Original Research

Factors affecting academic failure in medical students in Iran

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Abstract

Background: Students are considered part of the capital of each country. Several factors can affect their educational status and, as a result, contribute to their academic failure. The current study seeks to investigate the relationship between students' academic failure and the affecting factors with the Iranian Educational Ranking of Universities.

Methods: This is a descriptive cross-sectional study. The required sample size was calculated using Cochran's formula. A researcher-made questionnaire with 5 parts was used to collect data. Kruskal Wallis and Spearman's analysis of variance was used for analysis. The significance level was considered as 0.05.

Results: A total of 1215 people participated; 13.7% of students had had an academic failure and 2.0% of them were on academic probation. There was a correlation between university RAD rank and academic failure (r = -0.098 and $P = 0.0001$) as well as student satisfaction (r = 0.264 – $P = 0.0001$). There was a significant difference between an academic drop and academic grade in three ranks of university (Pv= 0.0001), and, interestingly, having moved from Rank 1 to 3, having academic grade increases, and having academic failure decreases.

Conclusion: According to the findings of this study, the higher ranked the college campus is on the RAD scale, the higher the academic failure rate. For annual assessment of universities, it is proposed that assessment of academic failure and grades be used as a benchmark.

Introduction

Students are human capital[1] and future of all countries.[2] Several factors affect students' academic status[3] leading to academic burnout[4] and possibly academic failure.[5]. Academic failure can delay finding a job and lead to frustration, loss of morale, and ultimately result in a large cost.[6,7] According to the definition of the United Nations' Educational, Scientific and Cultural Organization (UNESCO), academic failure means repetition of grades, early dropout, and lower educational quality.[8] Studies have provided different definitions of academic failure,[9-11]

but all have mentioned educational failure. According to these studies, various criteria such as lower scores, unsatisfactory grade point averages, repeated courses or grades, long education periods, academic probation, being expelled, leaving their programs before the arranged time, and changing disciplines are symptoms of students' academic failure[12-14]. Training a medical sciences student is costly[15-17]. It should be noted that academic failure and its consequences waste expenditures in this field1.[6,18]

Universities vary widely in different regions,[19] and this can be seen in the rankings of medical sciences universities.

Ranking medical sciences universities was first carried out in 2000 to assess the capabilities of medical sciences universities, and its criteria were revised over the next years.[20-21] This ranking was conducted by a plan titled "RAD" (Educational Ranking of Universities) in Iranian universities of medical sciences. This ranking focuses on five areas, namely, educational governance, educational development, educational management, qualitative development, and attention to the comprehensive scientific map of Iran.[22] Rank 1 Universities are mother universities; Rank 2 universities are developing universities, and Rank 3 Universities are newly-established universities.[23] However, there is no detailed description of how each university is placed in these three ranks . In the current study, universities were classified according to implicit explanations and available online content of universities, but it should be noted that Rank 1 universities are put in the one-third of the RAD plan ranking; Rank 2 universities are the middle one-third of the RAD plan; and Rank 3 universities are in the lower one-third of RAD plan.[21] The current study sought to investigate relationships of students' academic failure and its factors with ranks of universities.

Material and Methods

The present analytical cross-sectional study was conducted to investigate relationships of students' academic failure and various factors with the RAD rank and type of universities in 2017. A message titled "Recruitment of research colleague" with project details was first posted in the "Abdi research movement" channel of the Telegram application to selected universities, and then the primary researchers who had necessary qualifications in each type of university, were selected for this project. Shahid Beheshti University of Medical Sciences (Rank 1), Mazandaran University of Medical Sciences (Rank 2), and Abadan University of Medical Sciences (Rank 3) were selected to represent the three academic ranks to participate in this study. The sample population of each university was then estimated and the minimum necessary sample for the sampling of each university was determined using Cochran's formula. Ratios of medical, nursing, midwifery, and paramedical students were calculated for each university, and the minimum necessary sample for each discipline was calculated by multiplying sample sizes of universities. The current research used a convenience sampling method where the sample had passed at least one semester. Students had the opportunity to participate in the study and they were excluded in the case of their refusal. After obtaining necessary permits, researchers referred to the hospitals and faculties of the selected university and explained the research objective to students, then collected data without any names after obtaining verbal consent. Data were collected by using a 5-part questionnaire including the following sections:

A: Demographic data including age, gender, marital status, height, weight, ABO blood group and Rh, birth order in the family, educational major, year of entering the university, grade point average in high school, grade point average at university, academic degree, number of passed courses, number of failed courses, academic probation status, father's job, mother's job, parents' education levels, economic status, distance from home to university, employment status, and smoking status.

B: Questionnaire, Dimensions of Student Satisfaction with their educational majors (24) including 20 5-point questions on Likert Scale

C: Questionnaire on academic failure factors (24) including 15 5-point questions on Likert Scale

D: Prevention of academic failure from student perspective (24) including 13 5-point questions on Likert scale

E: Questionnaire on determinants of academic achievement from student points of view (25) including 5 areas; 1) Learner with 5 questions; 2) Educator with 8 questions; 3) Educational facilities with 5 questions; 4) Family with 3 questions; and 5) Socioeconomic status with 4 questions. All of these were on a 5-point Likert scale.

Validity and reliability of all questionnaires were evaluated; Cronbach's alpha was r=0.80 for questionnaires "B, C, and D" and r=0.84 for questionnaire "E" (24 and 25). Furthermore, research by Changizi Ashtyani et al. was used for students with average points of less than 15 or at least one probated semester to define academic failure (24).

After data collection, analytical and descriptive statistics were calculated using SPSS 16 and Graph Pad Prism 7 software for analysis. Due to the detection of abnormal distribution of findings by the D'Agostino & Pearson Omnibus test with a significance level of less than 0.0001, a non-parametric test was used for the analysis of variance (Kruskal-Wallis); and the Spearman test was used for evaluating relationships. The significance level was considered to be $P<0.05$ in the present research.

Results

In all, 1215 subjects participated (570 people from the Rank 1 university, 356 people from the Rank 2 university, and 289 people from the Rank 3 university). Regarding demographics, 756 students (61.7%) were female, and the average age of all participants was 20.22± 2.62 years. Very few students (74; 6.3%) were married. Blood types of A- and O- had the highest prevalence. A total of 365 students (30.2%) were smokers and most participants were the first-born children. Mean weight and height were 64.89± 13.49 and 169.35± 8.50, respectively and most had acceptable body mass indexes (BMIs). A total of 507 students (42.0%) were referred to the counseling center of the university for counseling. An average point of less than 15 accounted for about 1 percent of average points at high schools, while this range accounted for 158

students (13.09%) of average points at universities. Most students had parents with academic degrees and they entered universities immediately after pre-university and were native to provinces of their education. The average response to research questions was 89.4% (Table 1).

According to student satisfaction with academic majors, 96.7% of medical students, 73.8% of nursing and midwifery students, and 62.4% of paramedical students were satisfied

Table 1. Demographic information

Variable (response %)	Freq	%	Variable (response %)	Freq	%	Variable (response %)	Freq	%
Gender (99.50)			Order of child in the family (97.12)			Father's occupation (99.63)		
Male	463	38.29	First	543	46.02	Governmental	180	15.33
Female	746	61.70	Second	318	26.95	Non-governmental	494	42.08
Age groups (99.42)			Third	164	13.90	Unemployed	500	42.59
18-22	1044	86.42	Forth	83	7.03	Mother's occupation (96.13)		
23-26	149	12.33	Fifth and more	72	6.10	Housewife	775	66.35
27-30	11	0.91	Year of entrance to university (99.75)			Employed	393	33.65
+30	4	0.33	89	23	1.90	Father' literacy (99.18)		
Marriage (96.46)			90	35	2.89	Illiterate	21	1.74
Single	1098	93.69	91	6	0.50	Elementary	73	6.06
Married	74	6.31	92	79	6.52	Middle school	86	7.14
Height (68.47)			93	303	25.00	High school	307	25.48
150-159	105	12.62	94	526	43.40	University	718	59.59
160-169	343	41.23	95	240	19.80	Mother' literacy (99.18)		
170-179	225	27.04	Diploma average score (99.58)			Illiterate	48	3.98
180-189	149	17.91	<18	1043	86.20	Elementary	108	8.96
190-200	10	1.20	15-18	152	12.56	Middle school	121	10.04
Weight (67.73)			13-15	11	0.91	High school	364	30.21
40-59	331	40.22	>13	4	0.33	University	564	46.80
60-79	360	43.74	University average score (99.34			Distance between home and university (98.68)		
80-99	107	13.00	<18	183	15.16	<50	441	36.78
+100	25	3.04	15-18	866	71.75	50-100	141	11.76
Body mass (BM) index (67.65)			13-15	153	12.68	100-200	144	12.01
Severe low BM (<16.5)	17	2.07	>13	5	0.41	200-400	175	14.60
Low BM (16.5-18.5)	73	8.88	Time interval between pre-university and university entrance (99.42)			400-600	101	8.42
Normal BM (18.5-25)	575	69.95	Without distance	944	78.15	600 <	197	16.43
High BM (25-30)	126	15.33	1 years	181	14.98	Being Conditional (98.67)		
Class 1 obesity (30-35)	25	3.04	2 years	64	5.30	Yes	24	1.98
Class 2 obesity (35-40)	5	0.61	More than 3 years	19	1.57	No	1187	98.02
Class 3 obesity (40<)	1	0.12	Smoking (99.50)			The number of conditional courses (100.00)		
Blood group (66.50)			Yes	365	30.19	1 time	22	91.68
A+	30	3.71	No	844	69.81	2 time	1	4.16
A-	254	31.44	Study Degree (100.00)			3 time and more	1	4.16
B+	24	2.97	Bachelor of science	673	55.39	The number of drop credits (91.11)		
B-	175	21.66	Medical doctorate	542	44.61	0	926	83.65

Table 1. Continues

Variable (response %)	Freq	%	Variable (response %)		Freq	%	Variable (response %)	Freq	%
O+	44	5.45	Field of study (100.00)					0.5-1.5	37	3.34
O-	210	25.99		Medicine	542	44.61	2-3	94	8.49
AB+	9	1.11	Nursing	Nursing	279	22.96	+3	50	4.52
AB-	62	7.67		Midwifery	22	1.81	Economical statues (99.09)		
Referring to the University Consulting Center (99.34)				General Health	30	2.47	Low	41	3.41
Yes	507	42.00		Environmental Health	17	1.40	Moderate	565	46.93
No	700	58.00		Surgical technician	88	7.24	Good	527	43.77
The reason for referring to the counseling center (44.97)			Paramedical	Radiotherapy	26	2.14	Perfect	71	5.90
Educational	107	46.93		Radiology	74	6.09	Student' employment (99.59)		
Familial	33	1447		Medical Laboratory	45	3.70	Yes	435	35.95
Mental-psychological	88	38.60		Practical medicine	22	1.81	No	775	64.05
				Anesthesia technician	70	5.76			

with their majors, with a total student satisfaction score of 24.95±4.33. Satisfaction had the highest direct relationship with interest in majors, motivation for continuing education, and parent education, but inverse relationships with major, university rank, and time lag between pre-university and university (Table 2).

Most students had a moderate focus on studying. They liked a free and flexible study method and considered they spent less than an hour per day for study. Most (716) used the Internet for more than 6 hours per day, but 807 students (66.6%) used the internet for their lessons for less than 2 hours. About half lived in dormitories, and 84 students (7.0%) used quotas other than regional quotas. Most students had an intense or moderate interest in their majors and were interested in the continuation of their education and had chosen their majors due to personal interest, but only 282 students (39.7%) "always" or "often" attended classrooms. About half of students found it difficult to access supervisors and advisors. More than half of students considered their specialized courses to be "good" or "excellent", and most reported excellent college education quality. Regarding other factors influencing dropout, 99.1% were responsible (Table 3).

In terms of preventive factors of students' academic failure in all three academic ranks, three options, namely, the educational quality of faculty, the use of expert professors, and improved facilities in dormitories, had the highest impact. on factors preventing students' educational dropout at 98.4 % responsiveness (Table 4).

According to the current study, 166 students (13.7%) experienced academic failure and 2.0% were on probation.

In all, 441 students (36.8%) were native to provinces of their education study, and their total score was 25.21±4.33. A total of 82 (17.6%) nursing and midwifery students, 53 (15.1%) medical students, and 31 (8.3%) paramedical students had academic failure (Table 5). The difference in academic failure and grade point average was significant at three university ranks according to the Kruskal-Wallis test. The average point increased and the academic failure was reduced by moving from Rank 1 to 3. A total of 75 students (45.12%) were referred to counseling centers.

According to the investigation of factors of students' academic achievement, the highest impacts were seen in student motivation, student self-confidence, and interest in the continuation of education at all three ranks; the mean score of factors related to the learner dimension was 6.55±17.65 (out of 25 points), 8.40 ± 27.04 (out of 40) for the educator dimension, 5.46± 17.03 (out of 25) for the educational environment facilities, 2.97± 9.57 (out of 15) for the family dimension, and 4.26± 13.33 (out of 20 points) for the socioeconomic dimension. In all, 97.5% of students answered about the factors affecting their academic achievement (Table 6).

Discussion

According to the results of this study, the higher the university rank , the higher the academic failure rate. The prevalence of academic failure is notable in academic ranks, and the academic educational failure in better ranks conveys the message that there are problems in the education system. According to a systematic review by Azari et al. on comparison of students' academic

Table 2. Student satisfaction with the field of study

Very Dissatisfied	Point range	Type of university	Absolut frequency (%)	Total participates (%)
Dissatisfied	8-15	rank 1	8 (34.78 %)	23 (1.89 %)
		rank 2	7 (30.44 %)	
		rank 3	8 (34.78 %)	
		Total	23 (100.00 %)	
Low satisfied	16-21	rank 1	72 (33.65 %)	214 (17.61 %)
		rank 2	73 (34.11 %)	
		rank 3	69 (32.24 %)	
		Total	214 (100.00 %)	
Satisfied	22-27	rank 1	258 (41.68 %)	619 (50.95 %)
		rank 2	194 (31.34 %)	
		rank 3	167 (26.98 %)	
		Total	619 (100.00 %)	
Very satisfied	28-32	rank 1	218 (65.46 %)	333 (27.41 %)
		rank 2	73 (21.92 %)	
		rank 3	42 (12.62 %)	
		Total	333 (100.00 %)	
Very Dissatisfied	33-40	rank 1	14 (53.85 %)	26 (2.14)
		rank 2	9 (34.61 %)	
		rank 3	3 (11.54 %)	
		Total	26 (100.00 %)	
		Total		1215 (100.00 %)

Direct Correlation (r-spearman)	Reverse correlation (r-spearman)
Interest to the field of study (0.445)	field of study (-0.529)
Motivation to continue education (0.265)	University type (-0.264)
Father' education (0.225)	The time interval between pre-university and university entrance (-0.136)
Mother' education (0.219)	Selecting field of study affected by opinions of others (-0.131)
Economical statues (0.136)	Distance between students' Home and university (-0.110)
Study in 24 hours (0.130)	Difficult access to the supervisor (-0.109)
Semester of education in university (0.130)	Sex/Being female (-0.107)
Body mass index (0.086)	Getting consult from consultant center (-0.106)
	Smoking (-0.078)
	Order of child in the family (-0.085)
	Using of old professor (-0.081)
	Educational drop (-0.071)

failure at universities with better types with those with lower ranks, the research finding was supported, where universities with better educational types had higher academic failure rates.[9] Students with better ranks choose universities with better ranks. Furthermore, universities with better ranks allocate higher budgets for education. The academic failure of these universities could lead to two hypotheses, 1) universities with better types were stricter than lower-type universities, leading to student failure, or 2) universities with better types had lower educational qualifications. According to the Ministry of Health policy reports on the accreditation of educational systems, universities with better types had almost the same position in educational accreditation.[22] Therefore, the researchers' second hypothesis was less likely to occur and the hypothesis that universities with better types are stricter than lower-type universities leading to student failure to get more power.

As in previous studies, there was an inverse relationship between academic failure and female gender in the present research,[10] but it was inconsistent with studies by Tagharrobi et al., and Hoseini et al. on the greater incidence of academic failure in females.[26, 27] Academic failure also had an inverse relationship with age, but no relationship was seen with marriage.[10]

It should be noted that, unlike previous studies, there

Table 3. Other effective factors in educational dropout

Variable	Freq	Percentage	Variable	Freq	Percentage	Variable	Freq	Percentage
Precision and focus in the study			Method of study			How to choose field of study		
Low	305	25.12	precise and planned	156	12.89	Personal interests	878	73.35
Moderate	734	60.46	Non-restricted and flexible	639	52.76	Effects of family and people around	319	26.64
High	175	14.42	Without planning	416	34.35			
Study hours in 24 hours			Internet usage hours in 24 hours			Hours of internet usage in 24 hours for educational purposes		
Less than 2 h	670	55.19	Less than 1	36	3.00	Less than 1	407	33.61
2-4 h	372	30.65	1-2	69	5.77	1-2	400	33.03
4-6 h	127	10.46	2-4	157	13.10	2-4	217	17.92
More than 6 h	45	2.70	4-6	220	18.36	4-6	92	7.60
			More than 6	716	59.77	More than 6	95	7.84
Residence place			University admission area			Attendance in the classroom		
Student dormitory	665	54.82	Area 1	204	16.96	always	246	20.28
With family	482	39.74	Area 2	547	45.47	often	236	19.46
Self-governing dormitory	40	3.30	Area 3	368	30.59	low	387	31.90
Rental homes	26	2.14	Have a quota	84	6.98	rarely	344	28.36
Interest in the field of study			Motivation to continue education			Having access to the supervisor		
Low	120	9.91	low	114	9.43	easy	603	50.80
Moderate	520	42.94	moderate	424	35.07	difficult	584	49.20
High	571	47.15	high	671	55.50	Having access to the counseling unit		
The educational quality of college			professional courses usefulness			easy	567	48.50
Excellent	286	23.71	excellent	178	14.81	difficult	602	51.50
Good	425	35.24	good	511	42.51			
Medium	352	29.19	medium	421	35.02			
Weak	143	11.86	weak	92	7.65			

Table 4. Other factors preventing students' educational dropout

Factor	Total	Rank 1	Rank 2	Rank 3
Improving the educational quality of college or university	80.38	82.97	77.52	78.89
Use of experienced teacher	73.73	67.92	75.00	83.39
Improving amenities in dormitory and university	64.50	60.75	65.16	70.93
Giving university grants	55.77	55.19	55.61	57.09
Encouraging students by teachers	54.19	49.46	58.42	58.13
Use of well-trained educational counselors at universities	54.03	48.74	49.71	69.55
The ability and interest of teachers in teaching and internship	51.62	52.50	45.22	57.78
The existence of proper study hall in dormitory and university	50.95	49.28	49.71	55.70
Providing workshops to learn correct planning for studying, the correct way of studying and learning with the presence of successful students in this field.	46.30	46.77	44.50	47.75
Attention to individual differences of students by teachers during teaching and internship	43.97	40.68	46.91	46.71
Having access to the supervisors and their assistance	41.23	36.37	43.53	48.09
Collecting and compiling the experiences of successful students and distributing it periodically among other students	38.40	36.91	35.95	44.29
Student admission based on diploma average score (instead of national entrance exam)	21.11	18.99	22.75	23.18

Table 5. Frequency of student academic failure by universities and related factors (responsiveness rate: 100.00%).

Field of study	rank 1	rank 2	rank 3
Medicine	67 students	12 students	3 students
Nursing	19 students	19 students	15 students
Paramedical	10 students	15 students	6 students
Total (% of university)	16.80%	12.92%	8.30%
Direct Correlation (r-spearman)		**Reverse correlation (r-spearman)**	
Reduction of discipline in the study (0.173)		Attention and focus of student in the class (-0.152)	
Having a quota (0.082)		University type (-0.098)	
Age (0.073)		Study in 24 hours (-0.098)	
		Willing to continue education (-0.095)	
		Interest to the field of study(-0.090)	
		Internet usage hours in 24 hours (-0.081)	
		Ease in access to the consulting center (-0.074)	
		Sex/Female (-0.066)	
		Ease in access to the supervisor (-0.065)	

was no relationship between academic failure and other demographic characteristics such as economic status of family members or parents' education, degrees, or jobs.[24,28-30] Distances between students' homes and universities and time lag between high school and the university had no relationship with academic failure, contrary to studies by Dehbozorgi et al. and Vanhanen and Janhonen.[31,32]

About 1 percent of high school students had average points of below 15, while 13% of university students averaged points below 15. Furthermore, the average point of above 18 at high schools dropped by almost 71 percent at universities. Unlike other studies, there was no relationship between academic failure with university or high school average points.[11,24] Satisfaction with academic majors had an inverse relationship with university types; in other words, universities with better types showed students had lower satisfaction with their major; and this difference was significant. Furthermore, academic majors had a significant impact on satisfaction with major, meaning that by moving from medicine to nursing, midwifery, and paramedics, the satisfaction with major was reduced, and this was consistent with the previous studies.[13,33-35]

According to studies on relationships of the academic failure with determinants of academic failure (Table 5), it was found that concentration in the classroom is the single most important and simple factor in preventing academic failure. Increasing the order in the research can also reduce students' academic failure. This was confirmed by the previous studies.[27,34-36]

Among determinants of preventing academic failure in terms of students' views, improved educational quality of universities and colleges and recruitment of experienced professors along with improving facilities of universities

and faculties can be effective in preventing this, but it is necessary to pay attention to determinants of academic achievement in addition to determinants of academic failure. From students' perspectives, all three factors with the greatest impact on academic achievement were reliant on students. Creating an appropriate educational environment can help to prevent academic failure, but the current study found that students considered motivation and high self-confidence for the continuation of study as effective factors in their academic achievement.

Conclusion

The findings of the current research were very broad and practical, but the most important finding was an inverse relationship of the university RAD rank type with students' academic failure and satisfaction with their majors because students' academic failure in a better university type wastes more capital cost. Based on the findings of the current research, the self-discipline among students who attend better-ranked universities had a higher significant effect on students' performance; and satisfaction with majors could support researchers' perspectives in this study. The current research was not a conclusion to studies on academic failure at medical universities because academic failure is a variable subject dependent on many factors. Therefore, based on researchers' experiences in the current study, it is suggested to evaluate the academic failure and average points as criteria for annual evaluation of universities to prevent the loss of human capital by better management.

It should be noted that it was difficult to conduct this study because there was little inter-university cooperation and the issue of registering research separately at each university was a deterrent that postponed the research

Table 6. Factors affecting students' educational achievement

Dimension	Factors (of 5 scores)	Rank 1		Rank 2		Rank 3	
learner dimension	Student motivation	0.74±0.49	21.27±2.68	1.39±0.71	8.65±3.36	4.62±0.67	21.78±2.98
	Student self-confidence	4.55±0.64		1.60±0.80		4.54±0.69	
	Student interest in the field of study	4.59±0.69		1.53±0.80		4.55±0.72	
	Regular attendance of student in class	3.53±1.00		2.18±1.04		3.88±0.99	
	Attention and focus of student in the class	3.96±0.93		1.95±0.97		4.19±0.93	
Familial dimension	Sensitivity and insistence of parents on the education of children	4.29±0.88	31.23±4.54	1.79±0.93	16.49±5.21	4.29±0.88	31.98±5.05
	Guiding children in education, by family	4.21±0.95		1.93±0.98		4.21±0.95	
	Warm and intimate relationship with the family	4.55±0.74		1.66±0.90		4.55±0.74	
Dimension of environmental educational facilities	Number of faculty members	4.03±1.00	19.57±3.07	1.98±1.01	10.32±3.50	3.99±1.01	2040±3.36
	The suitability of the student dormitory environment in terms of population and facilities	3.52±1.05		2.42±1.12		3.45±1.18	
	Students' access to books and national and international publications in the library	3.71±1.08		2.23±0.96		3.81±1.00	
	The suitability of the physical environment of the class in terms of light, heat, space, table and chair arrangement, and the number of class members	3.72±0.99		2.09±0.97		3.85±0.96	
	Facilities of clinical teaching environment	3.81±0.95		2.40±1.05		3.84±0.97	
Educator dimension	teacher's level of education	3.13±1.05	10.57±2.34	2.66±1.20	6.99±2.49	3.45±1.10	10.83±2.64
	teacher' teaching experience	4.17±0.91		1.96±1.01		4.28±0.87	
	Teacher mastery on the scope of lesson	4.05±0.91		1.93±0.99		4.24±0.91	
	Respectful relationship between teacher and student	3.94±0.96		1.99±0.96		4.12±0.89	
	Continuous evaluation of the student (through oral questioning, taking quiz or ...) during the semester	4.30±0.82		1.77±0.93		4.32±0.82	
	Using different methods of teaching by the teacher such as group discussion, teaching by the student and ...	3.02±1.06		2.68±1.16		3.19±1.18	
	Teacher use of learning assist tools during teaching	3.43±1.01		2.35±1.04		3.55±1.07	
	Timeliness and timely presence of teacher in class	4.11±0.90		1.97±0.99		4.09±0.98	
socioeconomic-dimension	Giving grants (student loans) to students	3.72±1.06	15.37±2.81	2.09±1.01	8.46±2.98	3.80±1.08	15.641±2.79
	Income and economic status of family	3.71±0.96		2.24±1.00		3.70±0.97	
	Parental education level	3.54±1.04		2.49±1.15		3.48±1.11	
	Career future of the field of study	4.39±0.84		1.64±0.91		4.43±0.77	

and delayed its implementation. It is suggested to create a comprehensive system for inter-university studies to conduct more high-quality studies with a larger network of researchers.

Competing interests
We did not have any conflict of interest with any organization or individual in this study.

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