Admission Systems to Dental School In Europe:

A Closer Look at Flanders

Tine Buyse¹, Filip Lievens¹, & Luc Martens²

¹Department Personnel Management and Work and Organizational Psychology, Ghent University, Ghent,
Belgium

²Paediatric Dentistry and Special Care, Ghent University, Ghent, Belgium

Key Words: Admission, Selection, Medical and Dental Students

Abstract

Dental education in Europe faces enormous challenges. One deals with the admission to dental school. Although admission procedures vary considerably across Europe, a characteristic of some systems is that the same procedure is used across students who will ultimately pursue different majors (medical or dental). This is based on the assumptions that there is no significant difference in these students' scores and that the requirements for medicine and dentistry are equal.

This study examines these assumptions in the admission exam "Medical and Dental Studies" in Flanders. Students who pass may choose whether they start medical or dental education. Over an 8-year period (2000-2007), admission exam scores of students starting medicine ($n=4492$) were compared to those of students starting dentistry ($n=547$). Second, the validity of this exam is examined for both medical and dental education.

It was found that students starting dentistry had a significantly lower total score on the admission exam than students starting medicine. Differences were especially striking for the cognitive part of the admission exam. For both medical and dental students the admission exam score was a valid predictor of academic grades in the first three years, although correlations were lower for dental education.

These results have implications for admission procedures in countries where the same system is used for both majors. The findings that students who have a lower score choose dental education and that the validity of the exam is slightly lower for dentistry, raise questions about using the same admission exam for two obviously different majors.

Introduction

In 1999, the Bologna Declaration aimed to make the EU higher education community more transparent in order to place the EU as a world leader in higher education and to compete with the global market for students (1,2). In the domain of dental education, the aim is to harmonize the activity of the dental schools in achieving the EU standard for a graduate to be registered within the European Union as a dentist. With dental education moving toward a more European and even global context, it is time to examine the challenges that will test undergraduate education for dentists of the future (3).

So far, the discussion on dental education in Europe has mainly focused on the objectives of dental education and on the ways information and new skills should be provided to students (4-6). A common vision is that those selected as the dentists of the future should be capable learners, fascinated by knowledge and research, open-minded, communicative and socially competent, and open to the promotion of health and to all preventive and curative aspects of their chosen profession (7). Clearly, such dental curriculum objectives provide a firm basis for designing dental education. Similarly, these objectives play a key role to conceptualize admission procedures that can reach these objectives because the initial quality of students who choose dental education also influences the results of the educational efforts undertaken.

Due to historic, economic and cultural reasons the requirements for admission to dental education and the specific admission procedures used vary widely between the countries of Europe (7,8). Some countries allow everyone to start in the first year (e.g., France). Selection into the second year of dental (and in the latter country medical) school is then made on the basis of the results of competitive end-of-year examinations.

Most countries, however, operate a numerus clausus which is set by the national government. In one system, countries (e.g., Germany, Ireland, and Norway) determine specific minimum academic entrance requirements in terms of high school grades. In Ireland, for example, entry into university education (including dental school) is based solely on academic performance in the Leaving Certificate Examination at the end of formal school education (9). In Germany, main attention is being paid to the grade of the final school leaving exam (called Abitur). In Norway, the criteria for admission to the dental faculty are outstanding school records (especially on mathematics, physics, and chemistry) (10).

Another system (e.g., the UK, Sweden, and Portugal) combines high school grades with national/local tests to select dental students. Most of the UK universities base the selection of dental students on prior academic performance as well as on the performance on the UKCAT (UK Clinical Aptitude Test) or GAMSAT (Graduate Medical School Admissions Test), with some universities even using extra procedures such as a structured interview (11). In Sweden, the national admission centre uses secondary school matriculation scores or scores from a university standard aptitude test (12). Some dental schools use admission tests and interviews in combination with either grades or USAT (university standard aptitude test) and one dental school also relies on the assessment of manual dexterity (13). In those cases in Sweden where both test/interview and grades are used, the outline is different between admission to medicine and to dentistry. In Portugal, students have to obtain excellent scores in the entrance exam and brilliant secondary school course grades. In the Netherlands, grades in high school play a key role because popular subjects such as medicine or dental medicine have a numerus fixus. Medical schools select a proportion of entrants via interview and other

methods, but the remaining candidates are identified through a lottery (weighted by academic attainment) among school leavers (14).

In yet another system, countries like Finland and Flanders (the Dutch speaking part of Belgium) pay little attention to high school grades but choose their university students on the basis of an entrance exam. For example, in Finland, despite a nationwide final exam in high school (matriculation examination), the majority of student selections for university is based on entrance exams. As every university has internal autonomy, the entrance procedures vary widely but nearly all universities use a quota. Contrary to this country, one common government-run admission exam is organized in Flanders for students who want to study medicine or dentistry. The cut-off for allowing students into both studies is also identical. There is no *numerus clausus*. Everyone who succeeds (i.e. reaches the cut-off score) can enrol in their university of choice and can choose whether to study either medicine or dentistry. There is no specific number of places in each school and students claim their choice for medicine or dentistry only after passing the exam. Ever since the admission exam was institutionalised, most passing students chose medicine (in some years up to 90%). Previous studies showed this Flemish admission exam to be valid for predicting future grades (15-18).

A characteristic of the Flemish admission exam is that the same admission exam procedure (e.g., same tests, same cut-off score) is used across students who will ultimately pursue different majors (either medical or dental). Use of the same admission exam procedure across different majors is based on two assumptions. First, it assumes there is no significant difference in students' scores on the admission exam. If one of the groups (either future medical students or future dental students) obtains lower scores, then less of them might pass the admission exam. In the end, this also affects the

number of medical students or dental students who start education, ultimately graduate, and go on to the profession. Second, use of the same admission exam procedure across different majors (either medical or dental) is also based on the assumption that the same requirements are needed for medical and dental education, which is questionable (see the aforementioned specific objectives of dental education in Europe).

The objective of the present study is twofold. First, the admission exam scores of students who chose medical education are compared to those of students who chose dental education after passing the same admission exam in Flanders. We compare the scores of these two groups of students on 8 admission exams (from 2000 to 2007). A comparison is made in terms of (a) the total admission exam score, (b) the cognitive part of the admission exam, and (c) the non-cognitive part of the admission exam. Second, the validity of the Flemish admission exam is examined for both medical and dental students. This allows determining whether the admission exam score correlates equally well with academic grades in medical versus dental school.

Methods

Demographic profile

Data were collected from students who passed the admission exam from 2000 to 2007 and subsequently started medical or dental studies in one of the six Flemish medical faculties (of which only two provide dental training). The total sample size was 5039. Mean age of the total group on the date of their participation in the admission exam was 18 years and 3 months. For the students who chose medical education (n=4492) the mean age was 18 years and 3 months (Median=18y1m), whereas for the

students choosing dental education ($n=547$) it was 18 years and 6 months (Median=18y2m). The gender ratio amongst the participants was approximately 60% female. The percentages of males and females were equally distributed each year. The details per year are presented in Table 1.

Instrument

The first part of the admission exam was designed to evaluate applicants' mastery of 4 basic science-related subjects (mathematics, physics, chemistry, and biology). Per subject, 10 multiple choice questions were asked. Every question had 4 possible answers of which only one was correct.

Next, the cognitive ability test was a reasoning test which consisted of 50 multiple choice items with 5 response alternatives per item. The problems in this test were formulated in either verbal, numerical or figural terms. Prior research demonstrated the good reliability and predictive validity of this reasoning test for medical and dental students (19,20). In particular, Minnaert (19) reported an internal consistency of .84 and a validity coefficient of .36 for predicting the final scores obtained in the first year of medical and dental studies.

The remaining two tests of the admission exam were a silent reading protocol and a situational judgement test (SJT) about a physician-patient interaction. The silent reading protocol consisted of one or more texts followed by a total of 30 multiple choice questions. The physician-patient interaction was a situational judgement test (SJT). SJTs are measurement methods that present applicants with job-related situations and possible responses to these situations (21,22). All 30 questions of the SJT were of the

multiple choice type, with four response alternatives. No medical background was needed for this SJT. For all tests of the admission exam, specific time limits were set. More information about these tests can be found in Lievens et al. (17,18).

To obtain a total admission exam score, a weighted sum of the aforementioned test scores was computed. These weights were determined by the commission overseeing the admission exam. Candidates who passed the exam (about 30%) received a certificate that guaranteed entry to either medical or dental studies in any university of the Flemish community.

Regarding the criterion measure, we retrieved students' grade point average (GPA) from the first three years of medical and dental school from archival records of all universities in Flanders. The courses in these first three years primarily deal with medical subjects but some deal with communicating with patients, internships etc. (in some universities up to 15% of courses involves dealing with patients). We gathered students' GPAs at the end of each year. Given differences across universities (different courses, teachers,...), we standardised students' GPA within university and within academic year (ie. computed z-scores). In Belgium GPA is measured on a scale from 0 to 20, with higher scores indicating better grades.

Analysis

Data were analysed using the Statistical Package for Social Sciences (SPSS) version 15.0. To examine the first objective and to compare both groups (medical and dental students), t-tests for independent groups were conducted and both significance tests and effect sizes (d) were presented. The level of significance was set at $p < .05$.

The effect size was defined as the difference between two means divided by the pooled standard deviation for those means. Cohen's (23) rules of thumb were used which define $d = .20$ as a small effect, $d = .50$ as a medium effect and $d = .80$ as a large effect.

To examine the second objective (validity of the admission exam score), Pearson correlations were computed between the final admission exam score (see above) and GPA (see above) in the first three years of students who passed the admission exams between 2000 and 2007. These correlations were computed separately for medical versus dental school students. As these analyses were conducted only among people who passed the exam and subsequently started in medical/dental school, these analyses are based on a smaller number of students than the mean comparisons. For instance, first year GPA of students attending the admission exam in 2007 was not yet available at the time this study was conducted.

Results

Table 2 presents the descriptive statistics on the various tests and total score of the admission exam, broken down per year by chosen education. Regarding the total score (see Figure 1) on the admission exam, students who subsequently chose medicine obtained a higher score than students who chose dental education. This difference was significant in every year under study. Effect sizes of these significant differences varied from .26 to .54, showing small to medium effects. Note that in some years, the differences between both groups are quite small.

A comparable consistent pattern was observed concerning the cognitive parts of the admission exam. In all years, future dental students obtained a lower score than

medical students for the science knowledge tests. In 5 out of these 8 years the difference with future medical students was significant ($p < .05$, d varying from .31 to .41). In all years, future dental students had a lower score than medical students on the cognitive ability test and in 1 out of 8 years the difference was significant ($p = .043$, $d = .21$). A comparable result was found for the silent reading protocol test where future dental students always scored lower and in 5 out of 8 years this lower score was significantly different ($p < .05$, d varying from .25 to .59).

For the doctor-patient interaction results were not consistent. In 1 out of 8 years, medical students scored significantly higher than dental students ($p = .007$, $d = .28$). In 3 out of 8 years however, dental students obtained a higher score than medical students (2002, 2004 and 2007) but these differences were not statistically significant.

Table 3 presents the results of the validity of the total admission exam score broken down for medical and dental students. For both medical and dental students, the total admission exam score was a valid predictor of academic grades in the first three years as all correlations were significant. However, the total admission exam score was always a better predictor of academic grades in medical school than in dental school. For instance, the total admission exam score correlated .30 with academic performance of medical students in the first year, whereas it correlated .21 with academic performance of dental students in the first year.

Discussion

Dental education in Europe faces enormous challenges. The skill set which used to be accepted on graduation from dental graduates will need to be broader and higher

(3). Dental education must adapt to these rapidly increasing demands. The admission process is also a part of this challenge. The nature of the admission process depends not only on the number of candidates and the capacity of the educational facilities but also on the views of the school administration and the wider academic community, as well as national policy on the openness of higher education. There is a clear need for research to improve the reliability and predictive power of currently used admission methods (7). The admission procedure of a particular country determines the quality of the students selected. In addition, the consequences of actions taken in educational settings and the efficiency of these actions depend to a great extent on the admission system used.

As noted above, admission systems to dental education vary widely across Europe. This study speaks to admission systems wherein the same method (same tests, same cut-off score) is used across students who will ultimately pursue different majors (either medical or dental). Such systems are based on the assumptions that there is no significant difference between the capacities of students choosing for either of the two majors and that the requirements for both majors are the same. This study examines these two assumptions in the case of the Flemish admission exam. The present study is unique as it uses data from a multiple year period. As the authors were unable to identify prior studies that addressed the difference between admission exam scores and validities for future medical and dental students, future studies are needed to examine these issues in other systems and other countries in Europe.

Overall, our results are both striking and robust. Across all years, dental students systematically scored lower on the cognitive tests of the admission exam. For the non-

cognitive test, there is no consistent pattern, although it should be mentioned that future dental students sometimes outperformed future medical students (albeit not significantly). As the 'weakest' students with respect to the cognitive skills were those who made the choice for dental studies, one can question whether the same success criteria should apply to them. Results further showed that the final admission exam score was a valid predictor of academic grades in the first three years of medical and dental education. However, the final admission exam score was always a better predictor of academic grades in medical school than in dental school, indicating that the two majors are not comparable. These somewhat lower correlations for dental curriculum could be explained by the fact that dentistry requires specific practical skills which are not assessed by the current admission exam.

These results deserve attention in light of the fact that in Flanders, the profile of the dental curriculum seems unattractive among the general public. Therefore, fewer students probably take the admission exam with the intention to start dental education (as compared to those who want to pursue medical education). In addition, this study shows that this particular group has less chances of passing the admission exam, leading to a small group who can actually start dental education in Flanders. Taken together, this means that the admission exam does not recruit enough students to answer population oral health needs in the future. In fact, since the exam takes place, the total intake number of dental students in Flanders never reached the quorum which is allowed at the end of the studies. Moreover, 50% of all Flemish dentists is nearly +50 yrs of age. So a shortage of practitioners is expected by the year 2015. Therefore, attempts to make dental studies and the dental profession more attractive in the eye of the public

should be undertaken to increase the number of students in this field.

Several limitations of this study should be acknowledged and therefore, some caution in the interpretation of the results is warranted. First, in the present study the preferred career choice of the students was not measured before they took the admission exam. The present data relate to those students who passed the entrance examination; unknown are the passing rates among those who had a medical/dental curriculum in mind before participating. Such information became available only in 2008. Results (unpublished data) showed different passing rates for students who aspire to medical studies (20.7%) as compared to students who want to study dentistry (11.8%). The difference in total admission exam score was again significant ($M=17.95$, $SD= 4.97$) for students who want to pursue medical education vs. $M=16.6$, $SD= 4.88$ for students who want to pursue dental education ($t=4.81$, $p=.000$). These data corroborate our main conclusions.

As the admission exam is only developed for the Flemish part of Belgium, restrictions to the generalizability of the results must be acknowledged. The perception and prestige of a certain profession may vary from country to country. It would be worthwhile to determine if the results could be generalized to other countries (e.g., by comparing grades in high school, high school leaving exam scores or matriculation scores of both medical and dental students).

Conclusions

This study took a closer look at admission to dental education in Flanders. Students who passed the Flemish admission examination for medicine and dentistry and started the

dental curriculum scored significantly lower with respect to sciences and cognitive ability compared to those who started medicine. The key findings that students who have an average lower score choose to enter dental school in Flanders and that the validity of the exam is lower for dental education raise questions about using the same admission exam for two obviously different majors.

References

- 1 Hobson RS. A view of European challenges in dental education. *Br Dent J* 2009; 206: 65-66.
- 2 European Commission. The Bologna Process – towards the European higher education area. The Bologna Declaration. European Commission, 1999.
- 3 Hobson RS. Challenges to future dental education. *Br Dent J*, in press.
- 4 Banoczy J. Harmonisation of dental education and curricula in Europe. *Internat Dent J* 1999; 49: 69-72.
- 5 Shanley DB. Convergence towards higher standards in international dental education. *N Y State Dent J* 2004; 70: 35-39.
- 6 Sanz M, Widström E, Eaton KA. Is there a need for a common framework of dental specialties in Europe? *Eur J Dent Educ* 2008; 12: 138-143.
- 7 Gaengler P, de Vries J, Akota I, Balciuniene I, Berthold P, Gajewska M, Johnsen D, Urtâne I, Walsh L, Zijlstra, A. Student selection and the influence of their clinical and academic environment on learning. *Eur J Dent Educ* 2002; 6: 8-26.
- 8 Scott J. Dental education in Europe: the challenges of variety *J Dent Educ* 2003; 67: 69-78.
- 9 Lynch CD, McConnell RJ, Hannigan A. Dental school admissions in Ireland: can current selection criteria predict success? *Eur J Dent Educ* 2006, 10, 73-79.

- 10 Komabayashi T, Åstrom A. Dental education in Norway. *Eur J Dent Educ* 2007; 11: 245-250.
- 11 Hoad-Reddick G, MacFarlane TV. An analysis of an admissions system: can performance in the first year of the dental course be predicted? *Br Dent J* 1999; 186: 138-142.
- 12 Röding K. Professional competence in final-year dental undergraduates: assesement of students admitted by individualized selection and through traditional modes. *Eur J Dent Educ* 2001; 5: 12-16.
- 13 Heintze U, Radeborg, K, Bergtsson H, Stenlås A. Assesement and evaluation of individual prerequisites for dental education. *Eur J Dent Educ* 2004; 8: 152-160.
- 14 Coebergh J. Dutch medical schools abandon selection for lottery systems for places. *StudentBMJ* 2003;11:138.
- 15 Lievens F, Coetsier P. Situational tests in student selection: An examination of predictive validity, adverse impact and construct validity. *International journal of selection and assessment* 2002; 10: 245-257.
- 16 Lievens F. Longitudinal study of the validity of different cognitive ability tests in a student admission context. *Applied HRM research* 2004; 9(1): 27-30.
- 17 Lievens F, Buyse T, Sackett P. The operational validity of a video-based situational judgment test for medical college admissions: Illustrating the importance of matching predictor and criterion construct domains. *Journal of Applied Psychology* 2005; 90: 442-452.
- 18 Lievens F, Buyse T, Sackett P. Retest effects in operational selection settings:

development and test of a framework. *Personnel Psychology* 2005; 58: 981-1007.

19 Minnaert A. Academic performance, cognition, metacognition and motivation. Assessing freshmen characteristics on task: A validation and replication study in higher education. Unpublished doctoral dissertation, University of Louvain, Belgium 1996.

20 Minnaert A, Janssen PJ. The additive effect of regulatory activities on top of intelligence in relation to academic performance in higher education. *Learning and Instruction* 1998; 9: 77-91.

21 McDaniel MA, Hartman NS, Whetzel DL, Grubb WL. Situational judgment tests, response instructions, and validity: A meta-analysis. *Personnel Psychology* 2007; 60: 63-91.

22 Lievens F, Peeters H, Schollaert E. Situational Judgement tests: a review of recent research. *Personnel Review* 2008; 37:426-441.

23 Cohen J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum, 1988.

Table 1. Sample and demographic characteristics per year

Year	Total n	Students choosing Medical Education				Students choosing Dental Education			
		n	Male (%)	Female (%)	Mean age	n	Male (%)	Female (%)	Mean age
2000	399	367	144 (39.24)	223 (60.76)	18y2m	32	13 (40.63)	19 (59.38)	18y4m
2001	416	361	133 (36.84)	228 (63.16)	18y4m	55	14 (25.45)	41 (74.55)	18y5m
2002	492	435	159 (36.55)	276 (63.45)	18y1m	57	21 (36.84)	36 (63.16)	18y5m
2003	669	601	225 (37.44)	376 (62.56)	18y4m	68	23 (33.82)	45 (66.18)	18y10m
2004	689	621	220 (35.43)	401 (64.57)	18y2m	68	18 (26.47)	50 (73.53)	18y5m
2005	832	731	270 (36.94)	461 (63.06)	18y3m	101	40 (39.60)	61 (60.40)	18y8m
2006	829	725	285 (39.31)	440 (60.69)	18y3m	104	37 (35.58)	67 (64.42)	18y3m
2007	713	651	277 (42.55)	374 (57.45)	18y5m	62	25 (40.32)	37 (59.68)	19y5m
Total	5039	4492	1713 (38.13)	2779 (61.87)	18y3m	547	191 (34.92)	356 (65.08)	18y6m

Table 2. Means and standard deviations of Admission Exam test scores for medical and dental students per year

		Medical students			Dental students					
		n	Mean	SD	n	Mean	SD	t	p	d
2000	Cognitive part									
	Science	367	13.38	2.57	32	12.52	2.20	1.82	.070	.34
	Cognitive ability test	367	32.43	4.08	32	31.28	5.40	1.18	.247	.27
	Silent reading protocol	367	13.93	3.63	32	13.80	3.01	0.19	.848	.04
	Non cognitive part									
	SJT	367	16.93	2.74	32	16.10	2.45	1.66	.098	.30
	Total score	367	25.06	3.10	32	23.91	2.27	2.04	.042	.38
2001	Cognitive part									
	Science	361	13.15	2.22	55	12.65	2.39	1.53	.128	.22
	Cognitive ability test	361	27.33	4.68	55	26.18	5.07	1.67	.095	.24
	Silent reading protocol	361	11.39	3.80	55	9.18	3.32	4.10	.000	.58
	Non cognitive part									
	SJT	361	17.34	2.87	55	16.91	3.45	1.01	.316	.15
	Total score	361	24.45	3.65	55	22.83	3.85	3.04	.003	.44
2002	Cognitive part									
	Science	435	13.61	2.13	57	12.90	1.77	2.76	.007	.34
	Cognitive ability test	435	30.58	4.95	57	30.49	5.03	0.13	.898	.02
	Silent reading protocol	435	19.11	3.93	57	18.15	3.60	1.76	.079	.25

	Non cognitive part									
	SJT	435	18.11	2.93	57	18.55	2.36	-1.29	.199	-.15
	Total score	435	25.98	2.72	57	25.12	2.30	2.27	.023	.32
<hr/>										
	Cognitive part									
	Science	601	11.02	3.01	68	9.79	2.94	3.22	.001	.41
	Cognitive ability test	601	27.72	5.39	68	26.73	5.32	1.44	.151	.18
2003	Silent reading protocol	601	19.80	4.33	68	17.19	4.55	4.69	.000	.59
	Non cognitive part									
	SJT	601	19.07	2.82	68	18.60	2.76	1.31	.190	.17
	Total score	601	23.34	3.82	68	21.26	3.89	4.25	.000	.54
<hr/>										
	Cognitive part									
	Science	621	11.85	2.86	68	10.96	2.97	2.42	.016	.31
	Cognitive ability test	621	28.21	5.42	68	27.42	5.88	1.13	.260	.14
2004	Silent reading protocol	621	16.53	3.77	68	15.95	3.73	1.21	.229	.15
	Non cognitive part									
	SJT	621	18.14	3.26	68	18.18	3.67	-0.10	.918	-.01
	Total score	621	23.28	3.64	68	22.16	3.59	2.43	.015	.31
<hr/>										
	Cognitive part									
	Science	731	10.94	2.68	101	9.99	2.54	3.35	.001	.35
	Cognitive ability test	731	27.92	5.33	101	26.79	4.69	2.03	.043	.21
2005	Silent reading protocol	731	19.77	4.01	101	18.79	3.80	2.30	.022	.25

Non cognitive part										
	SJT	731	17.30	2.83	101	16.89	2.67	1.36	.175	.15
	Total score	731	22.92	3.35	101	21.51	3.15	4.00	.000	.42
<hr/>										
Cognitive part										
	Science	725	11.62	2.37	104	10.79	2.34	3.34	.001	.35
	Cognitive ability test	725	28.27	6.13	104	27.16	6.16	1.73	.085	.18
2006	Silent reading protocol	725	16.61	3.23	104	15.19	3.25	4.19	.000	.43
Non cognitive part										
	SJT	725	15.64	3.88	104	14.53	4.15	2.70	.007	.28
	Total score	725	22.60	3.19	104	21.06	3.14	4.62	.000	.48
<hr/>										
Cognitive part										
	Science	651	12.70	2.92	62	12.08	2.52	1.63	.103	.21
	Cognitive ability test	651	29.93	5.96	62	29.41	7.14	0.55	.582	.09
2007	Silent reading protocol	651	11.04	3.60	62	9.94	3.38	2.32	.021	.31
Non cognitive part										
	SJT	651	12.44	4.03	62	12.46	4.11	-0.05	.962	.00
	Total score	651	24.76	3.82	62	23.76	3.11	2.35	.021	.26

Notes: Positive effect sizes (d) reflect differences that favor medical students whereas negative effect sizes (d) reflect differences that favor dental students.

Table 3. Validity of the Total Admission Exam Score (2000-2007) in Predicting GPA in the First Three Academic Years Broken Down by Medical and Dental Education

	Medical education		Dental education	
	n	r	n	r
Year 1	3859	.30**	400	.21*
Year 2	2102	.23**	191	.14*
Year 3	1605	.24*	134	.20

Note. * $p < .05$; ** $p < .01$

Figure 1. Total scores on Admission Exam for medical and dental students per year