to 113.1%) and pediatrics got the highest score (119.5, 95% CI 114.7% to 125.2%) (P value =0.027) (table 3).

Discussion

This study Investigates the perception of teachers by DREEM questionnaire. For the first time, bearing in mind, that the teacher would play an important role in the beginning of a clinical

Table 1: Mean and total scores of subscales by sex

Sex	NO	Perception of Learning (%)	Perception of course organizers (%)	Perception of Atmosphere (%)	Total (%)
Male	31	39.8 (82.9)	31.6 (71.8)	43.5 (90.7)	115 (82.1)
Female	22	40.4 (84.1)	31.9 (72.5)	45 (93.9)	117.4 (83.8)
Total	53	40 (83.4)	31.7 (72.1)	44.2 (92)	116 (82.8)
P Value	-	N.S	N.S	N.S	N.S

The percents were accounted by maximum available scores in each domain.

Table 2: Education environment mean scores fro each hospital

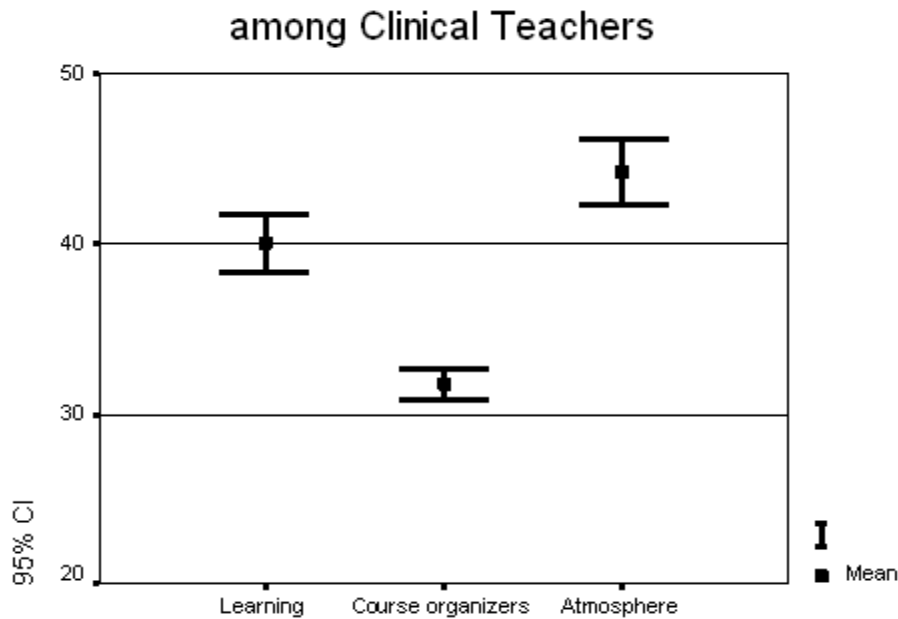
Hospital	NO	Perception of Learning	Perception of course organizers	Education Atmosphere	Total
Ali- asghar Hospital	16	38.1 (72.5%)	32.8 (74.5%)	45.9 (95.7%)	116.9 (83.5%)
Hazrat Rasoul Hospital	21	40.9 (85.3%)	31.2 (70.9%)	44.6 (93%)	116.8 (83.4%)
Shahid Akbar abadi Hospital	6	40.3 (84%)	31.5 (71.5%)	44 (91.6%)	115.8 (82.7%)
Firuzgar Hospital	10	41 (85.4%)	31.1 (70.9%)	40.6 (84.5%)	112.8 (80.5%)
P Value	-	N.S	N.S	N.S	N.S

The percents were accounted by maximum available scores in each domain.

Table 3: Comparison of Mean Scores Based on Major Clinical Wards

Clinical Wards	NO	Perception of Learning	Perception of course organizers	Perception of Atmosphere	Total
Pediatrics	22	40.3 (83.9%)	33 (75%)	46.2 a (96.3%)	119.5 (85.3%)
Internal Medicine	12	39 (81.2%)	30.3 (68.9%)	39.3 a (81.9%)	108.6 (77.6%)
Gynecology	8	41.3 (86.1%)	31.5 (71.5%)	44.8 (93.4%)	117.7% (84.1%)
Surgery	11	39.7 (82.7%)	30.9 (70.2%)	45 (93.7%)	115.6 (82.5%)
P Value	-	N.S	N.S	N.S	N.S

The percents were accounted by maximum available scores in each domain. a: P value =0.027

Fig 1: Comparing of DREEM area among Clinical Teachers

attachment makes it more mandatory to opinion seek their. (5)

The questionnaire was modified based on national culture as the other studies do so. (9)

Teacher's characteristics and clinical setting to improve the quality of are addressed in other studies (10).

So it is evident that using teachers' perception and giving feed back to them are affects the learning in clinical setting. Efficiently, results of a Canadian study showed that students are interested in enthusiastic teachers who gave them feed back and it inturn makes a better learning atmosphere. (11)

Overall DRREM score in 4 major wards showed excellent but, results in internal medicine ward in Educational atmosphere subscale showed that there may be some serious problems in teaching-learning activities and the relationship between the teacher as a supervisor- mentor and the student as a learner who should be gradually independent are impaired. (12)

Suggestion:

teachers pay more attention to the beginning of the newcomers (new students who come for clinical attachment) because their expectations

are high at the beginning (13) so they need more supervision and observation.

clinical teachers should give more feedback and be accessible as a source of knowledge and experience to make the students more responsible for their learning. (14)

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