Students' perceptions of learning environments in Gonabad University of Medical Sciences

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Brief Communication

Educational environment is one of the most important factors in determining the success of an effective curriculum and subsequently the students' academic achievement (1). The knowledge about students' perceptions of their educational environment is a useful basis for modifying and improving the quality of educational environment. Students' perception of learning environment is also found to influence their behavior (2).

The Dundee Ready Educational Environment Measure (DREEM) has been widely used to evaluate the educational environment in medical schools (1,3,4) .A study by Koohpayehzadeh et al. described the development and validation of the Dundee Ready Education Environment Measure (DREEM) in Iran (5).

This instrument is a general, multidimensional, multicultural instrument. It gives a universal score of a maximum of 200 and is capable of measuring five separate elements of the education environment: Students' Perceptions of Learning (SPoL), Students' Perceptions of Teachers (SPoT), Students' Perceptions of Atmosphere (SPoA), Students' Academic Self-Perception (SASP) and Student's Social Self-Perceptions (SSSP) (6). Despite the obvious potential value of the application of the DREEM to analyze medical education problems, this tool is not commonly used in Iran. Therefore, the aim of this study was to explore students' perceptions of their learning environment, among medical students of Gonabad University of Medical Sciences in Iran. In this study, various aspects of the educational environment were compared between gender, courses and academic fields.

This cross-sectional study was conducted in Gonabad University of Medical Sciences in 2012. Four hundred fifty medical sciences students were studying in this university at the time of the study. Questionnaires were distributed among 260 medical students. Twenty-six (10%) students were excluded from the study analysis as they either failed to return the questionnaire or did not complete it; and in total, 234 questionnaires were analyzed (response rate= 90%).

The target population included freshman, sophomore and senior students of medical sciences: nursing and midwifery (42%, n=98), health (24%, n= 57), Para medicine (26%, n= 62) and medicine (8%, n=17). This study was approved by the Ethics Committee of Gonabad University of Medical Sciences.

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Table 1. Descriptive Statistics of the Subscale and the Total DREEM Scores by Academic Field (n = 234)

Students' Perception	Medicine Mean (SD)	Para medicine Mean (SD)	Health Mean (SD)	Nursing and Midwifery Mean (SD)	p-value Mean (SD)	LSD<0/05 Mean (SD)
SPoL(Students' Perceptions of Learning)	25.6 (6.14)	24.6 (6.91)	25.4 (6.20)	26.2 (6.92)	0.700	
SPoT (Students' Perceptions of Teachers)	22.1 (6)	20.7 (5.80)	21.6 (5.10)	23.7 (5.99)	0.010	Para medicine, Nursing and Midwifery
SASP(Students' Academic Self-Perception)	19.2 (4.12)	19.3 (4.75)	19.9 (3.65)	19.4 (4.53)	0.700	
SPoA (Students' Perceptions of Atmosphere)	27.2 (6.19)	25.4 (6.19)	26.5 (4.47)	27.6 (5.54)	0.200	
SSSP(Students' Social Self-Perceptions)	15.7 (3.41)	14.9 (4)	15.2 (3.84)	15.6 (4.45)	0.700	
Total DREEM Scale Score	109.8 (21.06)	104.9 (22.52)	108.8 (18.43)	112.5 (23.69)	0.300	

The mean (±SD) age of the participants was 20.81 (±2.8) years. About 67% of the participants (n = 158) were female, 42% (n = 98) studied nursing and midwifery, 84% (n = 197) studied pre-clinical medicine. Out of the maximum score of 200, the mean and standard deviation of the overall score was 108.52±20.9.

The subscale means and standard deviations for the entire sample as well as each discipline are displayed in Table 1. Where applicable, post hoc analyses that yielded significant differences between pairs of courses were also performed. SPT scores varied significantly between academic fields (p = 0.01). Post hoc analyses indicted that nursing and midwifery students yielded significantly higher total DREEM scores than the paramedic students, But not be seen in other domains of significant difference. In our study, There were no significant differences between males and females (p>0.05). However, significant differences were found between courses for the total DREEM score, as well as the SPoL and SPoA subscales (p<0.05) (Table 2).

The overall DREEM mean score in our study was 108.52, which fell well inside the range (101–150) being indicative of a "more positive than negative" perception of the environment.

Scores were reported in Tehran (7), Vaughan (8) and Australia (9) study, in which the overall mean score was 134.79 /200, 135.3 /200 and 137.3 respectively. These results are higher than the mean obtained in the present study, which can be attributed to their more modern education systems and may indicate that these institutions are somewhat innovative in providing a student-centered approach to education. These are factors that are likely to have a

Table 2. Descriptive Statistics of the Subscale and Total DREEM Scores by Courses (Preclinical and Clinical) (n = 234)

Students' Perception	Pre-clinical Mean (SD)	Clinical Mean (SD)	p-value Mean (SD)
SPoL (Students' Perceptions of Learning)	22.6 (5.60)	25.9 (6.48)	0.004
SPoT (Students' Perceptions of teachers)	20.6 (4.05)	22.0 (5.90)	0.080
SASP(Students' Academic Self-Perception)	19.7 (4.24)	18.6 (3.72)	0.100
SPoA(Students' Perceptions of Atmosphere)	24.5 (3.79)	26.9 (5.74)	0.002
SSSP (Students' Social Self-Perceptions)	14.3 (3.54)	15.5 (3.91)	0.080
Total DREEM Scale Score	100.6 (15.83)	110.0 (21.45)	0.003

positive impact on students' achievement, satisfaction and success. In the present study, results showed that Paramedic students did not have a favorable perception about their educational environment in relation to professors and social conditions compared to students of other academic fields. They believed that there was not a good support system for those students who get stressed, and that the professors did not perform well in terms of giving feedbacks to the students, and did not provide conditions conducive to constructive criticisms. In our study, the DREEM scores were lower in male students than females, but this difference was not statistically significant in the 5 subscales and the total score of the DREEM. This is in agreement with what was reported by I.H.AI-Ayed (10). In the present study, comparing the students studying in the preclinical and clinical fields revealed that students of the preclinical group were more satisfied with the learning environment, and the difference between the two groups was significant. A study by Taheri, which was conducted on medical students also showed similar results.

Although most students perceived the learning environment as relatively more positive than negative, it should be considered that this score is still far from ideal. Therefore, reforms are needed in the learning and teaching environments for the purpose of providing acceptable conditions for the students who are the main clients of educational services, and to train more competent graduates who are capable of providing health services for individuals and the target community.

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