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Evaluation of Learning Environment

Öğrenme Ortamının Değerlendirilmesi

Giray Kolcu[1,2], Mukadder İnci Başer Kolcu[1]*

ABSTRACT

Background: Learning environment is a broad concept that expresses the physical environments, contexts, and cultures where learning takes place. This study is aimed to evaluate the preclinical learning environment of a medical faculty using the Dundee Ready Education Environment Measure. **Method:** The study was designed as a descriptive cross-sectional study. The population of the study was determined as medical school students enrolled at Suleyman Demirel University, Faculty of Medicine, 1st year, 2nd year, and 3rd-year students during the 2019-2020 academic year (N: 884). Item analyzes, reliability tests, and validation tests were performed to evaluate the correlation of the scale with the population of the study. In line with this information, it was decided that the population was suitable for the scale and that generalization could be made through this data. **Results:** In the study, the data of 326 participants were evaluated. In the collective evaluation of all years overall DREEM-TR score as 138.07 ± 22.75 regarding all students. In comparison between years, it was seen that there was a statistically significant difference between 1st year and 2nd and 3rd years ($p<.005$). **Discussion:** The use of valid/reliable measurement tools in the evaluation of the program is necessary for the monitorization of the program. These valuable findings are suggested to be used by the faculty management for the development and monitorization of the program. We believe that the continuity of this evaluation within the scope of program evaluation would contribute to the monitoring and development of the training program.

Key words: Medical education, learning, learning environment

ÖZET

Arka plan: Öğrenme ortamı, öğrenmenin gerçekleştiği fiziksel ortamları, bağlamları ve kültürleri ifade eden geniş bir kavramdır. Bu çalışmada, Dundee Eğitim Ortamı Değerlendirme Ölçeği kullanılarak bir tıp fakültesinin klinik öncesi öğrenme ortamının değerlendirilmesi amaçlanmıştır. Yöntem: Çalışma, tanımlayıcı kesitsel bir çalışma olarak tasarlanmıştır. Araştırmanın evreni, Süleyman Demirel Üniversitesi Tıp Fakültesi'ne kayıtlı tıp fakültesi öğrencileri, 2019-2020 eğitim öğretim yılında 1. sınıf, 2. sınıf ve 3. sınıf öğrencileri (N: 884) olarak belirlendi. Ölçeğin çalışma evreniyle ilişkisini değerlendirmek için madde analizleri, güvenilirlik testleri ve doğrulama testleri yapılmıştır. Bu bilgiler doğrultusunda evrenin ölçeğe uygun olduğuna ve bu veriler üzerinden genelleme yapılabileceğine karar verilmiştir. Bulgular: Çalışmada 326 katılımcının verileri değerlendirildi. Tüm yılların toplu değerlendirmesinde tüm öğrenciler için genel DREEM-TR puanı 138.07 ± 22.75 olarak bulunmuştur. Yıllar arasında karşılaştırıldığında 1. yıl ile 2. ve 3. yıllar arasında istatistiksel olarak anlamlı fark olduğu görüldü ($p<.005$). Tartışma: Programın değerlendirilmesinde geçerli/güvenilir ölçme araçlarının kullanılması, programın izlenmesi için gereklidir. Bu değerli bulguların, programın geliştirilmesi ve izlenmesi için fakülte yönetimi tarafından kullanılması önerilmektedir. Program değerlendirme kapsamında bu değerlendirmenin devamlılığının eğitim programının izlenmesine ve geliştirilmesine katkı sağlayacağına inanıyoruz.

Anahtar kelimeler: Tıp eğitimi, öğrenme, öğrenme ortamı

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[1] Department of Medical Education and Informatics, Süleyman Demirel University, ISPARTA
[2] SüleymanDemirel University Vice Director of Institute of Health Sciences, ISPARTA

***Address for Correspondence / Yazışma Adresi:** SDÜ Tıp Fakültesi Dekanlığı Morfoloji Binası Doğu Kampüsü 32260 Çünür/ISPARTA - TÜRKİYE,
E-mail: giraykolcu@gmail.com

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INTRODUCTION

The learning environment is a broad concept that expresses the physical environments, contexts, and cultures where learning takes place.[1] It is recommended to evaluate learning environments in order to develop educational programs in line with the innovations in medical education.[2,3] The correlation between learning activity and the learning environment has been frequently studied in the literature.[4,5] Students interact with the learning environment in various activities. Due to this interaction, behavior and satisfaction of the student are quite valuable in evaluating the learning environment.[6–8] It has been emphasized in many studies that students who perceive the educational environment better are more successful academically.[9–11]

Dundee Ready Education Environment Measure (DREEM) was developed to evaluate the learning environment.[12] This scale was published with number 23 in the Association for Medical Education in Europe (AMEE) guide.[13] It is recommended as a useful tool for monitoring the learning environment in the program evaluation area in medical education.[13,14]

This study is aimed to evaluate the preclinical learning environment of a medical faculty using the Dundee Ready Education Environment Measure.

MATERIALS AND METHODS

The study was designed as quantitative research which has a descriptive cross-sectional study pattern. In the study, Dundee Ready Education Environment Measure (DREEM-TR), which was developed by Roff et al. and adapted in Turkish by Sezer et al., was selected and, the researcher was informed regarding the usage.[12,15] The approval for this study was granted by the Non-Interventional Clinical Research Ethics Committee of Suleyman Demirel University, Faculty of Medicine.

DREEM-TR consisted of 43 items collected under five factors: 11 items (items 1, 7, 12, 14, 17, 19, 21, 22, 34, 40, and 42) in student's perception of learning dimension, 9 items (items 2, 6, 8, 15, 25, 28, 33, 35 and 36) in their perception on the teacher dimension, 8 items (items 5, 9, 18, 23, 24, 27, 37, and 41) in their perceptions on their own academic skills dimension, 11 items (items 10, 11, 20, 26, 29, 30, 31, 32, 38, 39, and 43) in their perceptions on learning climate, and 4 items (items 3, 4, 13 and 16) in their perceptions about the social environment. A five-point Likert-type scoring system as Strongly Agree (5), Agree (4), Neutral (3), Disagree (2) and Strongly Disagree (1) was used in the scale (items 4, 8, 22, 31, 35 and 42 were reverse-scored). The lowest score that could be obtained on DREEM-TR was 43, while the highest score was 215. The high scores obtained on the scale indicated that individuals had a positive perception of the educational environments, while the low scores obtained on the scale indicated that this perception was negative.

The population of the study was determined as medical school students enrolled at Suleyman Demirel University, Faculty of Medicine, 1st year, 2nd year, and 3rd-year students during the 2019-2020 academic year (N: 884). In the sample selection, the study sample was calculated as 307 with simple random sampling (Population size: 884, expected frequency: 50%, acceptable margin of error, confidence level: 97%). The scale was delivered to the students in the list online. Data were collected from 326 participants as 105 for the 1st year, 129 for the 2nd year, and 92 for the 3rd year (n: 326). In addition, when data were evaluated according to the generalizability theory (G-theory), the fact that the percentage of the variance component predicted for the years was 0% indicated that the scale scorings of the years were similar. It was interpreted that the sample selection was suitable.

Statistical analysis was performed using Microsoft Excel, EduG, SPSS and AMOS, and one-way analysis of variance (ANOVA).

Item analyzes, reliability tests and validation tests were performed to evaluate the correlation of the scale with the population of the study.

When the item analyses of the scale were evaluated according to the G-theory, the high relative value (7.5%) of the variance component predicted for individuals indicated that the scores could strongly represent (distinguish) the population scores. The fact that the predicted variance component for the items was 0% indicated that the item difficulties were similar.

For the structural validity of the scale, the confirmation of the original five-factor structure of DREEM-TR in Turkish culture was examined through confirmatory factor analysis (CFA). The fact that the t values, which provided information about the explaining of the observed variables by the latent variables, were higher than 2.56 was an indicator of significance at the level of $p<0.01$. In CFA, the predicted t values for all items in the scale were significant at the level of 0.01 except for Item 42 (Table 1).

Table 1. T-values obtained from confirmatory factor analysis for DREAM-TR

Students' Perception of Learning		Students' Perception of Teachers		Students' Academic Self-Perceptions		Students' Perception of Climate		Students' Social Self-Perceptions	
Statement	**t-value**	**Statement**	**t-value**	**Statement**	**t-value**	**Statement**	**t-value**	**Statement**	**t-value**
Item 1	7,05*	**Item 2**	7,63*	**Item 5**	6,63*	**Item 10**	7,03*	**Item 3**	5,37*
Item 7	9,21*	**Item 6**	7,63*	**Item 9**	6,63*	**Item 11**	7,03*	**Item 4**	-4,82*
Item 12	9,21*	**Item 8**	-5,29*	**Item 18**	7,61*	**Item 20**	7,68*	**Item 13**	4,29*
Item 14	9,41*	**Item 15**	8,09*	**Item 23**	6,42*	**Item 26**	9,23*	**Item 16**	5,37*
Item 17	9,42*	**Item 25**	8,36*	**Item 24**	6,04*	**Item 29**	8,62*		
Item 19	10,18*	**Item 28**	8,94*	**Item 27**	7,26*	**Item 30**	9,32*		
Item 21	9,01*	**Item 33**	7,86*	**Item 37**	7,78*	**Item 31**	-4,43*		
Item 22	6,56*	**Item 35**	-4,97*	**Item 41**	6,26*	**Item 32**	7,82*		
Item 34	8,41*	**Item 36**	8,23*			**Item 38**	8,59*		
Item 40	9,76*					**Item 39**	10,69*		
Item 42	1,53					**Item 43**	7,65*		
	(P:0125)								

***p<0,001**

Confirmatory factor analysis with AMOS

KMO sphericity test was calculated as 0.92, the scale was evaluated as factorable for this population, and exploratory factor analysis was performed. In the exploratory factor analysis, it was observed that the scale was divided into 5 sub-dimensions (perception of learning, perception of the teacher, perception of academic skill, perception of the learning climate, perception of the social environment) similar to the adaptation study. Confirmatory factor analysis was performed to confirm the structural validity of the scale in the population of the study. The compatibility level of the five-factor model obtained from the confirmatory factor analysis was calculated to be "acceptable" (Table 2).

Table 2. Confirmatory factor analysis

Analyzed Fit Indices	Perfect Fit	Acceptable Fit	Fit Indices Obtained from the First Level of CFA	Conclusion
χ2/sd	$0 \leq \chi 2 / sd \leq 2$	$2 \leq \chi 2 / sd \leq 3$	2.03	Acceptable fit
RMSEA	$.00 \leq RMSEA \leq .05$	$.05 \leq RMSEA \leq .10$	0.60	Acceptable fit
CFI	$.95 \leq CFI \leq 1.00$	$.90 \leq CFI \leq .95$	0.92	Acceptable fit
NFI	$.95 \leq NFI \leq 1.00$	$.90 \leq NFI \leq .95$	0.90	Acceptable fit
GFI	$.95 \leq GFI \leq 1.00$	$.90 \leq GFI \leq .95$	0.91	Acceptable fit

Confirmatory factor analysis with AMOS

In the reliability analysis of the scale for this population, Cronbach's alpha value was calculated as 0.90 according to the classical test theory and G-coefficient was calculated as 0.90 according to the G-theory. In addition, when data of the study were evaluated according to the G-theory, the high relative value (7.5%) of the variance component predicted for individuals indicated that the scores strongly represented (distinguished) the population scores. The fact that the predicted variance component for the items was 0% indicated that the item difficulties were similar. The high relative value (9.4%) of the variance component predicted for the individual-item indicated that the evaluations of individuals in terms of their years were different. The low percentage (0.1%) of the variance component predicted for the individual-year indicated that the scores of the periods were

similar for the individuals. That the percentage of variance component (67.7%) predicted for the individual-item-year was the highest variance component indicated that systematic/non-systematic errors were low (Table 3).

In line with this information, it was decided that the population was suitable for the scale and that generalization could be made through this data.

Table 3. Analysis of variance

				Components				
Source	**SS**	**df**	**MS**	**Random**	**Mixed**	**Corrected**	**%**	**SE**
B	1213.05519	91	13.33028	0.09350	0.09350	0.09350	7.5	0.01517
M	416.69666	42	9.92135	-0.03126	-0.03126	-0.03126	0.0	0.01264
D	11.91557	2	5.95779	-0.00311	-0.00311	-0.00311	0.0	0.00128
BM	4546.52814	3822	1.18957	0.11670	0.11670	0.11670	9.4	0.01013
BD	167.27823	182	0.91911	0.00185	0.00185	0.00185	0.1	0.00225
MD	1528.62791	84	18.19795	0.18868	0.18868	0.18868	15.2	0.03017
BMD	6416.84496	7644	0.83946	0.83946	0.83946	0.83946	67.7	0.01358
Total	14300.94666	11867					100%	

Analysis of variance with EduG

RESULTS

In the study, the data of 326 participants, 105 for the 1st year, 129 for the 2nd year and 92 for the 3rd year, were evaluated. In the descriptive analyses of the scale, it was observed that most of the participants responded to the items in favor of the proposition (Table 4).

In the analysis of scale scores, regarding the 1st year students, Students' Perception of Learning was calculated as 35.42±6.79; Students' Perception of Teachers as 34.92±6.07; Students' Academic Self-Perceptions as 26.02±5.75; Students' Perception of Climate as 35.81±8.22; Students' Social Self-Perceptions as 13.31±3.20, and Overall DREEM Score as 145.51±25.94. Regarding the 2nd year students, Students' Perception of Learning was calculated as 33.53±5.35; Students' Perception of Teachers as 28.92±5.06; Students' Academic Self-Perceptions as 24.82±4.80; Students' Perception of Climate as 32.87±6.08; Students' Social Self-Perceptions as 11.58±2.88, and Overall DREEM Score as 131.74±19.04. Regarding the 3rd year students, Students' Perception of Learning was calculated as 34.51 ± 5.79; Students 'Perception of Teachers as 30.79 ± 4.83; Students' Academic Self-Perceptions as 25.68 ± 4.97; Students' Perception of Climate as 34.78 ± 7.17; Students' Social Self-Perceptions as 12.69 ± 2.29, and Overall DREEM Score as 138.46 ± 21.18.

In the collective evaluation of all years, Students' Perception of Learning was calculated as 34.42 ± 6.00; Students' Perception of Teachers as 31.38 ± 5.91; Students' Academic Self-Perceptions as 25.45 ± 5.18; Students' Perception of Climate as 34.36 ± 7.22; Students' Social Self-Perceptions as 12.45 ± 2.93 and Overall DREEM Score as 138.07 ± 22.75 regarding all students (Table 5).

When DREEM-TR percentages were evaluated; regarding the 1st year students, students' perception of learning was calculated as 63%, students' perception of teachers as 77%, students' academic self-perceptions as 65%, students' perception of climate as 65%, students' social self-perceptions as %65 and overall DREEM percentage as 67%. Regarding the 2nd year students, students' perception of learning was calculated as 60%, students' perception of teachers as 64%, students' academic self-perceptions as 62%, students' perception of climate as 60%, students' social self-perceptions as 60%, and overall DREEM percentage as 60%. Regarding the 3rd year students, Students' Perception of Learning was calculated as 61%, Students' Perception of Teachers as 68%, Students' Academic Self-Perceptions as 65%, Students' Perception of Climate as 63%, Students' Social Self-Perceptions as 65%, and Overall DREEM percentage as 64%.

Table 4. Descriptive analysis of statements

Domain	Statement	Strongly disagree	Disagree	Unsure	Agree	Strongly agree	Mean ± SD
Students' Perception of Learning	Item 1	11,3%	19,9%	35,3%	26,1%	7,7%	2,99 ± 1,10
	Item 7	6,1%	12,3%	23,6%	26,7%	31,3%	3,64 ± 1,21
	Item 12	6,1%	20,9%	35,9%	30,1%	7,1%	3,11 ± 1,01
	Item 14	5,8%	20,9%	34,7%	30,1%	8,6%	3,14 ± 1,03
	Item 17	4,3%	15,0%	39,0%	33,7%	8,0%	3,26 ± 0,95
	Item 19	7,7%	24,2%	33,1%	26,7%	8,3%	3,03 ± 1,07
	Item 21	7,1%	18,7%	32,8%	36,2%	5,2%	3,13 ± 1,01
	Item 22	5,5%	20,9%	36,8%	27,0%	9,8%	3,14 ± 1,03
	Item 34	3,4%	22,1%	32,8%	31,0%	10,7%	3,23 ± 1,02
	Item 40	8,3%	18,7%	39,3%	24,5%	9,2%	3,07 ± 1,06
	Item 42	3,7%	19,9%	38,0%	27,0%	11,3%	3,22 ± 1,01
Students' Perception of Teachers	Item 2	2,8%	13,2%	27,9%	38,7%	17,5%	3,54 ± 1,01
	Item 6	6,1%	8,0%	31,9%	39,6%	14,4%	3,48 ± 1,03
	Item 8	36,2%	27,9%	17,5%	14,4%	4,0%	2,22 ± 1,19
	Item 15	1,8%	9,5%	30,7%	41,7%	16,3%	3,61 ± 0,93
	Item 25	9,2%	22,1%	34,4%	23,0%	11,3%	3,05 ± 1,12
	Item 28	4,9%	14,7%	35,0%	33,4%	12,0%	3,32 ± 1,02
	Item 33	3,1%	15,6%	29,1%	37,7%	14,4%	3,44 ± 1,01
	Item 35	23,6%	31,9%	24,2%	15,6%	4,6%	2,45 ± 1,14
	Item 36	1,5%	12,0%	28,5%	41,7%	16,3%	3,59 ± 0,94
Students' Academic Self-Perceptions	Item 5	5,2%	19,0%	37,7%	30,4%	7,7%	3,16 ± 0,99
	Item 9	5,2%	12,9%	25,2%	36,2%	20,6%	3,53 ± 1,11
	Item 18	6,7%	22,1%	32,5%	29,4%	9,2%	3,12 ± 1,06
	Item 23	13,2%	17,5%	36,2%	23,9%	9,2%	2,98 ± 1,14
	Item 24	17,8%	27,6%	25,5%	23,6%	5,5%	2,71 ± 1,16
	Item 27	4,6%	17,2%	32,2%	32,8%	13,2%	3,32 ± 1,05
	Item 37	6,1%	16,9%	38,0%	30,1%	8,9%	3,18 ± 1,01
	Item 41	3,7%	15,6%	31,0%	35,0%	14,7%	3,41 ± 1,03
Students' Perception of Climate	Item 10	9,5%	22,4%	32,5%	28,2%	7,4%	3,01 ± 1,08
	Item 11	15,6%	24,5%	27,9%	23,0%	8,9%	2,84 ± 1,19
	Item 20	7,1%	18,7%	44,8%	23,9%	5,5%	3,02 ± 0,96
	Item 26	8,6%	23,0%	31,9%	26,7%	9,8%	3,06 ± 1,11
	Item 29	7,1%	18,1%	27,3%	32,8%	14,7%	3,30 ± 1,13
	Item 30	4,0%	17,8%	37,1%	28,8%	12,3%	3,27 ± 1,02
	Item 31	20,2%	32,2%	23,3%	18,4%	5,8%	2,57 ± 1,17
	Item 32	11,0	16,0%	35,0%	32,2%	5,8%	3,05 ± 1,07
	Item 38	21,8%	19,9%	27,6%	20,2%	10,4%	2,77 ± 1,28
	Item 39	11,3%	18,7%	36,2%	26,7%	7,1%	2,99 ± 1,09
	Item 43	5,8%	13,2%	24,5%	29,8%	26,7%	3,58 ± 1,18
Students' Social Self-Perceptions	Item 3	20,2%	27,3%	29,1%	18,4%	4,9%	2,60 ± 1,14
	Item 4	11,0%	23,0%	23,9%	25,5%	16,6%	3,13 ± 1,25
	Item 13	5,2%	12,6%	21,5%	28,5%	32,2%	3,69 ± 1,19
	Item 16	8,6%	15,6%	29,1%	31,6%	15,0%	3,28 ± 1,15

Table 5. DREEM-TR Scores

	Students' Perception of Learning	Students' Perception of Teachers	Students' Academic Self-Perceptions	Students' Perception of Climate	Students' Social Self-Perceptions	Overall DREEM Score
1st year	35,42±6,79	34,92±6,07	26,02±5,75	35,81±8,22	13,31±3,20	145,51±25,94
2nd year	33,53±5,35	28,92±5,06	24,82±4,80	32,87±6,08	11,58±2,88	131,74±19,04
3rd year	34,51±5,79	30,79±4,83	25,68±4,97	34,78±7,17	12,69±2,29	138,46±21,18
Total	34,42±6,00	31,38±5,91	25,45±5,18	34,36±7,22	12,45±2,93	138,07±22,75

When DREEM-TR percentages were evaluated; regarding the 1st year students, students' perception of learning was calculated as 63%, students' perception of teachers as 77%, students' academic self-perceptions as 65%, students' perception of climate as 65%, students' social self-perceptions as %65 and overall DREEM percentage as 67%. Regarding the 2nd year students, students' perception of learning was calculated as 60%, students' perception of teachers as 64%, students' academic self-perceptions as 62%, students' perception of climate as 60%, students' social self-perceptions as 60%, and overall DREEM percentage as 60%. Regarding the 3rd year students, Students' Perception of Learning was calculated as 61%, Students' Perception of Teachers as 68%, Students' Academic Self-Perceptions as 65%, Students' Perception of Climate as 63%, Students' Social Self-Perceptions as 65%, and Overall DREEM percentage as 64%

In the collective evaluation of all years, Students' Perception of Learning was calculated as 61%, Students' Perception of Teachers as 68%, Students' Academic Self-Perceptions as 63%, Students' Perception of Climate as 61%, Students' Social Self-Perceptions as 60% and Overall DREEM percentage as 64% regarding all students (Table 6).

In comparison between years, it was seen that there was a statistically significant difference between 1st year and 2nd and 3rd years ($p<.005$), and there was no statistically significant difference between the 2nd year and 3rd year (p:067). In the evaluation with G-theory, the percentage of variance component predicted for the item-year was calculated as 15.2%.

Table 6. DREEM-TR percentages

	Students' Perception of Learning/55	Students' Perception of Teachers/45	Students' Academic Self-Perceptions/40	Students' Perception of Climate/55	Students' Social Self-Perceptions/20	DREEM percentage
1st year	63%	77%	65%	65%	65%	67%
2nd year	60%	64%	62%	60%	60%	60%
3rd year	61%	68%	65%	63%	65%	64%
Total	61%	68%	63%	61%	60%	64%

DISCUSSION/CONCLUSION

Evaluation of the educational environment is an important part of program evaluation.[16] The use of valid/reliable measurement tools in the evaluation of the program is necessary for the monitorization of the program.[17] DREEM-TR is a valid/reliable tool adapted to Turkish to evaluate the learning environment. In our study, the preclinical learning environments of Süleyman Demirel University, Faculty of Medicine were evaluated with DREEM-TR.

The compatibility of the scale with the population of the study was evaluated, and it was decided in the analyzes that the scale was compatible with the population and that the data could be generalized.

This study offers valuable experience sharing with other faculties to evaluate the learning environment. Although sharing a situation-specific to our faculty is a limitation of the study, it offers a suggestion for the evaluation of other faculties.

In the descriptive analyses of the scale, it was observed that the answers of most of the participants were supportive of the questions on the scale. Today, it is stated that the activities associated with accreditation have a positive effect on the quality of medical education programs.[18] In the analysis of the scale scores of our study, it was observed that the perceptions of the 1st year students on the learning environment were significantly higher in all sub-dimensions and in total compared to other years. "DREEM percentage" is recommended as a common parameter in the evaluation of the learning environment in the literature.[19] There are many factors that affect the DREEM score. Therefore, there is no consensus in the literature for an acceptable DREEM score [20]. DREEM percentages range from 50% to 75% in the studies.[20,21] In this evaluation, the DREEM-TR score percentage of the learning environment of Süleyman Demirel University, Faculty of Medicine was calculated as 64%. According to this score, we can evaluate the learning environment at a "medium" level when evaluated relatively.

When students' DREEM-TR scores and percentages were evaluated, it was observed that the perception of the teacher had the highest percentage in all years and the perception of the social environment had the lowest. In the evaluation of the sub-dimensions of the scale; it was observed that the perception of learning in the 1st year students and the perception of learning, perception of learning climate, and perception on the social environment in 2nd year students were low. It was observed that the perception of learning in the 3rd year students was low.

It is stated in the literature that the perception of the teacher is relatively high in the education programs where teacher-centered approaches are prevalent.[11] In our study, when the DREEM-TR scores and percentages of the students in the sub-dimensions of the scale were evaluated, it was observed that the perception of the teacher had the highest percentage in all years. This situation shows that the teacher-centered approach of our education program continues. Therefore, it is necessary to review the role of the teacher in the education program.

There are many studies on the social limitations of medical school students.[22–24] In our study, when the DREEM-TR scores and percentages of the students were evaluated, it was observed that the perceptions of students on the social environment were the lowest and it was in line with the literature. This result reveals once again the importance of consultancy services in medical education.

It is suggested that teacher-centered approaches should be replaced by student-centered approaches in all higher education specific to medical education.[25,26] It is aimed that students attain self-oriented learning and lifelong learning skills through student-centered approaches. In our study, when the DREEM-TR scores and percentages of the students were evaluated, it was observed that the perception of learning was low in the 1st year, 2nd year and 3rd-year students. We can evaluate the determination of this situation as an opportunity for change in our educational approaches.

One of the valuable contributions of accreditation to institutions is that it enables the monitorization of the program. In this context, the monitorization made with valid/reliable tools indicates the part where the change should start. In this context, when the DREEM-TR scores and percentages of the students were evaluated in our study, it was seen that the perception of learning, perception of the learning climate, and perception of the social environment were low in the 2nd year students.

When the DREEM-TR scores of the students were evaluated in the comparison of years, it was seen that there was a statistically significant difference between the 1st year and 2nd-3rd year, and there was no statistically significant difference between the 2nd year and 3rd year. In addition, in the evaluation of data according to the G-theory, the high relative value (15.2%) of the variance component predicted for item-year supported the difference between the years. We can associate this difference with the accreditation of the faculty in 2019 and the positive impact of many changes in the accreditation process on the students who encountered the faculty for the first time.

The DREEM-TR scale is a suitable tool for evaluating the learning environment, and it has produced valuable findings related to our education program in our study. These valuable findings are suggested to be used by the faculty management for the development and monitorization of the program. We also believe that the continuity of this evaluation within the scope of program evaluation would contribute to the monitoring and development of the training program.

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There is no conflict of interest.
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For this study, informed consent was obtained from all participants.
Consent for publication (include appropriate statements)
This study has been authorized by the authors to be published in the scientific journal Educational Assessment, Evaluation, and Accountability.
Availability of data and material (data transparency)
The data that support the findings of this study are available from the corresponding author, upon reasonable request.
Authors' contributions
GK designed the model and the computational framework and analyzed the data, wrote the manuscript with input from all authors, MİBK contributed to the design and implementation of the research and collected data.

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