ORIGINAL ARTICLE

جدارة نتائج امتحانات نهاية الفصل عن طريق تعيين الترابط بين علامات طلاب كلية الصحه في جامعه مشهد للعلوم الطبيه

المقدمه: احدى أساليب تقييم الطلاب هو اختبارات نهاية الفصل. لتحليل الاسئله يمكننا إستخدام معايير كمقياس الصعوبه و مقياس التمييز او تعيين تاكسومونى الاسئله، و لكن هذا الاسلوب يعتبر أسلوب ضمنى للإختبار و لا يتطلع الى الترابط بين الإختبارات. الترابط الباطنى بين علامة اختبار نهايه الفصل و المعدل تشير بشكل غير مستقيم الى الروابط بين نتائج الإختبارات المتعدده. هذه الدراسه تهدف الى تعيين مستوى الترابط بين علامات طلاب كليه الصحه في جامعه مشهد للعلوم الطبيه في عام ٩٣-١٣٩٢ ه .ش.

الأسلوب: اشترك في هذه الدراسه المقطعيه ١٥٨ من طلبه كليه الصحه. تم استخراج المعلومات الديموغرافيه لكل طالب من ملفه الشخص و المعدل و العلامات. تم استخدام اختبار بيرسون لاجل تعيين ترابط علامات الطلاب مع المعدل العام. و تم تعيين ($P<0.05$).

النتائج: اشارت النتائج الى أن معدل الطلاب المشرهين و الإناث كانت اعلى من الطلاب الغير مشرهين و الذكور. ايضا اشارت النتائج في مجال اختبار ترابط العلامات مع المعدل، اقل مستوى في الترابط في الدروس العامه و اكثر مستوى كان في الدروس الإختصاصيه.

الإستنتاج: نظرا لقوة وسهوله اختبار الترابط يمكننا استخدام هذا الإسلوب كاسلوب تقييمى جيد.

كلمات المفتاح: جدارة النتائج، كليه الصحه.

Validity of Student Course Final Exams Scores through Determine Correlation, Health School, Mashhad University of Medical Sciences

Background: Final exam is one of evaluation methods of students. We can utilize indexes such as difficulty index and discrimination index in order to analyze each test questions or to determine questions taxonomy. However, these methods have inter- testing look and do not consider the relationship between various tests results. Inter correlation between final exam score and the average indirectly shows the relationship between various tests results. The present study is performed with the aim of determining Bachelor students' scores correlation rate in the curriculum year of 92-93 in health college of Mashhad Medical Sciences.

Methods: in this cross- sectional study 158 B.S students were examined in three different health areas of interest in Health College. Average, students' scores in each course and curriculum case demographic characteristics were elicited. We used Pierson test for correlation test of students' scores with total grade. Test level of significance considered $p<0, 05$.

Results: research findings shows that a higher average in Mashhad indigenous and female students than Mashhad non- native and male students. Furthermore, the results of scores correlation test with grade indicate the least correlation rate in general courses than in specific courses.

Conclusions: we can make use of this methodology for test assessment with respect to correlation test validity and simplicity.

Keywords: Results validity, Health College

Monavar fzalaghaee[1]; Zohre Moeini[2]; Mojtaba Afsharnia[3]; Roya Peirovi[3,4,*]; Hadi Eslami[4]; Hossein Alidadi[5]

[1]Department of Biostatistics, School of Health, Health Sciences Research Center, Mashhad University of Medical Sciences, Mashhad, IRAN

[2]Student Research Committee, Shiraz University of Medical Sciences, Shiraz, IRAN

[3]Department of Environmental Health Engineering, Gonabad University of Medical Sciences, Gonabad, IRAN

[4]Environmental Science and Technology Research Center, Department of Environmental Health Engineering, Shahid Sadoughi University of Medical Sciences, Yazd, IRAN

[5]Department of Environmental Health Engineering, Health Sciences Research Center, Mashhad University of Medical Sciences, Mashhad, IRAN

[*]Department of Environmental Health Engineering
Gonabad University of Medical Sciences
Gonabad, IRAN

Tel:05157223028
Fax: 05157223814
Email: peirovi.r@gmu.ac.ir

Received: July 15, 2015
Accepted: November 8, 2015

مشہد یونیورسٹی آف میڈیکل سائنسس میں میڈیکل فیکلٹی میں فائنل اگزام کے نمبروں میں یکسانیت کی بنیاد پر نمبروں کا اعتبار

بیک گراونڈ: ٹرم کے آخر کا امتحان طلباء کی صلاحیتوں اور توانائیوں کو جانچنے کا ایک طریقہ ہے۔ ہر امتحان کے سوالات کا تجزیہ کرنے کے لئے مختلف طریقے استعمال کرسکتے ہیں لیکن ان طریقوں سے محض امتحانات کے نمبروں کا پتہ چلتا ہےکہ لیکن امتحانات کے مابین نسبت کا کوئي سراغ نہیں ملتا، ٹرم کے آخر میں لئے جانے والے امتحان میں نمبروں کی یکسانیت سے بالواسطہ پرسنٹیج اور مختلف امتحانوں کے آپسی تعلق کو بھی بیان کرتا ہے۔

روش: اس تحقیق میں ایک سو اٹھاون پوسٹ گریجویٹ کے طلباء نے شرکت کی جن کا تعلق میڈیسین کے تین مختلف شعبوں تھا۔ ہر موضوع میں طلباء کے اوسط نمبر اور ان کی ڈیموگرافیک کوائف ان کی فائل سے نکالے گئے۔ نمبروں میں یکسانیت کی جانچ کرنے کےلئے پیرسن ٹسٹ سے سال پورے تعلیمی سال کے اوسط نمبروں کا تجزیہ کیا گیا۔

نتیجے: اس تحقیق سے پتہ چلتا ہےکہ مشہد کے مقامی طلباء اور لڑکیوں کا اوسط دوسرے شہر کے طلباء سے اچھا تھا۔

سفارش : اس روش کے قابل اعتبار اور سادہ ہونے کی بنا پر اسے امتحانات کی جانچ پڑتال کے لئے استعمال کیا جاسکتا ہے۔

کلیدی الفاظ: امتحانات، ٹرم کے آخرمیں، میڈیسن، جانچ پڑتال ۔

اعتبار نتایج امتحانات پایان ترم از طریق تعیین همبستگی نمرات دانشجویان دانشکده بهداشت دانشگاه علوم پزشکی مشهد

مقدمه: یکی از روش‌های ارزشیابی دانشجویان امتحانات پایان ترم می باشد. برای تحلیل سؤالات هر آزمون می‌توان از شاخص‌هایی مانند ضریب دشواری و ضریب تمیز استفاده یا تاکسومونی سؤالات را تعیین نمود، ولی این شیوه‌ها نگاه درون آزمونی دارند و به روابط بین نتایج آزمون‌های مختلف توجه‌ای ندارند. همبستگی درونی بین نمره پایان ترم با معدل بطورغیرمستقیم روابط بین نتایج آزمون‌های مختلف رانشان می دهد. مطالعه حاضر با هدف تعیین میزان همبستگی نمرات دانشجویان کارشناسی سال تحصیلی ۹۳-۱۳۹۲ دانشکده بهداشت دانشگاه علوم پزشکی مشهد انجام شد.

روش: در این مطالعه مقطعی ۱۵۸ دانشجو درمقاطع کارشناسی پیوسته و ناپیوسته در سه گرایش مختلف بهداشت از دانشکده بهداشت مورد بررسی قرار گرفتند. معدل ، نمرات دانشجویان در هر درس و مشخصات دموگرافیک از پرونده تحصیلی استخراج گردید. برای آزمون همبستگی نمرات دانشجویان با معدل کل از تست پیرسیون استفاده شد سطح معناداری آزمون $P<۰,۰۵$ در نظر گرفته شد.

یافته ها: یافته‌های مطالعه، بیشتر بودن معدل در دانشجویان بومی مشهد و دختران را نسبت به دانشجویان غیر مشهدی و پسران نشان داد. همچنین نتایج حاصل از آزمون همبستگی نمرات با معدل، کمترین میزان همبستگی در دروس عمومی نسبت به دروس اختصاصی را بیان کرد.

نتیجه گیری: با توجه به سادگی و روایی آزمون همبستگی، می‌توان از این روش برای سنجش آزمون استفاده کرد.

واژه های کلیدی: اعتبارنتایج، دانشکده بهداشت

INTRODUCTION

Examining the history of academic services can make clear the relationship between university and national development. Because if the history of academic services development correlates with social, political and economic development and progress in terms of time and their vicissitudes and swings coincide, this can to some extent indicate their correlation (1). In recent decades higher education system experienced vast social, economic, cultural changes due to facing the development of technology and fulfilling the needs of society encountered fundamental issues (2). Failure to achieve the predetermined educational goals is one of the most important problems of each educational system (3). One of the key roles of higher education system is training efficient human force to work in different necessary parts of society. Producing knowledge, fulfilling the needs of society, training experts, and finding solutions to solve social problems are some of the main and final goals of universities(2). Teaching must be done through s suitable methods. Providing satisfaction and learning motivation in students and teachers' teaching style requires a scientific context (4).

There are different factors involved in the education qualitative improvement. One of the most important ones is curriculum change or revision, improvement and change of the teaching style, the change in education supporting process as well as assessment methods and curriculum development assessment(4). Assessment or evaluation means determining subject value or judging the value, importance and quality of a phenomenon. This phenomenon can be a student, teacher, educational system or curriculum in educational issue (5). In each curriculum, assessment is an important column that can conduct training from static status to dynamic one. Furthermore, it is one of the outstanding features in educational activities process and creates the possibility to recognize strengths and weaknesses. We can take suitable steps toward evolution making and educational reformation by reinforcing positive features and obviating insufficiencies (6). Assessment method can improve learning approach and increase students' learning (7). Lack of fundamental assessment of educational programs even in general section is more tangible and probably this part of program is one of the most undeveloped features of formal and informal education process in general organization. Program and curriculum evaluation has attracted considerable attention in organizations and institutes of higher education human source managers and experts (2). According to the experts, reforming evaluating methods, as the most important column of education, will result in the improvement of education more effectively. One of the essential components of educational planning is assessment (8). Classroom assessment structures can affect processes with the aim of improvement and curriculum performance. Hence, a great deal of attention must be attracted to the assessment method and its consequences in designing educational methods (9). At the end of each course, test persuasive learning will not be tested; rather the knowledge will be tested since learning is an internal action. We can make use of students' evaluation results to judge their performance and judge about the effectiveness of quality, methods and materials. An effective evaluation not only has considerable role in students' distinction, but also helps the teacher in evaluating his activities and an appropriate solution to solve the curriculum problems can be proposed. It should also be noted that average scores of different courses is not independent of its course teacher (10). Assessment follows different aims such as students' ranking, understanding their educational problems, evaluating applied teaching methods and the degree of success in the related courses. It should be considered that assessment has been an inseparable part of education and each student performance must be along with evaluated educational goals and assessment methods must be in harmony with educational purposes. Therefore, evaluation is a continuous phenomenon and must accompany students' feedbacks (8). Generally, teachers utilize stage assessment, but consider final exam assessment as the most important factor (11). Examining students' exam marks during the course and comparing them in different educational units can indicate students' scores validity indirectly. Little difference in students' scores and high internal correlations can be indicative of exams' internal correlation and indirectly reflects the validity rate of exam scores. We can make use of indexes such as difficulty index and discrimination index or determine the questions taxonomy to analyze the questions of each test. However, these methods have inter -testing look and do not consider the relationship of tests results (12).

There are different factors affecting the correlation rate and the average. We can refer to gender, age, marital status, teaching style, course teacher, course number of units, methodology, etc. as some important factors. So far, many researchers addressed the effects of these factors on the results of assessment. Campos et al, did a research in this field study with the title of family doctor assessment correlation which gain success in university theoretical courses (13). Moreover, another research was performed in Zahedan Medical Sciences University by the title "examining the effective factors on curriculum development" that shows the most important factors for academic achievement were studying methods, time of study, and interest in field of study as well as concentration and attention at the time of study. According to the results of this study, holding educational workshops regarding curriculum planning, learning and studying methods can be effective in students' academic achievement (14).

With respect to the above-mentioned subjects, it appears that analyzing exam questions and students exam scores in various courses can be applied for assessing the performance of teachers and different educational groups. If the smart students' marks in most courses have little correlation with a course or vice versa such case will be noticed in a weak student, this question arises that why this mark has no correlation with other courses. Such distinctions can be understood only through examining scores internal correlation (15). Due to inevitable importance of final exam evaluation, and by considering that no investigation and

comparison has so far been done among the assessment results of fields of general, environmental and occupational health, this research is performed with the aim of determining the correlation rate of B.A students' scores in the curriculum year of 92-93 in Health College of Mashhad Medical Science University.

METHODS

In this cross- sectional research, research units were B.S students of Health College of Mashhad Medical Science University. First, research subject was examined in university education development center. Then the project was approved and necessary licenses were obtained, and then we referred to college department of education in order to collect data. With respect to research goals which was comparison of B.S students' scores correlation and by choosing the curriculum year of 1392-93, the second mentioned semester data was chosen as common semester for investigation since the entrance to university semester of these two groups were different and on the other hand B.S (associate degree) had only apprenticeship as course unit in the last semester. All final exam marks along with the same semester average and demographic characteristic of students though without mentioning the students' names were elicited. All final exam marks in each course was defined as a constant. To this point, if a student takes the same course more than once and had different marks, we calculate the average of them and entered it in statistical analysis. Finally, by omitting guest and exchange students, related information about 158 students 'scores were statistically analyzes by SPSS software.

RESULTS

In this study, we analyzed 158 Mashhad Health College students 'scores. On the whole, according to table 1, finding shows that mean GPA of all female students was higher than the males and there was a level of significance (p, 0.001). The mean GPA in general health and occupational health was higher than environmental health students. In addition, the resultant outcomes of correlation test between B.S and associate had no level of significance.

Correlation test results by separating gender, field of study and area were shown in the following table.

According to the table 2, correlation test shows that by aging associate student had a decrease in average GP as 0.204 but was not statistically significant. In B.S students, there was no significant relationship between the mean and the age.

Presented courses scores in the second semester of 92-93 curriculum year, and total average in the B.S and associate students in three health fields of study were investigated. The correlation test results among different courses and the average of general health B.S students were presented in table 3. It shows that the course Microbiology had the highest scores and school health had the lowest correlation with the students 'total term average.

According to the table4, the correlation test among different courses and the average of B.S students of occupational health shows that the courses general mathematics and first aids had the highest correlation and the course Islamic thoughts had the lowest correlation with the students' term total average.

Table 1. GPA based on demographic information

characteristics		number	standard deviation(Mean)	Exam results	
				t	P value
Academic grade	B.S	77	15.88± 1.63	-0.352	0.727
	associate	81	15.98 ± 2..35		
gender	female	119	16.19 ± 1.41	2.30	0.026
	male	39	15.16 ± 2.65		
Field of study	Environmental health	55	15.20 ± 2.23	7.51	0.001
	General health	56	16.46 ± 1.22		
	Occupational health	47	16.45 ± 1.71		
city	Mashhad	83	16.18 ± 1.61	1.75	0.082
	others	75	15.66 ± 2.05		

Table 2. the correlation between total mean of B.S and associate students

Academic area	number	Age average	Mean GPA	Correlation coefficient	Level of significance
B.S	77	21.55 ± 1.56	15.88 ± 1.63	- 0.204	0.0076
associate	81	27.53 ± 5.58	15.98 ± 2.03	0.072	0.524

Table 3. The correlation between the course scores and total GPA of B.S general health students

courses	Scores' average	Correlation coefficient	Level of significance
Interpretation of Quran	16.23	0.569	0.002
Vital statistics	14.68	0.681	< 0.001
Principles of epidemiology	16.94	0.539	0.003
microbiology	13.45	0.762	< 0.001
Regulations of nutrition	15.18	0.714	< 0.001
Health economy	17.3	0.699	< 0.001
School health	18.31	0.217	0.258
Semester mean GPA		16.29	

Table 4. The correlation between the course scores and total average of B.S Occupational health students (n=21)92

courses	Scores' average	Correlation coefficient	Level of significance
Interpretation of Quran	17.43	0.585	0.011
Islamic Thought	14.47	0.346	0.135
Solid mechanics	12.90	0.766	< 0.001
Specific physics	16.85	0.636	0.002
Analytical Chemistry	16.85	0.648	0.002
General mathematics	18.34	0.861	< 0.001
First aids	18.01	0.794	< 0.001
Knowing industries	14.93	0.761	< 0.001
Total average		16.37	

Table 5. Correlation between course scores and total average of B.S environmental health students (n=27)90

courses	Scores average	Correlation coefficient	Level of significance
Iran Islamic Revolution	17.15	0.159	0.448
Soil Mechanics	14.78	0.753	< 0.001
Urban and industrial solid waste	13.50	0.719	< 0.001
exploitation and maintenance of water and wastewater	13.38	0.694	< 0.001
Environmental health management in emergencies	14.96	0.682	< 0.001
Introduction to Model- making in Environmental Health systems	15.04	0.775	< 0.001
Environmental laws and regulations and environmental health	14.57	0.714	< 0.001
Industrial wastes	15.27	0.773	< 0.001
Total average		15.06	

According to table 5, the correlation test examination among different courses B.S environmental health students' average shows that the courses model- making in environmental health systems and industrial waste water had the highest correlation and the course Iran Islamic revolution had the lowest correlation with the students' whole term average.

According to table 6, correlation test in associate general health group displays that the course environmental health had the highest and the course human ecology had the lowest correlation with the total average.

The correlation in associate B.S occupational health as presented in table 7, shows that the course Principles of Sampling had the highest and the course Work-related diseases (2) and general mathematics 2 had the lowest correlation with the average.

According to table 8, after analyzing the courses in B.S

associate students of environmental health, correlation test results show that the courses Food inspection and control and Environmental *chemistry* had the highest and the course mathematics had the lowest correlation with the total average.

DISCUSSION

Assessment is one of the most important ways of investigating the efficiency of a system. In order to have a dynamic and effective higher education system, an efficient and compiled assessment program is needed. In addition to evaluating the students and their knowledge, having a standard assessment program can be an appropriate feedback of the knowledge, transferring the knowledge skill, and teachers command. We examined different factors such as gender, field of study, being native as well as courses correlation with students' total average. Our findings show that among the three different health areas, mean GPA of environmental health students was lower than the other two fields of Health. It could be due to numerous calculations and the engineering nature of this field courses. The high school major of environmental health students was science. Therefore, these students did not learn mathematical and physics based courses specifically and they may face problems calculating mathematical and physics based courses. In addition, based on the results, and mean GPA of Mashhad student was 0.5 higher than non-native students and average deviation of Mashhad non-native students was more than native ones. This difference may be as a result of different problems and difficulties that students who reside in dormitories may face with. Furthermore, being away from friends and family affects learning level and concentration. In order to obviate these problems, authorities can revise and reconsider universities acceptance rate in different cities and take native students in their own birthplace as the most important factor of students' acceptance. The results of correlation test in our study shows different correlations between different courses and the average. In most tests, general courses had the lowest and the specific courses had the highest correlation with the average. A similar research result titled" the validity of academic achievement exams through Pharmacy students' scores correlation in Kerman Medical Sciences University" confirms this case. In that study, there is low correlation in physical education course and the other courses (12). A revision of courses with low correlation in the relevant specific group and decision-making regarding different ways of holding the exams in other groups expect the specific group could be useful and practical. Correlation test results demonstrate that the average decreases to 0.204 by aging. However, this decrease was not statistically significant.

Table 6. Correlation between course scores and total average of B.S general health students

courses	Scores average	Correlation coefficient	Level of significance
Learning computer skills	15.59	0.544	0.003
Biochemistry	15.39	0.50	0.008
Human Ecology	18.07	0.403	0.037
rehabilitation	16.91	0.622	0.001
Environmental Health 1 water	17.17	0.787	< 0.001
Vital statistics	15.79	0.759	< 0.001
Health education and communication	15.37	0.549	0.003
Food health	16.69	0.709	< 0.001
Total average		16.65	

Table 7. Correlation between course scores and the total average of B.S occupational health

courses	Scores average	Correlation coefficient	Level of significance
Islamic Thought 2 (Prophet hood and Imamat)	15.68	0.727	< 0.001
General mathematics 2	17.87	0.689	< 0.001
Vital statistics (2)	14.83	0.732	< 0.001
Specific physics	17.42	0.816	< 0.001
Principles of Sampling the Air	14.48	0.861	< 0.001
Work- related disease 2	17.38	0.618	< 0.001
Specific English	15.70	0.703	< 0.001
Safety in the workplace 2	14.64	0.853	< 0.001
Total average		15.98	

Table 8. Correlation between course scores and the total average of B.S Environmental health students (n=28) 92

courses	Scores average	Correlation coefficient	Level of significance
Mathematics	12.40	0.373	< 0.001
Computer applications	15.46	0.539	< 0.001
Application of Statistical Methods in Environmental Health	15.32	0.569	< 0.001
Environmental chemistry	15.75	0.689	< 0.001
Environmental microbiology	16.00	0.439	< 0.001
radiation health and protection	15.58	0.633	< 0.001
Control and inspection of food	17.80	0.696	< 0.001
Principles of hydrology and hydrogeology	16.66	0.557	< 0.001
Total average		15.34	

Aging and matrimony affect the life problems. This decrease in average may be as a result of increase in life problems and job status. Since most of the B.S (associate) are married, they dedicate less time to studying than single students. Nevertheless, in another study it is proved that older students contribute more to training courses. It is suggested to consider and study theoretical and practical courses in different age groups and different year of university entrance in order to better analyze the effect of age on students' scores (12).

Overall, it can be said that high standard deviation in each course is indicative of more students' scores variation or dispersion in that course. This variation in a classroom can reflect less course correlation with total average. In addition, dispersed score and high standard deviation in a group indicates the course assessment was not standard. The comparison of the mean GPA of female and male students showed that female students had higher mean GPA. This significant difference could be due to boys' financial independence in the family. Especially, when they get married they spend more time working. Besides, interest in studying is less in men than in women and they dedicate less time studying. According to above-mentioned reasons women spend less time in society. Another research, which was done on the female and male students' scores though a written test, confirmed this result. In that study, female students had better performance than male students in written exams. There was no difference in students' valuation scores of teachers. However, female students got better marks in the apprenticeship final exam (16). To confirm the results of this study we can refer to another research working on the effective factors involved in the success of Medical science Universities students. The study also indicates that among demographic factors gender has an effect on students' educational achievement and female students were not more successful than male ones (14).

We can make use of this method for rating the assessment in different majors, grades and courses with respect to simplicity and validity of correlation test. Likewise, by replacing teachers' assessment by students we can omit biased and unreliable evaluations. In this study we examine the students' scores in one semester. It is suggested to perform this research on different course units and apprenticeship of on students of health fields and based on results we can have a better and more careful programming about different parts.

Financial Resources

The present study, number: 930593, is approved by Research Deputy of Mashhad University of Medical Sciences

Conflict of interest

The authors declare no conflict of interest.

REFERENCES

1. Sedghi Bokani N, Soofi S. The role of higher education in the national development in accordance with spatial planning, localization of development of higher education regional Seminar. Azad Islamic University, Sanandaj; 2010. [In Persian].

2. Sharifzadeh F. The necessity of identifying educational system and its role regarding country's social-scientific development: A research on university undergraduate public administration program. Sociological and cultural studies 2011; 2(1): 79-112. [In Persian].

3. Bijari B, Javadinia SA. The study of medical students' satisfaction with active participation in the presentation of the topic of poisoning. Future of medical education journal 2014; 4(1): 3-7.

4. 4.Adhami A, Javadi Y, Haghdost AA. Relationship between facilities and manpower of basic sciences departments and academic achievement of medical students in Kerman. The journal of Qazvin University of Medical Sciences 2002; 6(2): 56-63.

5. Danesh Kazemi AR, Davari AR, Momeni Sarvestani M. Correlation between the scores of dental students in theory and practical restoration courses from 1991 till 2012. Journal of medical education and development 2013; 8(2): 57-64. [In Persian].

6. Hejazi E. Ethnical necessities and features of students' assessment". Abstracts of the First national Seminar of Methods of Teaching and Learning at University and Theological Schools; 2015. [In Persian].

7. Mahmoodi MR, Baneshi MR, Mohammad Alizadeh S. Influence of assessment method selection in studying and learning approaches: Is it necessary to

change assessment style? Future of medical education journal 2014; 4(2): 35-40.
11. Delaram M. Evaluation of students by faculty members and educational staff at Shahr-e-Kord University of Medical Sciences in 1386-87. Journal of medical education and development 2008; 2(2): 9-15. [In Persian].
12. Bahmanabadi S, Baluchzade F. Determining the role of achievement objectives in mediating the relationship between classroom assessment structure and academic achievement: A descriptive study. Iranian journal of medical education 2013; 13(2): 123-33. [In Persian].
13. Karamdoost NA. Analyzing the relationship between students' evaluation of professors' teaching at psychology and education faculties and their mean score of the courses during from 98 - 99 till 2000 - 2001. Journal of psychology and education 2004; 34: 1.
8. Komeili Gh, Rezaee Q. Faculty member's method of evaluation at Zahedan University of Medical Sciences. Iranian journal of medical sciences 2001; 1(4): 52-7. [In Persian].
9. Adhami A, Haghdoost AA, Khazaeli P, Afzali M. Internal consistency of academic scores as an index of the validity of course exams: a study in Faculty of Pharmacy, Kerman University of Medical Sciences. Strides in development of medical education 2012; 9(1): 58-64. [In Persian].
10. Campos-Outcalt D, Witzke D, Fulginiti J. Correlations of family medicine clerkship evaluations with scores on standard measures of academic achievement. Fam Med 1994; 26(2): 85-8.
14. Saravani S, Dehghan Haghighi J, Abed-Saeedi Z, Homayouni Zand R. An examination of effective factors on academic success of students of Zahedan Medical University. Future of medical education journal 2013; 3(3): 35-40.
15. Haghdust A, Esmaeili A. Internal consistency of medical students' scores in general and basic science exam, Kerman University, Iran, 2006. [In Persian].
16. Bienstock JL, Martin S, Tzou W, Fox HE. Medical students' gender is a predictor of success in the obstetrics and gynecology basic clerkship. Teach Learn Med 2002; 14(4): 240-3.