مقایسه درک دانشجویان و استادیون زن و مرد از محیط آموزشی بالینی

مقدمه: مراکز آموزشی پزشکی شاخصی از مراکز آموزشی پزشکی در هر کشور است. این مراکز به بهبود مردم مстеارز، پیشرفت علم و بهبود کیفیت خدمات درمانی مسئول هستند. از همین رخ و برای بازدارندگی درک و رضایت استادیون و طلاب در محیط آموزشی بالینی، از ابزارهای آزمایشگری و آزمایشگری دیده نهایی برای شناخت و شناسایی عوامل مثبت و منفی محیط آموزشی بالینی استفاده می‌شود. دی‌رئیم (DREEM) یک ابزار آزمایشگری آزمایشگری دیده نهایی مشهور در کناره جامعه است. این ابزار به بررسی نیازهای طلاب و استادیون در محیط آموزشی بالینی می‌پردازد.

روش: در این پژوهش کلینیک دانشگاه علوم پزشکی کرمان در سال 1391 تحقیق صورت گرفت. این پژوهش یک پژوهش توصیفی حذفی طرح آماری با تغییر در محیط آموزشی بالینی بود. تعداد نمونه 230 نفر شامل 123/140 از نوع پزشکی و 107/200 از نوع پزشکی و 107/200 از نوع پزشکی بودند. پاسخگویی در این پژوهش با استفاده از پرسشنامه دی‌رئیم صورت گرفت. پرسشنامه دی‌رئیم در 4 اجزای مختلف، شامل ایجاد، کارکرده، انتظار و استیضاح تقسیم شده است. نتایج پرسشنامه دی‌رئیم با استفاده از آنالیز معیارهای کسب شده نیز در نوع پزشکی با پشته انجام شد.

نتایج: نتایج پژوهش نشان داد که تعداد تجربیات در محیط آموزشی بالینی در دو نوع پزشکی و پزشکی متفاوت بود. با توجه به نیازهای طلاب و استادیون در محیط آموزشی بالینی، نتایج نشان داد که محیط آموزشی بالینی در دو نوع پزشکی متفاوت بود. نتایج نشان داد که محیط آموزشی بالینی در دو نوع پزشکی متفاوت بود. به طور کلی، محیط آموزشی بالینی در دو نوع پزشکی متفاوت بود.
INTRODUCTION
Evaluation is a systematic and instrumental examination in order to enhance the efficiency of educational programs (1). Accreditation Council for Graduate Medical Education (ACGME) has stepped to detect one of the effective elements of trainee’s learning _ differences of learning environment (2). Roff and McAleer diagnosed that if enable to identify variables of the educational environment program and evaluate student and teachers' perception to reach teaching goals and get a basis for change the variables to improve educational experience (3). if we identify variables of the educational environment program and evaluate student and teachers' perception, we will reach teaching goals and improve educational experience.

To ensure a good education should be control learning environment quality (4), thus effective learning high light to quality of educational environment (5). Measuring the educational climate provides appropriate reaction to progress educational program (6). Significant learning has affirmative relation with student’s Perception of educational climate that influences on trainee's learning experience. It influences why, how and what trainees’ learn (7). The teacher’s viewpoint of the educational atmosphere was considered rarely (8). Trainee’s perception of training environment is related to their clinical outcomes and the learner’s consent for learning prosperity and achievement (5, 9, and 10). Maybe perceptions of the atmosphere caused by the enhance variety association students (11). Each event occurring in medical school links to environment and education (6). Learning environments is where learning happens (2), the base of training medical students is in the clinical wards and training medical residents is performing in the wards of hospital (12, 13).

As evaluation is time-consuming and costly (11), thus delivering high quality of medical education are important for educational environment evaluation in both clinical and academic areas. The evaluation process is an opportunity to identify any area that improvement is impossible (14, 15, and 8).

Different instruments are used for evaluation, that one of these is Dundee Ready Educational Environment Measuring (DREEM). DREEM is particularizing to the matchless environment tested by students on medical and health-related courses and it has developed by Delphi Panel and in Scotland Dundee University (16, 17). DREEM utilize in whole world as a diagnostic tool to assessing perception of educational atmosphere, it has been used to recognized reigns of energetic and poor environment and also to contrast opposes medical education schools and measure the available with perfect educational environment (18, 10).

Clinical instructor has complex activities and the most significant ones are to train and control practices and students, monitor the health and safety of patients under students’ treatment and cooperate with staffs (19). Clinical instructors have complex activities. The most significant is training and controlling practices and students, monitor the health and safety of patients under students' treatment and cooperate with staffs (19).

In Iran, a general medicine course lasts seven years, almost half of which comprises basic sciences and path physiology course and the remainder clinical sciences course. Like many other medical schools in Iran, Kerman University of Medical Sciences employs curriculum, hospital based approach. There have three educational hospitals. The aim of this study was to compare medical students’ and teachers’ perception about clinical educational environment in educational hospital wards in Kerman University of medical sciences.

METHODS
This descriptive, analysis cross-sectional study was conducted at Kerman University of Medical Sciences in the center of Iran, in 2012. Approval to perform the study was provided by the Medical Ethic of the Kerman University of Medical Sciences.

Participants were selected from the students of 6 and 7 year studying general medicine (medical interns) and specialized medical students (residents); Internal, Surgery, Pediatrics and Gynecology and their teachers (faculty members of Kerman University). Inclusion criteria for students (interns and residents) and teachers participants were, a) being teacher or student at Kerman University, b) able to provide and complete an informed consent to take part in the study. Exclude criteria was who did not fulfill the questionnaires. Using DREEM (Dundee Ready Educational Environment Measuring) to investigate the educational atmosphere four main clinical wards (Internal, Surgery, Pediatrics and Gynecology) in the educational hospitals affiliated to Kerman University of Medical Sciences. DREEM was distributed to 50 teachers. And also was administered to 174 students (86 interns, 88 residents). But, the sample size was completed 63 Intern, 42 teachers and 73 assistant, due to the loss. Sampling was done census.

DREEM has 50 items in 5 following domains:
1. Student’s perceptions of learning domain, SPL_ 12 items, Maximum score = 48.
2. Student’s perceptions of teacher performance domain, SPT_ 11 items, Maximum score = 44.
3. Student’s academic self-perceptions, SAP_ 8 items, Maximum score = 32.
4. Student’s perceptions of learning atmosphere, SPA_ 12 items, Maximum score = 48.
5. Student’s social self-perceptions, SSP_ 7 items, Maximum score = 28.

DREEM utilized for teachers with some little changes in accordance with the national culture, and in frame 35 item. The changes include deleted two domains of the DREEM inventory one of these is SAP, student’s academic self-perceptions, and the others is SSP, student’s social self-perception, because of the questions of these two domains include students’ academic progress and their personal situation.
The internal consistency coefficient was calculated by Cronbach's alpha. Validity was confirmed in previous studies (r=0.76) (20), but in this study the content validity (0.77) and reliability (0.76) was assessed.

In order to prepare the Persian version of DREEM, the original version of EREEM questionnaire was translated into Persian by two teachers (nursing education) who had good English knowledge and were well-experienced in the field of Medical education. Then, the Persian translation was given to another two teachers and was back-translated into English. Certain comparisons focusing on linguistic reform were made. In the next step, the revised Persian version was sent to a number of experts in the field of Medical education and the overall consensus over the content of questionnaire was achieved on the draft version in a separate meeting. The last version was then provided to the research team for further application and completion.

After the necessary arrangements and explaining the purpose of study, students have to complete a questionnaire. The total score is 200 for students and the residents, that the range of overall scores DREEM are as follow: 0-50 unfavorable, 51-100 semi favorable, 101-150 favorable, and 151-200 very favorable.

For teachers with three domains is 140 score that the range of overall scores DREEM are: 0-35 unfavorable, 36-70 semi favorable, 71-105 favorable, 106-140 very favorable. The DREEM's scale is five subscale Likert, was: completely agree (5), agree (4), no idea (3), disagree (2), completely disagree (1).

Data was analyzed by using SPSS version-18. Descriptive statistics was used to calculate means and standard deviations of DREEM variables, total DREEM, and the five subscales.

Inferential statistics was calculated to compare domains, mean using by Anova test (Post Hoc, Tukey’s) and T-Test. Normal distribution was measured in all three groups using by one-Sample Kolmogorov-Smirnov Test. The level of statistical significance was taken at less than 0.05 (P < 0.05).

**RESULTS**

The DREEM inventory was completed by 84% of the teachers (n=42), 82.9% of the residents (n=73) and by 73.2% interns (n=63) who has studied in the medical courses at the educational hospitals of Kerman University of Medical Science.

Of the 178 participants, 51.1% were male (n=91) and 48.9% were female (n=87).

The total score for students’ perceptions was out of 200 and teachers’ perception was out of 140.

The total DREEM is 161/ 200 (for interns), 157/200 (for residents) and 123/140 (for teachers) that generally tend to be positive.

Table 1 shows the maximum score of total DREEM inventory and its five subscales, mean, standard deviation, and percentage of all domains. The highest score was found in the domain of teacher’s perception of learning (mean: 90.97, standard deviation: 10.30) and the lowest in the domain of intern’s Social self-Perceptions (mean: 75.68, standard deviation: 16.17).

Table 1 presents the mean scores of DREEM inventory in three groups. There was significant difference of total DREEM score (P<0.002*).

**DISCUSSION**

This is one of the few studies from our country about educational environment at undergraduate, postgraduate teaching and teachers at the same time using validated DREEM inventory. This study aimed to compare medical students’ of six and seven year of study and residents’ perceptions and their teachers of educational environment of main clinical wards at Kerman hospitals.

McAleer and Roff (21) created score explain as an approximate guide to interpret the domains. Using of these descriptors for the area scores the students, residents and teachers that perceptions of learning was teaching highly thought of (scores of 36-48), and their perceptions of the teachers was that they were moving in the right direction (scores of 23–33) and Model course organizers (34-44). Their academic self-perception for students and residents was Confident (scores of 25-32), as was their perception of the atmosphere A more positive attitude (scores of 25–36) and A good feeling overall (37-48). The students’ social self-perception was not too bad (scores of 15–21) and very good socially (22-28). The total score is 200 for students and the residents, that the range of overall scores DREEM are as follow: 0-50 unfavorable, 51-100 semi favorable, 101-150 favorable, and151-200 very favorable. For teachers with three domains are 140 score that the range of overall scores DREEM are as follow: 0-35 unfavorable, 36-70 semi favorable, 71-105 favorable, 106-140 very favorable. Total DREEM scores were high 161/200 for interns, 157/200 for residents and 123/140 for teachers very positive (favorable).

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<th>Table1. Means and standard deviation scores DREEM and P-Value</th>
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<td><strong>Domains</strong></td>
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<td>Perception of learning</td>
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<td>Perception of teacher performance</td>
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<td>Academic-Self perceptions</td>
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<td>Perception of learning atmosphere</td>
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<td>Social self-Perceptions</td>
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<td>Total DREEM score</td>
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In a survey carried out at a medical school in England that used DREEM (22), the mean score was calculated as 124/200. In another investigation concerning eight teaching hospitals in Birmingham, England (23), the mean score was 139/200; and also, another study for interns (24), the mean score was 114/200. These values were lower than in the present study. One explanation is that interns and residents were satisfied with hospital educational environment. In comparison with the results of Montazeri and colleagues (25) for teachers, the mean score was 93/140. The cause of higher score of present study may reflect that these teachers were fairly innovative in terms of providing a student-centered approach to education.

According to result, in the domain of perception of learning Significant Differences between three groups (interns, residents and teachers) were observed. This is in agreement to the study done by Badsar and colleagues (26), although is contrary to that study conducted by Brown (27). It seems that in the hospitals apply standard models for clinical teaching process and the reason is the importance and notice to environment. Hospitals apply clinical teaching standard models. It seems that the reason is importance and notice to environment.

In our study no significant differences were observed between three groups in domain of Perception of teacher and performance. This is in agreement to what reported by Semantic (28), but is contrary to that report in a study carried out in Pakistan and India (24, 29). Maybe the reason is interest and ability of teachers to engage students in building learning experiences and other characteristics of a place where involved the physical environment.

In domain of Perceptions’ atmosphere were observed Significant Differences in three groups. This is in agreement to that reported by Semantic, Bakhshialiabad and Montazari (30, 24) but in survey was done by authors, not found contrast with the present results. Maybe this phenomenon happens because almost all have positive attitude toward perceptions’ atmosphere. And also Research at undergraduate and graduate level is important in deciding career fields and future profession (31).

Considering to the results, comparing perceptions of students and their teachers, illustrated that all of them tended positively.

Should be noted that factors such as environmental education and teacher, and finally, social environment can be effective in improving learning. In many of studies emphasize to correlation among approaches and education atmosphere with academic Achievement.

Since Healthcare evolution requires a proper educational environment and objective-based by providing environment substrates can be improve educational system. In the current study, trainings environment of interns, residents, teachers are considered desirable, but the present situation suggests educational environments need to investigate further and deeper.

Limitation and recommendations: This research was conducted only on a small size of population. Therefore, research studies with much larger sample size would be required to ensure appropriate generalization of the findings of the study. Some teachers and students didn’t tend to respond to the questionnaire.

It’s better to conduct more research in the following areas:
1. Survey of education quality, Dentistry School-based
2. Compare the understanding students of dentistry and residents of the learning environment DREEM-based
3. The use of other measurement patterns learning environment
4. Assess the quality of the operating room environment; based-DREEM

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