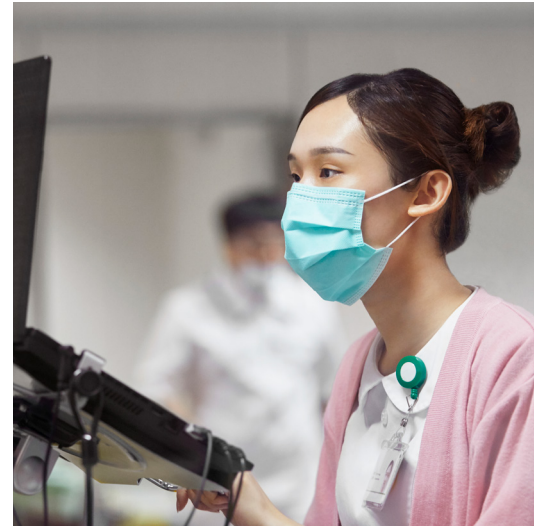


# OAT Optometry Admission Test



## Optometry Admissions Test (OAT) 2022 Validity Study (2018-2020 Data)

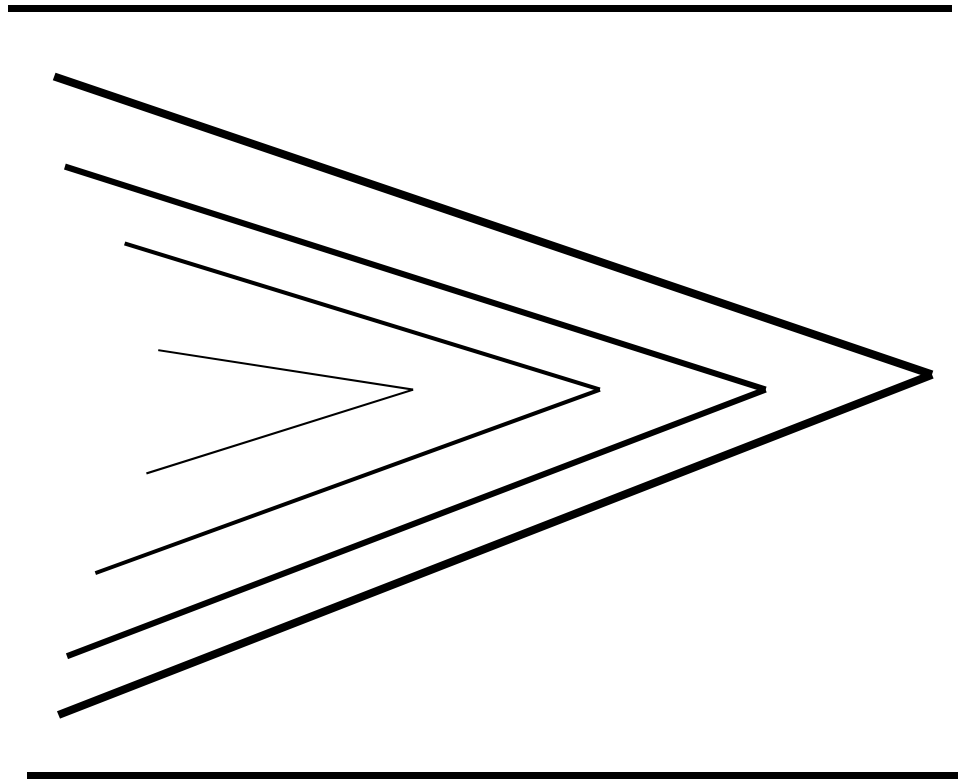


**Optometry  
Admission  
Test  
Program**

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**OAT Validity Study**

**2018-2020 Data**



Any suggestions concerning other ways in which these validation studies can better serve the optometry education community are most welcome. Please send your comments and/or suggestions to:

Optometry Admission Test Program  
211 East Chicago Avenue  
Chicago, IL 60611-2637

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## **Introduction**

Validity is a critical consideration for any testing program. Validity refers to the degree to which logic and evidence support the use of test scores for making critical decisions (e.g., pass/fail, admission, placement, grouping) concerning examinees.

The OAT Validity Study 2018-2020 reports the relationship among OAT scores, pre-optometry grade point averages (GPAs), and the academic and clinical achievements of a sample of students during their first and second year in United States optometry schools. Correlation coefficients were used to understand the relationship between admission selection criteria (such as GPAs and OAT scores) and pre-optometry success in students' first two years of optometry education.

The Optometry Admission Testing Program recognizes the importance placed upon the validity of the Optometry Admission Test. The value of a report of this nature is enhanced when participation is representative of the population under study. In contrast, the value is diminished by low participation and low representativeness. In past reports, participating schools were identified by name. Beginning with the 2009 report, each school is identified by a code number that is only revealed to the individual school. It is hoped that this measure of anonymity will increase participation. The goal is always 100% participation.

## **Data**

A total of 13 of the 23 United States optometry schools participated in this study. This represents a decrease of two schools, as compared to the number (15) obtained in the prior report (2016 to 2018).

This report involves first- and second-year data on the same group of students. When viewing the data presented the number of students listed might not correspond with the number actually enrolled. This is because some students' OAT scores were not available. Student data were included in the analyses only when OAT scores were also provided. Additionally, due to curriculum differences, some schools could not provide information in every area requested.

Data collection occurred during students' third year in optometry school, when data associated with first and second year school performance were complete. Thus, the following applies:

- Student GPA data reflect the 2018-2019 and 2019-2020 school years
- Student OAT data reflect test administrations occurring prior to the 2018-2019 school year<sup>1</sup>.

Data consisted of course grades, averages for several courses, or subject-matter averages. Multiple regression was used to analyze the data and produce a multiple correlation coefficient (R). The predictor variables included in the regression were Undergraduate GPA, Math and Science GPA, Other GPA, Options 1 and 2 (i.e., other optional criteria for admission considered by each optometry school), and OAT scores achieved by the students prior to admission to optometry school. Only three schools reported data for Option 1 and one school reported data for Option 2. The criterion variables included in separate multiple regressions were overall optometry GPAs in Year 1 and Year 2 of the optometry program and optometry grades in seven subject areas (also called tracks). The tracks can be described as follows:

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<sup>1</sup> The OAT underwent a change in scale metric in May of 2009. The present study is based on test data after the implementation of this change.

**Track I Optics:** geometric, visual, physical, ophthalmic.

**Track II Biomedical Sciences:** human anatomy, histology, neuroanatomy, human physiology, microbiology, general pathology, systemic pathology, general pharmacology, general biochemistry.

**Track III Vision Science:** ocular anatomy, ocular biochemistry, psychophysics, perception, color vision, vegetative physiology of the eye, normal binocular vision, ocular motility.

**Track IV Ocular Health Science:** ocular disease, ocular pharmacology.

**Track V Clinical Science:** clinic methods, environmental vision, anomalies of binocular vision, contact lenses, pediatric optometry, developmental vision, sports vision, low vision, geriatric optometry, clinical management.

**Track VI Clinic:** all clinics.

**Track VII Other:** epidemiology, practice management, professional communications, ethics.

Of the eight schools reporting a value for the predictor variable 'Other GPA,' five schools specified what was included. For these five schools, 'Other GPA' signified one or more of the following: (1) Non-Science courses. (2) Last year's GPA from undergraduate studies. (3) All science courses with one calculus grade and one statistic grade. (4) All prerequisite courses. This generally includes a one semester course with a laboratory component in the following science courses: general biology or zoology, general chemistry, organic chemistry, general physics, microbiology or bacteriology. In addition, it includes courses in English composition or English literature, mathematics or calculus, psychology, and statistics.

## **Methods**

In previous OAT validity study reports, large tables containing Pearson product-moment correlation coefficients ( $r$ ) and squared multiple correlation coefficients ( $R^2$  or R-Square) by school were presented to indicate the relationship between admission selection criteria—such as students' pre-optometry GPAs (i.e., undergraduate math & science GPA, other GPA, and overall undergraduate GPA) and OAT scores—and student performance in their first two years of optometry education. As expected, results varied from school to school given the large number of participating schools. The meta-analytic approach developed by Hunter and Schmidt (1990) was adopted in this report, to cumulate and integrate findings across the participating optometry schools, summarizing the relationship. This is a two-step approach. First,  $r$  and multiple  $R^2$  produced via standard multiple regressions between optometry school grades and undergraduate GPAs and OAT scores were calculated for each participating optometry school (see Appendices 1 for the results). The multiple regressions involve the following predictors: 1) all OAT scores (including reading comprehension, quantitative reasoning, biology, general chemistry, organic chemistry, and physics), 2) all OAT scores and undergraduate math & science GPA, 3) all OAT scores, undergraduate math & science GPAs and overall undergraduate GPAs, 4) all OAT scores, undergraduate math & science GPAs, overall undergraduate GPAs and other GPAs, as well as 5) the full set of available predictors (combination of undergraduate GPAs—including undergraduate math & science GPA, other

GPA, overall undergraduate GPA and Options 1 & 2—as well as all OAT scores). The correlational and multiple R values for all participating optometry schools serve as input data for the meta-analysis, in reporting overall findings.

Caution is warranted in interpreting the 'Other GPA' predictor, due to the fact that this predictor meant different things for different schools. While this predictor is useful when looking at findings within a given school, its interpretation across schools is problematic due to the differences in meanings. For this reason, findings pertaining to 'Other GPA' are presented in this report, but interpretation is left to the specific schools involved (i.e., the pertinent findings are not specifically discussed within this report).

Since optometry schools use OAT scores to make admission decisions, applicants who were accepted into optometry schools tend to have higher OAT scores than those who were not admitted. In other words, the range of OAT scores found in an enrolled optometry student sample is restricted relative to the OAT score range that would be found in the full population of applicants to optometry schools. Additionally, OAT scores and GPAs are not perfectly reliable. Research has shown that statistical artifacts such as range restriction and unreliability of measures can reduce the size of observed correlation coefficients. Given this, the observed relationship found within the current dataset is considered an underestimate of what would have been found had the entire pool of applicants been admitted to optometry school, and if OAT scores and GPAs had been perfectly reliable. The use of the meta-analytic approach addresses these issues by implementing statistical corrections for range restriction and the unreliability of operational measures. Because optometry schools must base their decisions on actual OAT scores, it would be inappropriate in this situation to correct for predictor unreliability in OAT scores. Thus, the present meta-analysis simply included corrections for range restriction in OAT scores, and correction to address unreliability in optometry school GPAs (i.e., the performance criterion). These adjustments provide a more accurate understanding of the true relationship between the OAT as an admission tool, and general performance in optometry school (if the latter had been perfectly measured).

More specifically, the corrections employed use standard formulas involving the ratio of the restricted and unrestricted standard deviation of students' scores on the predictor variables (e.g., OAT scores) and reliability coefficients associated with the optometry school GPAs. The restricted standard deviation would be the standard deviation found in the observed sample, while the unrestricted standard deviation would be the corresponding standard deviation associated with the pool of all applicants in a given year (i.e., all OAT examinations in 2017-2018 or 2018-2019, for first and second year students, respectively). Corrected validity coefficient estimates indicate the anticipated level of association that would have been obtained if students had NOT been selected on the aforementioned predictors and if optometry school GPAs were perfectly reliable criterion measures. In accordance with meta-analytic procedures, artifact distribution information used for all range restriction corrections and unreliability corrections is presented in Table 1.

Table 1: Artifact Distribution Used in the Meta-Analyses

Variable	$k_U$	Mean U	Variance U	Mean r	Variance r
Predictor (OAT Scores and Undergraduate GPAs)					
Academic Average	13	0.65	0.0115	0.96	0.00002
Total Science	13	0.66	0.0108	0.93	0.00002
Quantitative Reasoning	13	0.82	0.0032	0.76	0.00070
Reading Comprehension	13	0.89	0.0071	0.83	0.00054
Biology	13	0.77	0.0045	0.77	0.00114
General Chemistry	13	0.77	0.0080	0.75	0.00034
Organic Chemistry	13	0.77	0.0067	0.81	0.00010
Physics	13	0.75	0.0058	0.82	0.00018
Undergraduate GPA	N/A	N/A	N/A	0.82	0.00026
Math and Science GPA	N/A	N/A	N/A	0.82	0.00026
Other GPA	N/A	N/A	N/A	0.82	0.00026
Option 1	N/A	N/A	N/A	0.82	0.00026
Option 2	N/A	N/A	N/A	0.82	0.00026
Criterion (Optometry School GPAs)					
First-year Overall GPA	N/A	N/A	N/A	0.82	0.00026
Second-year Overall GPA	N/A	N/A	N/A	0.82	0.00026
Track I Grades: Optics	N/A	N/A	N/A	0.82	0.00026
Track II Biomedical Sciences	N/A	N/A	N/A	0.82	0.00026
Track III Vision Science	N/A	N/A	N/A	0.82	0.00026
Track IV Ocular Health Science	N/A	N/A	N/A	0.82	0.00026
Track V Clinical Science	N/A	N/A	N/A	0.82	0.00026
Track VI Clinic	N/A	N/A	N/A	0.82	0.00026
Track VII Other	N/A	N/A	N/A	0.82	0.00026

Note: U = ratio for range restriction;  $k_U$  = number of ratios in the distribution (number of schools); r = reliability in the distribution.

## Results and Discussion

### Part I: Bivariate Correlations between Optometry School Grades and Predictors (OAT scores, Undergraduate GPAs, and Options)

Tables 2-10 provide the results of the meta-analysis. The top section of Tables 2 through 10 present bivariate (i.e., two variable) correlations between optometry school grades and various individual predictors. These predictors either present OAT scores or undergraduate GPAs. OAT scores include two OAT composite scores (i.e., total science and academic average) and six individual OAT scores (i.e., quantitative reasoning, reading comprehension, biology, general chemistry, organic chemistry and physics). Undergraduate GPAs consist of math & science GPA, other GPA, and overall undergraduate GPA. Tables 2 and 3 present bivariate correlations between first- and second-year optometry school grades, respectively, and the aforementioned predictors. Similarly, Tables 4 through 10 present bivariate correlations between optometry school grades in seven subject areas (Tracks I through VII) and the aforementioned predictors. In interpreting the results, the following should be noted:



- The observed weighted mean correlation coefficient ( $r_{obs}$ ) is the average correlation coefficients of all participating schools weighted by the sample size of each school and calculated following the meta-analytic approach introduced by Hunter & Schmidt (1990, p. 100).
- If the correlation coefficient of one school does not appear to be consistent with those of other schools, this coefficient is considered an outlier in the meta-analytic framework. Inclusion of outliers in the analysis will typically lead to a possible shift in the mean coefficient. In some cases the presence of an outlier can yield an apparent stronger relationship, whereas in other cases an outlier's presence can yield an apparent weaker relationship. This study employed the sample-adjusted meta-analytic deviance (SAMD) statistic developed by Huffcutt & Arthur (1995) to detect the presence of outliers. Corrected correlation coefficients with the outlier(s) present ( $\rho_{with\ outlier}$ ) and with the outlier(s) removed ( $\rho$ ) were then calculated and shared in this report.
- The corrected correlation coefficients ( $\rho$ ) reported in Tables 2 - 10 show the relationships between optometry school performance and students' prior achievement as indicated by undergraduate GPAs and OAT scores.
- A 95% credibility interval around the corrected correlation coefficients was constructed and reported. The credibility interval helps in understanding the generalizability of the corrected correlation coefficients. A credibility interval that does not include zero indicates valid generalization of corrected correlation coefficients.

Table 2. Correlations of OAT Scores, Undergraduate GPAs and First Year Optometry School Overall GPAs

Variable	K	N	$r_{obs}$	$SD_{obs}$	$\rho_{with\ outlier}$	$\rho$	$SD_{\rho}$	95% Credibility Interval
Pearson Bivariate Correlation								
Academic Average	13	1062	0.40	0.11	N/A	<b>0.61</b>	0.08	0.45 - 0.78
Total Science	13	1062	0.40	0.12	N/A	<b>0.60</b>	0.10	0.41 - 0.79
Quantitative Reasoning	13	1062	0.19	0.10	N/A	<b>0.25</b>	0.00	0.25 - 0.25
Reading Comprehension	13	1062	0.22	0.11	N/A	<b>0.27</b>	0.05	0.18 - 0.36
Biology	13	1062	0.32	0.11	N/A	<b>0.46</b>	0.06	0.34 - 0.58
General Chemistry	11	931	0.27	0.09	0.38	<b>0.37</b>	0.00	0.37 - 0.37
Organic Chemistry	13	1062	0.28	0.14	N/A	<b>0.39</b>	0.13	0.14 - 0.64
Physics	13	1062	0.27	0.13	N/A	<b>0.38</b>	0.10	0.19 - 0.58
Undergraduate GPA*	12	997	0.34	0.12	0.37	<b>0.42</b>	0.08	0.25 - 0.58
Math and Science GPA	10	691	0.34	0.10	0.37	<b>0.42</b>	0.00	0.42 - 0.42
Other GPA*	6	440	0.29	0.14	0.36	<b>0.35</b>	0.11	0.13 - 0.57
Option 1*	2	124	0.11	0.22	N/A	<b>0.13</b>	0.22	-0.30 - 0.56
Option 2**†	1	29	0.70	0.09	N/A	N/A	N/A	N/A
Multiple Correlation								
All OAT Scores*	13	1062	0.47	0.12	N/A	<b>0.52</b>	0.09	0.35 - 0.69
All OAT Scores & Math/Science GPAs*	11	776	0.53	0.12	N/A	<b>0.58</b>	0.09	0.40 - 0.76
All OAT Scores, Math/Science & Overall GPAs*	11	776	0.54	0.12	N/A	<b>0.59</b>	0.10	0.40 - 0.78
All OAT Scores, Math/Science, Overall and Other GPAs*	6	391	0.51	0.12	N/A	<b>0.57</b>	0.08	0.40 - 0.73
All Predictors**†	1	29	0.84	0.06	N/A	N/A	N/A	N/A

Note. k = number of schools;  $r_{obs}$  = observed sample-size-weighted average correlation;  $SD_{obs}$  = standard deviation of observed correlations;  $\rho_{with\ outlier}$  = corrected correlation coefficients with the outlier(s) included in the data;  $\rho$  = corrected correlation coefficient with the outlier(s) removed;  $SD_{\rho}$  = standard deviation of corrected correlation coefficient; \* Not corrected for range restriction; † Actual Pearson Correlation Coefficient based on one school's data.

Table 3. Correlations of OAT Scores, Undergraduate GPAs and Second Year Optometry School Overall GPAs

Variable	K	N	r <sub>obs</sub>	SD <sub>obs</sub>	ρ <sub>with outlier</sub>	ρ	SD <sub>ρ</sub>	95% Credibility Interval
Pearson Bivariate Correlation								
Academic Average	13	1062	0.36	0.14	N/A	<b>0.56</b>	0.14	0.29 - 0.83
Total Science	13	1062	0.36	0.14	N/A	<b>0.56</b>	0.14	0.30 - 0.83
Quantitative Reasoning	13	1062	0.15	0.10	N/A	<b>0.21</b>	0.00	0.21 - 0.21
Reading Comprehension	11	938	0.23	0.12	0.26	<b>0.30</b>	0.07	0.16 - 0.44
Biology	13	1062	0.29	0.10	N/A	<b>0.42</b>	0.00	0.42 - 0.42
General Chemistry	13	1062	0.25	0.14	N/A	<b>0.35</b>	0.12	0.11 - 0.58
Organic Chemistry	13	1062	0.26	0.16	N/A	<b>0.36</b>	0.16	0.04 - 0.69
Physics	13	1062	0.24	0.15	N/A	<b>0.34</b>	0.14	0.06 - 0.62
Undergraduate GPA*	12	997	0.39	0.10	0.44	<b>0.48</b>	0.05	0.37 - 0.58
Math and Science GPA*	11	776	0.36	0.11	N/A	<b>0.44</b>	0.06	0.33 - 0.55
Other GPA*	7	573	0.40	0.10	0.43	<b>0.48</b>	0.06	0.37 - 0.59
Option 1*	2	124	0.12	0.23	N/A	<b>0.14</b>	0.24	-0.33 - 0.61
Option 2†	1	29	0.54	0.13	N/A	N/A	N/A	N/A
Multiple Correlation								
All OAT Scores*	13	1062	0.44	0.12	N/A	<b>0.49</b>	0.09	0.31 - 0.66
All OAT Scores & Math/Science GPAs*	10	691	0.54	0.12	0.56	<b>0.59</b>	0.09	0.40 - 0.77
All OAT Scores, Math/Science & Overall GPAs*	11	776	0.54	0.12	N/A	<b>0.60</b>	0.10	0.40 - 0.79
All OAT Scores, Math/Science, Overall and Other GPAs*	6	391	0.55	0.13	N/A	<b>0.60</b>	0.10	0.40 - 0.80
All Predictors†	1	29	0.83	0.06	N/A	N/A	N/A	N/A

Note. k = number of schools; r<sub>obs</sub> = observed sample-size-weighted average correlation; SD<sub>obs</sub> = standard deviation of observed correlations; ρ<sub>with outlier</sub> = corrected correlation coefficients with the outlier(s) included in the data; ρ = corrected correlation coefficient with the outlier(s) removed; SD<sub>ρ</sub> = standard deviation of corrected correlation coefficient; \* Not corrected for range restriction; † Actual Pearson Correlation Coefficient based on one school's data.

Table 4. Correlations of OAT Scores, Undergraduate GPAs and Track I Grades: Optics

Variable	K	N	r <sub>obs</sub>	SD <sub>obs</sub>	ρ <sub>with outlier</sub>	ρ	SD <sub>ρ</sub>	95% Credibility Interval
Pearson Bivariate Correlation								
Academic Average	9	811	0.41	0.09	N/A	<b>0.64</b>	0.00	0.64 - 0.64
Total Science	9	811	0.39	0.09	N/A	<b>0.62</b>	0.00	0.62 - 0.62
Quantitative Reasoning	9	811	0.27	0.07	N/A	<b>0.36</b>	0.00	0.36 - 0.36
Reading Comprehension	9	811	0.21	0.11	N/A	<b>0.27</b>	0.06	0.14 - 0.39
Biology	9	811	0.36	0.10	N/A	<b>0.52</b>	0.05	0.42 - 0.62
General Chemistry	9	811	0.28	0.11	N/A	<b>0.42</b>	0.08	0.42 - 0.58
Organic Chemistry	9	811	0.29	0.11	N/A	<b>0.41</b>	0.04	0.32 - 0.49
Physics	8	678	0.28	0.10	N/A	<b>0.41</b>	0.00	0.41 - 0.41
Undergraduate GPA*	9	811	0.30	0.13	N/A	<b>0.36</b>	0.10	0.15 - 0.56
Math and Science GPA*	7	525	0.30	0.14	N/A	<b>0.37</b>	0.11	0.15 - 0.58
Other GPA*	6	544	0.31	0.10	0.33	<b>0.38</b>	0.03	0.31 - 0.45
Option 1†	1	95	0.53	0.07	N/A	N/A	N/A	N/A
Option 2*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Multiple Correlation								
All OAT Scores*	9	811	0.48	0.11	N/A	<b>0.53</b>	0.07	0.38 - 0.68
All OAT Scores & Math/Science GPAs*	7	525	0.50	0.12	N/A	<b>0.56</b>	0.10	0.37 - 0.75
All OAT Scores, Math/Science & Overall GPAs*	7	525	0.52	0.13	N/A	<b>0.57</b>	0.12	0.34 - 0.80
All OAT Scores, Math/Science, Overall and Other GPAs*	5	362	0.48	0.12	N/A	<b>0.53</b>	0.09	0.35 - 0.71
All Predictors*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note. k = number of schools; r<sub>obs</sub> = observed sample-size-weighted average correlation; SD<sub>obs</sub> = standard deviation of observed correlations; ρ<sub>with outlier</sub> = corrected correlation coefficients with the outlier(s) included in the data; ρ = corrected correlation coefficient with the outlier(s) removed; SD<sub>ρ</sub> = standard deviation of corrected correlation coefficient; \* Not corrected for range restriction; † Actual Pearson Correlation Coefficient based on one school's data.

Table 5. Correlations of OAT Scores, Undergraduate GPAs and Track II Biomedical Sciences

Variable	K	N	$r_{obs}$	$SD_{obs}$	$\rho_{with\ outlier}$	$\rho$	$SD_{\rho}$	95% Credibility Interval
Pearson Bivariate Correlation								
Academic Average	9	811	0.37	0.11	N/A	<b>0.59</b>	0.10	0.40 - 0.78
Total Science	9	811	0.40	0.12	N/A	<b>0.62</b>	0.11	0.40 - 0.84
Quantitative Reasoning	9	811	0.16	0.10	0.07	<b>0.14</b>	0.00	0.14 - 0.14
Reading Comprehension	9	811	0.20	0.09	N/A	<b>0.25</b>	0.00	0.25 - 0.25
Biology	9	811	0.29	0.07	N/A	<b>0.43</b>	0.00	0.43 - 0.43
General Chemistry	9	811	0.26	0.14	N/A	<b>0.38</b>	0.13	0.12 - 0.64
Organic Chemistry	9	811	0.33	0.12	N/A	<b>0.45</b>	0.09	0.27 - 0.63
Physics	9	811	0.31	0.12	N/A	<b>0.44</b>	0.09	0.28 - 0.61
Undergraduate GPA*	9	811	0.34	0.10	N/A	<b>0.41</b>	0.04	0.33 - 0.49
Math and Science GPA*	7	525	0.33	0.09	N/A	<b>0.40</b>	0.00	0.40 - 0.40
Other GPA*	7	648	0.29	0.13	N/A	<b>0.35</b>	0.10	0.15 - 0.55
Option 1 <sup>†</sup>	1	95	-0.11	0.10	N/A	N/A	N/A	N/A
Option 2*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Multiple Correlation								
All OAT Scores*	9	811	0.47	0.12	N/A	<b>0.51</b>	0.09	0.33 - 0.70
All OAT Scores & Math/Science GPAs*	7	525	0.52	0.13	N/A	<b>0.57</b>	0.11	0.34 - 0.80
All OAT Scores, Math/Science & Overall GPAs*	7	525	0.54	0.13	N/A	<b>0.59</b>	0.11	0.37 - 0.81
All OAT Scores, Math/Science, Overall and Other GPAs*	5	362	0.50	0.13	N/A	<b>0.55</b>	0.10	0.35 - 0.74
All Predictors*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note. k = number of schools;  $r_{obs}$  = observed sample-size-weighted average correlation;  $SD_{obs}$  = standard deviation of observed correlations;  $\rho_{with\ outlier}$  = corrected correlation coefficients with the outlier(s) included in the data;  $\rho$  = corrected correlation coefficient with the outlier(s) removed;  $SD_{\rho}$  = standard deviation of corrected correlation coefficient; \* Not corrected for range restriction; <sup>†</sup> Actual Pearson Correlation Coefficient based on one school's data.

Table 6. Correlations of OAT Scores, Undergraduate GPAs and Track III Vision Science

Variable	K	N	$r_{obs}$	$SD_{obs}$	$\rho_{with\ outlier}$	$\rho$	$SD_{\rho}$	95% Credibility Interval
Pearson Bivariate Correlation								
Academic Average	8	748	0.36	0.12	0.55	<b>0.58</b>	0.11	0.37 - 0.79
Total Science	9	811	0.34	0.13	N/A	<b>0.54</b>	0.14	0.28 - 0.81
Quantitative Reasoning	8	748	0.16	0.10	0.18	<b>0.21</b>	0.03	0.15 - 0.26
Reading Comprehension	9	811	0.23	0.11	N/A	<b>0.28</b>	0.07	0.15 - 0.41
Biology	9	811	0.27	0.14	N/A	<b>0.40</b>	0.14	0.13 - 0.68
General Chemistry	7	680	0.19	0.05	0.29	<b>0.28</b>	0.00	0.28 - 0.28
Organic Chemistry	9	811	0.29	0.12	N/A	<b>0.40</b>	0.09	0.22 - 0.59
Physics	9	811	0.23	0.11	N/A	<b>0.34</b>	0.05	0.25 - 0.43
Undergraduate GPA*	9	811	0.33	0.12	N/A	<b>0.41</b>	0.09	0.23 - 0.59
Math and Science GPA*	7	525	0.31	0.10	N/A	<b>0.38</b>	0.00	0.38 - 0.38
Other GPA*	5	451	0.30	0.10	0.37	<b>0.36</b>	0.04	0.29 - 0.44
Option 1 <sup>†</sup>	1	95	0.06	0.10	N/A	N/A	N/A	N/A
Option 2*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Multiple Correlation								
All OAT Scores*	9	811	0.44	0.12	N/A	<b>0.48</b>	0.09	0.30 - 0.66
All OAT Scores & Math/Science GPAs*	7	525	0.48	0.12	N/A	<b>0.53</b>	0.10	0.34 - 0.72
All OAT Scores, Math/Science & Overall GPAs*	7	525	0.50	0.12	N/A	<b>0.55</b>	0.10	0.36 - 0.74
All OAT Scores, Math/Science, Overall and Other GPAs*	5	362	0.48	0.12	N/A	<b>0.53</b>	0.09	0.40 - 0.56
All Predictors*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note. k = number of schools;  $r_{obs}$  = observed sample-size-weighted average correlation;  $SD_{obs}$  = standard deviation of observed correlations;  $\rho_{with\ outlier}$  = corrected correlation coefficients with the outlier(s) included in the data;  $\rho$  = corrected correlation coefficient with the outlier(s) removed;  $SD_{\rho}$  = standard deviation of corrected correlation coefficient; \* Not corrected for range restriction; <sup>†</sup> Actual Pearson Correlation Coefficient based on one school's data.

Table 7. Correlations of OAT Scores, Undergraduate GPAs and Track IV Ocular Health Science

Variable	K	N	r <sub>obs</sub>	SD <sub>obs</sub>	ρ <sub>with outlier</sub>	ρ	SD <sub>ρ</sub>	95% Credibility Interval
Pearson Bivariate Correlation								
Academic Average	9	811	0.21	0.10	N/A	<b>0.36</b>	0.00	0.36 - 0.36
Total Science	9	811	0.21	0.09	N/A	<b>0.36</b>	0.00	0.36 - 0.36
Quantitative Reasoning	8	748	0.09	0.07	0.08	<b>0.12</b>	0.00	0.12 - 0.12
Reading Comprehension	7	709	0.17	0.12	0.17	<b>0.24</b>	0.09	0.07 - 0.42
Biology	9	811	0.18	0.10	N/A	<b>0.27</b>	0.03	0.21 - 0.32
General Chemistry	9	811	0.14	0.13	N/A	<b>0.20</b>	0.10	0.01 - 0.40
Organic Chemistry	9	811	0.19	0.12	N/A	<b>0.28</b>	0.08	0.12 - 0.43
Physics	9	811	0.13	0.10	N/A	<b>0.19</b>	0.00	0.19 - 0.19
Undergraduate GPA*	9	811	0.36	0.08	N/A	<b>0.43</b>	0.00	0.43 - 0.43
Math and Science GPA*	7	525	0.33	0.08	N/A	<b>0.40</b>	0.00	0.40 - 0.40
Other GPA*	7	648	0.31	0.11	N/A	<b>0.38</b>	0.08	0.23 - 0.53
Option 1*†	1	95	-0.04	0.10	N/A	N/A	N/A	N/A
Option 2*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Multiple Correlation								
All OAT Scores*	9	811	0.37	0.10	N/A	<b>0.41</b>	0.03	0.43 - 0.47
All OAT Scores & Math/Science GPAs*	7	525	0.48	0.08	N/A	<b>0.53</b>	0.00	0.53 - 0.53
All OAT Scores, Math/Science & Overall GPAs*	7	525	0.53	0.06	N/A	<b>0.58</b>	0.00	0.59 - 0.58
All OAT Scores, Math/Science, Overall and Other GPAs*	5	362	0.52	0.05	N/A	<b>0.57</b>	0.00	0.57 - 0.57
All Predictors*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note. k = number of schools; r<sub>obs</sub> = observed sample-size-weighted average correlation; SD<sub>obs</sub> = standard deviation of observed correlations; ρ<sub>with outlier</sub> = corrected correlation coefficients with the outlier(s) included in the data; ρ = corrected correlation coefficient with the outlier(s) removed; SD<sub>ρ</sub> = standard deviation of corrected correlation coefficient; \* Not corrected for range restriction; † Actual Pearson Correlation Coefficient based on one school's data.

Table 8. Correlations of OAT Scores, Undergraduate GPAs and Track V Clinical Science

Variable	K	N	r <sub>obs</sub>	SD <sub>obs</sub>	ρ <sub>with outlier</sub>	ρ	SD <sub>ρ</sub>	95% Credibility Interval
Pearson Bivariate Correlation								
Academic Average	9	811	0.30	0.14	N/A	<b>0.50</b>	0.16	0.19 - 0.80
Total Science	9	811	0.29	0.11	N/A	<b>0.47</b>	0.04	0.39 - 0.56
Quantitative Reasoning	8	748	0.19	0.13	0.22	<b>0.25</b>	0.11	0.04 - 0.46
Reading Comprehension	9	811	0.19	0.13	N/A	<b>0.24</b>	0.10	0.04 - 0.44
Biology	9	811	0.25	0.09	N/A	<b>0.37</b>	0.00	0.37 - 0.37
General Chemistry	9	811	0.19	0.13	N/A	<b>0.28</b>	0.12	0.05 - 0.51
Organic Chemistry	9	811	0.22	0.12	N/A	<b>0.31</b>	0.08	0.15 - 0.46
Physics	9	811	0.19	0.09	N/A	<b>0.28</b>	0.00	0.28 - 0.28
Undergraduate GPA*	9	811	0.33	0.12	N/A	<b>0.40</b>	0.10	0.22 - 0.59
Math and Science GPA*	7	525	0.27	0.10	0.35	<b>0.33</b>	0.00	0.33 - 0.33
Other GPA*	6	515	0.24	0.14	0.36	<b>0.29</b>	0.11	0.08 - 0.50
Option 1*†	1	95	-0.04	0.10	N/A	N/A	N/A	N/A
Option 2*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Multiple Correlation								
All OAT Scores*	9	811	0.38	0.11	N/A	<b>0.42</b>	0.07	0.28 - 0.56
All OAT Scores & Math/Science GPAs*	7	525	0.44	0.12	N/A	<b>0.48</b>	0.08	0.32 - 0.64
All OAT Scores, Math/Science & Overall GPAs*	7	525	0.48	0.14	N/A	<b>0.53</b>	0.12	0.31 - 0.76
All OAT Scores, Math/Science, Overall and Other GPAs*	5	362	0.43	0.13	N/A	<b>0.48</b>	0.09	0.50 - 0.65
All Predictors*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note. k = number of schools; r<sub>obs</sub> = observed sample-size-weighted average correlation; SD<sub>obs</sub> = standard deviation of observed correlations; ρ<sub>with outlier</sub> = corrected correlation coefficients with the outlier(s) included in the data; ρ = corrected correlation coefficient with the outlier(s) removed; SD<sub>ρ</sub> = standard deviation of corrected correlation coefficient; \* Not corrected for range restriction; † Actual Pearson Correlation Coefficient based on one school's data.

Table 9. Correlations of OAT Scores, Undergraduate GPAs and Track VI Clinic

Variable	K	N	r <sub>obs</sub>	SD <sub>obs</sub>	ρ <sub>with outlier</sub>	ρ	SD <sub>ρ</sub>	95% Credibility Interval
Pearson Bivariate Correlation								
Academic Average	3	170	0.07	0.10	N/A	<b>0.12</b>	0.00	0.12 - 0.12
Total Science	3	170	0.07	0.13	N/A	<b>0.11</b>	0.00	0.11 - 0.11
Quantitative Reasoning	3	170	0.01	0.08	N/A	<b>0.01</b>	0.00	0.01 - 0.01
Reading Comprehension	3	170	0.04	0.09	N/A	<b>0.05</b>	0.00	0.05 - 0.05
Biology	3	170	0.00	0.12	N/A	<b>0.01</b>	0.00	0.01 - 0.01
General Chemistry	3	170	0.13	0.03	N/A	<b>0.18</b>	0.00	0.18 - 0.18
Organic Chemistry	3	170	0.13	0.16	N/A	<b>0.18</b>	0.12	-0.04 - 0.41
Physics	3	170	0.13	0.14	N/A	<b>0.18</b>	0.07	0.05 - 0.32
Undergraduate GPA*	3	170	0.17	0.05	N/A	<b>0.21</b>	0.00	0.21 - 0.21
Math and Science GPA*	3	170	0.05	0.13	N/A	<b>0.06</b>	0.00	0.06 - 0.06
Other GPA*	2	102	0.21	0.01	N/A	<b>0.26</b>	0.00	0.26 - 0.26
Option 1*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Option 2*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Multiple Correlation								
All OAT Scores*	3	170	0.34	0.13	N/A	<b>0.38</b>	0.06	0.25 - 0.51
All OAT Scores & Math/Science GPAs*	3	170	0.35	0.13	N/A	<b>0.39</b>	0.07	0.26 - 0.52
All OAT Scores, Math/Science & Overall GPAs*	3	170	0.43	0.08	N/A	<b>0.47</b>	0.00	0.47 - 0.47
All OAT Scores, Math/Science, Overall and Other GPAs*	2	102	0.50	0.07	N/A	<b>0.55</b>	0.00	0.55 - 0.55
All Predictors*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note. k = number of schools; r<sub>obs</sub> = observed sample-size-weighted average correlation; SD<sub>obs</sub> = standard deviation of observed correlations; ρ<sub>with outlier</sub> = corrected correlation coefficients with the outlier(s) included in the data; ρ = corrected correlation coefficient with the outlier(s) removed; SD<sub>ρ</sub> = standard deviation of corrected correlation coefficient; \* Not corrected for range restriction.

Table 10. Correlations of OAT Scores, Undergraduate GPAs and Track VII Other

Variable	K	N	r <sub>obs</sub>	SD <sub>obs</sub>	ρ <sub>with outlier</sub>	ρ	SD <sub>ρ</sub>	95% Credibility Interval
Pearson Bivariate Correlation								
Academic Average	8	716	0.16	0.10	N/A	<b>0.27</b>	0.00	0.27 - 0.27
Total Science	8	716	0.14	0.09	N/A	<b>0.24</b>	0.00	0.24 - 0.24
Quantitative Reasoning	7	653	0.08	0.10	0.07	<b>0.11</b>	0.00	0.11 - 0.11
Reading Comprehension	8	716	0.19	0.12	N/A	<b>0.23</b>	0.08	0.07 - 0.40
Biology	8	716	0.11	0.08	N/A	<b>0.16</b>	0.00	0.16 - 0.16
General Chemistry	7	612	0.10	0.12	0.11	<b>0.15</b>	0.07	0.02 - 0.28
Organic Chemistry	8	716	0.11	0.11	N/A	<b>0.16</b>	0.06	0.05 - 0.27
Physics	8	716	0.11	0.07	N/A	<b>0.15</b>	0.00	0.15 - 0.15
Undergraduate GPA*	8	716	0.20	0.12	N/A	<b>0.24</b>	0.08	0.08 - 0.40
Math and Science GPA*	6	430	0.15	0.14	N/A	<b>0.18</b>	0.09	0.01 - 0.36
Other GPA*	7	648	0.16	0.13	N/A	<b>0.19</b>	0.09	0.02 - 0.36
Option 1*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Option 2*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Multiple Correlation								
All OAT Scores*	8	716	0.30	0.10	N/A	<b>0.33</b>	0.04	0.26 - 0.40
All OAT Scores & Math/Science GPAs*	6	430	0.35	0.14	N/A	<b>0.38</b>	0.10	0.19 - 0.57
All OAT Scores, Math/Science & Overall GPAs*	6	430	0.39	0.14	N/A	<b>0.43</b>	0.10	0.22 - 0.63
All OAT Scores, Math/Science, Overall and Other GPAs*	5	362	0.38	0.11	N/A	<b>0.41</b>	0.06	0.30 - 0.52
All Predictors*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note. k = number of schools; r<sub>obs</sub> = observed sample-size-weighted average correlation; SD<sub>obs</sub> = standard deviation of observed correlations; ρ<sub>with outlier</sub> = corrected correlation coefficients with the outlier(s) included in the data; ρ = corrected correlation coefficient with the outlier(s) removed; SD<sub>ρ</sub> = standard deviation of corrected correlation coefficient; \* Not corrected for range restriction.

Findings from the preceding tables are summarized below.

- Taken as a whole, Tables 2 to 10 provide strong empirical evidence that OAT scores and undergraduate GPAs are strongly related to the various student performance criteria (first- and second-year overall optometry GPAs and optometry school Track I to Track V grades).
- The OAT academic average score ( $\rho=0.61$ ), OAT total science score ( $\rho=0.60$ ), and biology score ( $\rho=0.46$ ) appear to have the highest level of association with **overall GPAs in the first-year of optometry school** (Table 2). Overall undergraduate GPA ( $\rho=0.42$ ) and math & science GPA ( $\rho=0.42$ ) are also strongly related to first-year overall GPAs. Of the five remaining individual OAT scores, organic chemistry score ( $\rho=0.39$ ), physics score ( $\rho=0.38$ ), and general chemistry score ( $\rho=0.37$ ) are more strongly related to the first-year overall GPAs than quantitative reasoning score ( $\rho=0.25$ ) and reading comprehension score ( $\rho=0.27$ ).
- The pattern of correlations involving **second-year overall GPAs** with OAT scores and undergraduate GPAs (Table 3) is very similar to that of first-year overall GPAs (Table 2). OAT academic average score ( $\rho=0.56$ ) and OAT total science score ( $\rho=0.56$ ) appear to have the highest level of association with overall GPAs in the second-year of optometry school. Overall undergraduate GPA ( $\rho=0.48$ ), other GPAs ( $\rho=0.48$ ), math & science GPA ( $\rho=0.44$ ), and biology score ( $\rho=0.42$ ) are also strongly related to second-year overall GPAs. Of the five remaining individual OAT scores, general chemistry score ( $\rho=0.35$ ), and organic chemistry score ( $\rho=0.36$ ), and physics score ( $\rho=0.34$ ), are more strongly related to the second-year overall GPAs than quantitative reasoning score ( $\rho=0.21$ ) and reading comprehension score ( $\rho=0.30$ ).
- OAT academic average score ( $\rho=0.64$ ), OAT total science score ( $\rho=0.62$ ), biology score ( $\rho=0.52$ ), general chemistry score ( $\rho=0.42$ ), organic chemistry score ( $\rho=0.41$ ), and physics score ( $\rho=0.41$ ) are the most important predictors in their level of association with **optometry school Track I grades** (Table 4).
- OAT total science score ( $\rho=0.62$ ), OAT academic average score ( $\rho=0.59$ ), organic chemistry score ( $\rho=0.45$ ), physics score ( $\rho=0.44$ ), biology score ( $\rho=0.43$ ), overall undergraduate GPA ( $\rho=0.41$ ), and math & science GPA ( $\rho=0.40$ ) are the most important predictors in their level of association with **optometry school Track II grades** (Table 5).
- OAT academic average score ( $\rho=0.58$ ), OAT total science score ( $\rho=0.54$ ), overall undergraduate GPA ( $\rho=0.41$ ), biology score ( $\rho=0.40$ ), and organic chemistry score ( $\rho=0.40$ ) are the most important predictors in their level of association with **optometry school Track III grades** (Table 6).
- Undergraduate GPA ( $\rho=0.43$ ), math and science GPA ( $\rho=0.40$ ), other GPA ( $\rho=0.38$ ), OAT academic average score ( $\rho=0.36$ ), and OAT total science score ( $\rho=0.36$ ) are the most important predictors in their level of association with **optometry school Track IV** (Table 7).
- OAT academic average score ( $\rho=0.50$ ), OAT total science score ( $\rho=0.47$ ), undergraduate GPA ( $\rho=0.40$ ), biology score ( $\rho=0.37$ ), math & science GPA ( $\rho=0.33$ ), and organic chemistry score ( $\rho=0.31$ ) are the most important predictors in their level of association with **optometry school Track V grades** (Table 8).
- Other GPA ( $\rho=0.26$ ), undergraduate GPA ( $\rho=0.21$ ), general chemistry score ( $\rho=0.18$ ), organic chemistry score ( $\rho=0.18$ ), and physics score ( $\rho=0.18$ ) are the most important predictors in their level of association with **optometry school Track VI grades** (Table 9).
- OAT academic average score ( $\rho=0.27$ ), OAT total science score ( $\rho=0.24$ ), undergraduate GPA ( $\rho=0.24$ ), reading comprehension score ( $\rho=0.23$ ), other GPA ( $\rho=0.19$ ), and math and science GPA ( $\rho=0.18$ ) are the most important predictors in their level of association with **optometry school Track VII grades** (Table 10).

It should be noted that because the distributions of undergraduate GPA, math and science GPA, other GPA, and options 1 & 2 for all the applicants are unknown, it is not possible to correct for range restriction for these predictors. Therefore, the true relationship ( $\rho$ ) between these predictors and general performance in optometry school values for these predictors are likely to be higher than the values currently being reported (i.e., due to the inability to correct for range restriction). Additionally, it should be noted that the 95% credibility interval for each corrected correlation coefficient does not include zero except for two predictors, Option 1 in Tables 2 and 3 and organic chemistry score in Table 9. When the 95% credibility interval for a correlation coefficient does not include zero, it indicates that the correlation is unlikely to have occurred due to sampling error.

### ***Part II: Multiple Correlations between Optometry School Grades and Sets of Predictors (OAT Scores, Undergraduate GPAs, and Options)***

The bottom section of Tables 2 through 10 present multiple correlations between optometry school grades and various sets of predictors (i.e., various combinations of undergraduate GPAs and OAT scores). Across these tables, the criterion measure (i.e., optometry school grades) changes for each table, while the sets of predictors included in separate multiple regressions remains the same. Additionally, it should be recognized that the schools involved change across predictor sets. As shown in Table 2, a total of 13 schools are involved for the predictor set of “All OAT Scores” while only 1 school is involved for the full set of “All Predictors.”

Tables 2 and 3 present multiple correlations involving first- and second-year optometry school grades, respectively, and the aforementioned sets of predictors. Tables 4 through 10 present multiple correlations involving optometry school grades in Tracks I through VII, respectively, and the aforementioned sets of predictors. Because some schools could not provide data in every area requested, the number of schools involved in the calculation of the corrected correlation coefficients may change each time when more predictors are added to the standard multiple regressions (i.e., the schools utilized to calculate the corrected correlation coefficient for the “All OAT scores” variable may not be the same schools utilized to calculate the corrected correlation coefficient for the “All OAT Scores, Math/Science, Overall and Other GPAs” variable). Given this situation, it is possible that the corrected correlation coefficients might decrease even though more predictors are added to the standard multiple regressions. Such outcomes are evident in most of the tables. The results are summarized below.

- All OAT scores are strongly related to first-year overall GPAs ( $\rho=0.52$ ) and second year overall GPA ( $\rho=0.49$ ) as shown in Tables 2 and 3, respectively. The addition of overall undergraduate GPA and math and science GPA results in a stronger relation to first-year overall GPAs ( $\rho=0.59$ ) and second-year overall GPA ( $\rho=0.60$ ). The addition of other GPA does not result in a stronger relation to first-year overall GPA ( $\rho=0.57$ ) and second-year overall GPAs ( $\rho=0.60$ ). This is very likely because only six schools provided data for this set of predictors. No analysis was conducted for the full set of predictors because only one school provided data for the full set of “All Predictors”.
- The pattern of multiple correlations involving optometry school grades in Tracks I through VII (Tables 4 to 10) and different sets of predictors is similar to that of first-year overall GPAs (Table 2) and second-year overall GPAs (Table 3). All OAT scores are strongly related to optometry school grades in Tracks I through VII, with  $\rho$  values ranging from 0.33 (Table 10) to 0.53 (Table 4). All OAT scores, overall undergraduate GPA, and math and science GPA are more strongly related to optometry school grades in Tracks I through VII, with  $\rho$  values ranging from 0.43 (Table 10) to 0.59 (Table 5). The addition of other GPA does not result in a stronger relation with optometry school grades in Tracks I through V and Track VII with  $\rho$

values ranging from 0.41 (Tables 10) to 0.57 (Tables 7). No analysis was conducted for the full set of predictors for the same reasons mentioned above.

- At an overall level, combination of undergraduate GPAs – including math & science GPA, overall GPA, other GPA – as well as all OAT scores revealed a strong and consistent prediction of optometry school performance.

Again, it should be noted that because the distributions of all OAT scores and undergraduate GPAs for all the applicants are unknown, it is not possible to correct for range restriction for these predictors. Therefore,  $p$  values for these predictors are very likely to be even higher than the values that are currently being reported. Also, the 95% credibility interval for each corrected correlation coefficient does not include zero, which suggests that the correlations are unlikely to have occurred due to sampling error.

### ***Limitations***

The data in this report are based on a sample consisting of optometry students from thirteen (57%) of the 23 optometry schools in the United States. A limitation of this study is that not all schools reported data in all areas. To the degree that the present sample is not representative of the full population, this would limit the ability to generalize conclusions from this sample to the entire optometry school population. Having noted this, it should also be recognized that results reported for individual schools provide extremely valuable information for those participating schools. This information can be used to help optimize school admissions practices.

Although the corrected validity coefficients account for range restriction in the OAT scores, it should be noted that other predictors (i.e., undergraduate GPA, math & science GPA and other GPA) and criteria (i.e., biomedical grades, optics grades, and grade point average) also likely suffer from range restriction. In other words, since higher OAT scores and higher undergraduate GPAs are associated with higher first- and second-year grades, then optometry student samples (which consist of these higher scoring individuals) would likely contain fewer students with poor optometry grades than it would had these predictors not been utilized in admission decisions. Range restriction reduces the magnitude of obtained correlation coefficients. The net impact of these statistical artifacts is that reported correlations likely underestimate the true magnitude of the relationship between the predictors and true optometry performance. In short, the true correlation between OAT scores and optometry performance is likely to be even larger than the values that are currently being reported.

### ***Conclusions***

This study found that OAT scores and undergraduate GPAs were strong individual predictors of student performance in optometry school. When these predictors were taken as a set, the total contribution of the set represented a more powerful predictor than that obtained when looking at each predictor individually. The criterion-related validity evidence presented in this report is consistent with the results of previous OAT validity studies, and should reassure optometry programs of the continued value of including OAT scores as part of their admission criteria.



## **References**

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## **Appendix 1. Pearson Product-Moment Correlation Coefficients and Multiple Correlations between First-Year and Second-Year Optometry School Grades and Predictors (OAT Scores, Undergraduate GPAs and Options).**

In interpreting the tables presented in this appendix, the following should be noted:

- Tables 1 through 9 present bivariate (i.e., two variable) correlations involving optometry school grades and various individual predictors. These predictors represent either undergraduate GPAs, options or OAT scores.
- Tables 10 through 18 present multiple correlations involving optometry school grades and various sets of predictors (i.e., various combinations of undergraduate GPAs, options and OAT scores).
- Correlations which are significant at the 0.05 level are indicated by asterisks in Tables 1 through 9. At this level, there is a 95% probability that the obtained results are not attributable to chance.
- “# of Significant Correlations” represent the number of schools for which the computed coefficient was significant at the 0.05 level and “Percent Significant” is a ratio representing the number of significant coefficients (the first row) divided by the total number of coefficients (the second row) in Tables 1 through 9.
- The  $R^2$  is the squared multiple correlation between a dependent variable and a set of independent variables in Tables 10 through 18. It is the proportion of the variance in first- or second-year grades or GPAs that can be predicted by a linear combination of OAT Scores, undergraduate GPAs, Math & Science GPAs, Other GPAs and options 1 & 2.

Table 1: First-Year Optometry School Overall GPAs Correlated with OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	UNDER GRAD GPA	MATH & SCIENCE GPA	OTHER GPA	OPTION 1	OPTION 2	OPTOMETRY ADMISSION TEST							
							TS	ACAD AVG	QUANTI-TATIVE	READING-COMP.	PHYSICS	BIOLOGY	GENERAL CHEM.	ORGANIC CHEM.
SCHOOL 001	42	0.342*	0.343*	N/AV	N/AV	N/AV	0.575*	0.630*	0.375*	0.387*	0.507*	0.568*	0.448*	0.231
SCHOOL 002	104	0.258*	0.268*	0.080	N/AV	N/AV	0.242*	0.287*	0.164	0.201*	0.121	0.156	0.214*	0.207*
SCHOOL 003	63	0.150	0.210	0.083	N/AV	N/AV	0.345*	0.290*	-0.012	0.174	0.430*	0.153	-0.038	0.330*
SCHOOL 004	85	-0.076	-0.018	N/AV	N/AV	N/AV	0.244*	0.347*	0.320*	0.205	0.113	0.201	0.188	0.060
SCHOOL 005	153	0.270*	N/AV	0.367*	N/AV	N/AV	0.376*	0.359*	0.169*	0.063	0.335*	0.293*	0.162	0.258*
SCHOOL 006	95	0.395*	0.381*	N/AV	N/AV	N/AV	0.467*	0.428*	0.102	0.138	0.297*	0.313*	0.368*	0.219*
SCHOOL 007	38	0.563*	0.573*	0.479*	N/AV	N/AV	0.626*	0.582*	0.229	0.389*	0.515*	0.469*	0.230	0.607*
SCHOOL 008	95	0.320*	0.372*	N/AV	-0.013	N/AV	0.468*	0.477*	0.230*	0.332*	0.264*	0.359*	0.360*	0.370*
SCHOOL 009	68	0.523*	0.489*	N/AV	N/AV	N/AV	0.619*	0.597*	0.270*	0.291*	0.452*	0.423*	0.580*	0.540*
SCHOOL 010	29	0.513*	0.465*	0.383*	0.508*	0.704*	0.122	0.116	-0.054	0.086	0.021	0.129	0.232	-0.014
SCHOOL 011	93	0.305*	0.286*	0.351*	N/AV	N/AV	0.381*	0.357*	0.149	0.352*	0.292*	0.403*	0.335*	0.285*
SCHOOL 012	133	0.483*	N/AV	0.490*	N/AV	N/AV	0.455*	0.497*	0.288*	0.307*	0.145	0.417*	0.337*	0.377*
SCHOOL 013	64	0.160	0.225	0.066	N/AV	N/AV	0.288*	0.238	0.035	0.032	0.300*	0.325*	0.211	0.096
# OF SIGNIFICANT COEFFICIENTS		10	8	5	1	1	12	11	6	7	9	9	7	9
VALID N		13	11	8	2	1	13	13	13	13	13	13	13	13
PERCENT SIGNIFICANT		77%	73%	63%	50%	100%	92%	85%	46%	54%	69%	69%	54%	69%
MEDIAN		0.320	0.343	0.359	0.248	0.704	0.381	0.359	0.169	0.205	0.297	0.325	0.232	0.258

N/AV - GRADES NOT AVAILABLE

\* Significant coefficient (p<.05).

Table 2: Second-Year Optometry School Overall GPAs Correlated with OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	UNDER GRAD GPA	MATH & SCIENCE GPA	OTHER GPA	OPTION 1	OPTION 2	OPTOMETRY ADMISSION TEST							
							TS	ACAD AVG	QUANTITATIVE	READING-COMP.	PHYSICS	BIOLOGY	GENERAL CHEM.	ORGANIC CHEM.
SCHOOL 001	42	0.295	0.226	N/AV	N/AV	N/AV	0.261	0.292	0.118	0.235	0.266	0.275	0.196	0.064
SCHOOL 002	104	0.319*	0.268*	0.138	N/AV	N/AV	0.219*	0.228*	0.123	0.205*	0.145	0.181	0.089	0.188
SCHOOL 003	63	0.316*	0.347*	0.236	N/AV	N/AV	0.354*	0.325*	0.006	0.228	0.409*	0.182	-0.028	0.354*
SCHOOL 004	85	0.039	0.201	N/AV	N/AV	N/AV	0.212	0.203	0.178	-0.009	0.011	0.193	0.180	0.081
SCHOOL 005	153	0.292*	N/AV	0.387*	N/AV	N/AV	0.388*	0.374*	0.167*	0.111	0.366*	0.321*	0.166*	0.236*
SCHOOL 006	95	0.427*	0.392*	N/AV	N/AV	N/AV	0.384*	0.356*	0.058	0.141	0.217*	0.258*	0.292*	0.234*
SCHOOL 007	38	0.628*	0.611*	0.554*	N/AV	N/AV	0.670*	0.632*	0.323*	0.355*	0.500*	0.492*	0.261	0.688*
SCHOOL 008	95	0.375*	0.464*	N/AV	-0.014	N/AV	0.482*	0.472*	0.225*	0.290*	0.283*	0.361*	0.397*	0.372*
SCHOOL 009	68	0.553*	0.498*	N/AV	N/AV	N/AV	0.595*	0.595*	0.289*	0.335*	0.414*	0.440*	0.549*	0.517*
SCHOOL 010	29	0.594*	0.562*	0.469*	0.540*	0.544*	-0.138	-0.121	-0.176	0.058	-0.201	-0.067	0.025	-0.215
SCHOOL 011	93	0.353*	0.301*	0.374*	N/AV	N/AV	0.332*	0.308*	0.129	0.345*	0.244*	0.314*	0.319*	0.261*
SCHOOL 012	133	0.506*	N/AV	0.514*	N/AV	N/AV	0.398*	0.452*	0.257*	0.324*	0.106	0.355*	0.324*	0.332*
SCHOOL 013	64	0.293*	0.327*	0.237	N/AV	N/AV	0.356*	0.333*	0.089	0.116	0.342*	0.355*	0.315*	0.127
# OF SIGNIFICANT COEFFICIENTS		11	9	5	1	1	10	10	5	6	8	8	7	8
VALID N		13	11	8	2	1	13	13	13	13	13	13	13	13
PERCENT SIGNIFICANT		85%	82%	63%	50%	100%	77%	77%	38%	46%	62%	62%	54%	62%
MEDIAN		0.353	0.347	0.381	0.263	0.544	0.356	0.333	0.129	0.228	0.266	0.314	0.261	0.236

N/AV - GRADES NOT AVAILABLE

\* Significant coefficient ( $p < .05$ ).

Table 3: Optometry School Track I Grades: Optics Correlated with OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	UNDER GRAD GPA	MATH & SCIENCE GPA	OTHER GPA	OPTION 1	OPTION 2	OPTOMETRY ADMISSION TEST							
							TS	ACAD AVG	QUANTITATIVE	READING-COMP.	PHYSICS	BIOLOGY	GENERAL CHEM.	ORGANIC CHEM.
SCHOOL 001	42	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 002	104	0.230*	0.256*	0.055	N/AV	N/AV	0.280*	0.313*	0.180	0.176	0.173	0.196*	0.216*	0.223*
SCHOOL 003	63	0.235	0.194	0.234	N/AV	N/AV	0.366*	0.396*	0.256	0.298*	0.435*	0.268*	0.071	0.193
SCHOOL 004	85	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 005	153	0.235*	N/AV	0.315*	N/AV	N/AV	0.463*	0.456*	0.295*	0.080	0.343*	0.442*	0.251*	0.304*
SCHOOL 006	95	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 007	38	0.570*	0.603*	0.481*	N/AV	N/AV	0.542*	0.541*	0.387*	0.324*	0.327*	0.536*	0.172	0.539*
SCHOOL 008	95	0.279*	0.361*	N/AV	0.053	N/AV	0.350*	0.385*	0.195	0.282*	0.155	0.237*	0.344*	0.310*
SCHOOL 009	68	0.557*	0.508*	N/AV	N/AV	N/AV	0.589*	0.589*	0.353*	0.300*	0.425*	0.409*	0.569*	0.505*
SCHOOL 010	29	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 011	93	0.175	0.167	0.235*	N/AV	N/AV	0.313*	0.296*	0.220*	0.273*	0.253*	0.318*	0.235*	0.260*
SCHOOL 012	133	0.409*	N/AV	0.429*	N/AV	N/AV	0.398*	0.454*	0.347*	0.302*	0.043	0.443*	0.322*	0.292*
SCHOOL 013	64	0.128	0.186	0.158	N/AV	N/AV	0.330*	0.295*	0.250	-0.047	0.205	0.397*	0.342*	0.098
# OF SIGNIFICANT COEFFICIENTS		6	4	4	0	0	9	9	5	6	5	9	7	7
VALID N		9	7	7	1	0	9	9	9	9	9	9	9	9
PERCENT SIGNIFICANT		67%	57%	57%	0%	0%	100%	100%	56%	67%	56%	100%	78%	78%
MEDIAN		0.235	0.256	0.235	0.053	0%	0.366	0.396	0.256	0.282	0.253	0.397	0.251	0.292

N/AV - GRADES NOT AVAILABLE

\* Significant coefficient ( $p < .05$ ).

Table 4: Optometry School Track II Grades: Biomedical Science Correlated with OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	UNDER GRAD GPA	MATH & SCIENCE GPA	OTHER GPA	OPTION 1	OPTION 2	OPTOMETRY ADMISSION TEST							
							TS	ACAD AVG	QUANTI-TATIVE	READING-COMP.	PHYSICS	BIOLOGY	GENERAL CHEM.	ORGANIC CHEM.
SCHOOL 001	42	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 002	104	0.275*	0.233*	0.146	N/AV	N/AV	0.267*	0.265*	0.115	0.121	0.143	0.182	0.194*	0.300*
SCHOOL 003	63	0.280*	0.307*	0.213	N/AV	N/AV	0.351*	0.304*	0.019	0.206	0.441*	0.216	-0.022	0.288*
SCHOOL 004	85	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 005	153	0.287*	N/AV	0.366*	N/AV	N/AV	0.392*	0.348*	0.098	0.052	0.389*	0.294*	0.179*	0.276*
SCHOOL 006	95	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 007	38	0.461*	0.468*	0.375*	N/AV	N/AV	0.642*	0.555*	0.152	0.308	0.557*	0.471*	0.252	0.589*
SCHOOL 008	95	0.379*	0.408*	N/AV	-0.011	N/AV	0.477*	0.469*	0.173	0.313*	0.270*	0.335*	0.379*	0.399*
SCHOOL 009	68	0.498*	0.462*	N/AV	N/AV	N/AV	0.605*	0.571*	0.214	0.273*	0.438*	0.415*	0.565*	0.521*
SCHOOL 010	29	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 011	93	0.252*	0.252*	0.248*	N/AV	N/AV	0.219*	0.189	0.065	0.238*	0.193	0.225*	0.217*	0.142
SCHOOL 012	133	0.462*	N/AV	0.446*	N/AV	N/AV	0.453*	0.445*	0.121	0.251*	0.227*	0.311*	0.345*	0.398*
SCHOOL 013	64	0.165	0.255*	0.055	N/AV	N/AV	0.316*	0.291*	-0.072	0.165	0.343*	0.281*	0.255*	0.174
# OF SIGNIFICANT COEFFICIENTS		8	7	4	0	0	9	8	0	4	7	7	7	7
VALID N		9	7	7	1	0	9	9	9	9	9	9	9	9
PERCENT SIGNIFICANT		89%	100%	57%	0%	0%	100%	89%	0%	44%	78%	78%	78%	78%
MEDIAN		0.287	0.307	0.248	-0.011	0%	0.392	0.348	0.115	0.238	0.343	0.294	0.252	0.300

N/AV - GRADES NOT AVAILABLE

\* Significant coefficient (p<.05).

Table 5: Optometry School Track III Grades: Vision Science Correlated with OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	UNDER GRAD GPA	MATH & SCIENCE GPA	OTHER GPA	OPTION 1	OPTION 2	OPTOMETRY ADMISSION TEST							
							TS	ACAD AVG	QUANTI-TATIVE	READING-COMP.	PHYSICS	BIOLOGY	GENERAL CHEM.	ORGANIC CHEM.
SCHOOL 001	42	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 002	104	0.236*	0.251*	0.124	N/AV	N/AV	0.242*	0.301*	0.155	0.280*	0.161	0.119	0.163	0.216*
SCHOOL 003	63	0.345*	0.338*	0.321*	N/AV	N/AV	0.141	0.065	-0.155	0.038	0.247	0.003	-0.098	0.181
SCHOOL 004	85	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 005	153	0.276*	N/AV	0.340*	N/AV	N/AV	0.358*	0.348*	0.157	0.069	0.306*	0.299*	0.169*	0.241*
SCHOOL 006	95	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 007	38	0.552*	0.556*	0.464*	N/AV	N/AV	0.672*	0.641*	0.376*	0.318	0.513*	0.542*	0.245	0.681*
SCHOOL 008	95	0.290*	0.296*	N/AV	0.062	N/AV	0.311*	0.317*	0.077	0.319*	0.174	0.192	0.182	0.299*
SCHOOL 009	68	0.491*	0.447*	N/AV	N/AV	N/AV	0.574*	0.559*	0.240	0.314*	0.406*	0.447*	0.524*	0.479*
SCHOOL 010	29	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 011	93	0.321*	0.258*	0.339*	N/AV	N/AV	0.262*	0.252*	0.113	0.278*	0.193	0.310*	0.247*	0.179
SCHOOL 012	133	0.487*	N/AV	0.496*	N/AV	N/AV	0.399*	0.446*	0.250*	0.331*	0.097	0.400*	0.248*	0.352*
SCHOOL 013	64	0.098	0.188	-0.032	N/AV	N/AV	0.205	0.184	-0.090	0.110	0.221	0.185	0.102	0.203
# OF SIGNIFICANT COEFFICIENTS		8	6	5	0	0	7	7	2	5	3	5	4	6
VALID N		9	7	7	1	0	9	9	9	9	9	9	9	9
PERCENT SIGNIFICANT		89%	86%	71%	0%	0%	78%	78%	22%	56%	33%	56%	44%	67%
MEDIAN		0.321	0.296	0.339	0.062	0%	0.311	0.317	0.155	0.280	0.221	0.299	0.182	0.241

N/AV - GRADES NOT AVAILABLE

\* Significant coefficient (p<.05).

Table 6: Optometry School Track IV Grades: Ocular Health Science Correlated with OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	UNDER GRAD GPA	MATH & SCIENCE GPA	OTHER GPA	OPTION 1	OPTION 2	OPTOMETRY ADMISSION TEST								
							TS	ACAD AVG	QUANTI- TATIVE	READING- COMP.	PHYSICS	BIOLOGY	GENERAL CHEM.	ORGANIC CHEM.	
SCHOOL 001	42	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 002	104	0.327*	0.225*	0.141	N/AV	N/AV	0.083	0.137	0.091	0.218*	0.043	0.066	-0.021	0.118	
SCHOOL 003	63	0.207	0.255*	0.147	N/AV	N/AV	0.172	0.085	-0.261	-0.047	0.291*	0.009	-0.097	0.275*	
SCHOOL 004	85	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	
SCHOOL 005	153	0.312*	N/AV	0.363*	N/AV	N/AV	0.242*	0.217*	0.011	0.081	0.214*	0.197*	0.109	0.120	
SCHOOL 006	95	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	
SCHOOL 007	38	0.353*	0.289	0.338*	N/AV	N/AV	0.220	0.139	-0.031	-0.150	0.270	-0.060	0.045	0.401*	
SCHOOL 008	95	0.406*	0.456*	N/AV	-0.040	N/AV	0.295*	0.227*	0.067	0.049	0.114	0.228*	0.200	0.297*	
SCHOOL 009	68	0.483*	0.397*	N/AV	N/AV	N/AV	0.424*	0.450*	0.203	0.327*	0.252*	0.364*	0.372*	0.391*	
SCHOOL 010	29	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	
SCHOOL 011	93	0.366*	0.309*	0.362*	N/AV	N/AV	0.193	0.194	0.053	0.249*	0.073	0.274*	0.190	0.158	
SCHOOL 012	133	0.450*	N/AV	0.456*	N/AV	N/AV	0.219*	0.284*	0.150	0.275*	-0.006	0.171*	0.249*	0.216*	
SCHOOL 013	64	0.238	0.361*	0.248	N/AV	N/AV	0.080	0.079	0.188	-0.070	0.028	0.214	0.080	-0.061	
# OF SIGNIFICANT COEFFICIENTS		7	6	4	0	0	4	4	0	4	3	5	2	5	
VALID N		9	7	7	1	0	9	9	9	9	9	9	9	9	
PERCENT SIGNIFICANT		78%	86%	57%	0%	0%	44%	44%	0%	44%	33%	56%	22%	56%	
MEDIAN		0.353	0.309	0.338	-0.040	0%	0.219	0.194	0.067	0.081	0.114	0.197	0.109	0.216	

N/AV - GRADES NOT AVAILABLE

\* Significant coefficient (p<.05).



Table 7: Optometry School Track V Grades: Clinical Science Correlated with OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	UNDER GRAD GPA	MATH & SCIENCE GPA	OTHER GPA	OPTION 1	OPTION 2	OPTOMETRY ADMISSION TEST							
							TS	ACAD AVG	QUANTI-TATIVE	READING-COMP.	PHYSICS	BIOLOGY	GENERAL CHEM.	ORGANIC CHEM.
SCHOOL 001	42	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 002	104	0.299*	0.251*	0.134	N/AV	N/AV	0.206*	0.202*	0.132	0.156	0.094	0.215*	0.086	0.155
SCHOOL 003	63	0.187	0.198	0.183	N/AV	N/AV	0.156	0.103	-0.132	0.002	0.275*	0.064	-0.099	0.192
SCHOOL 004	85	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 005	153	0.312*	N/AV	0.374*	N/AV	N/AV	0.295*	0.284*	0.125	0.063	0.262*	0.229*	0.125	0.168*
SCHOOL 006	95	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 007	38	0.408*	0.211	0.471*	N/AV	N/AV	0.318	0.299	0.145	0.145	0.201	0.213	0.134	0.380*
SCHOOL 008	95	0.321*	0.343*	N/AV	-0.042	N/AV	0.418*	0.449*	0.295*	0.319*	0.202*	0.349*	0.327*	0.332*
SCHOOL 009	68	0.560*	0.492*	N/AV	N/AV	N/AV	0.490*	0.560*	0.398*	0.385*	0.343*	0.399*	0.413*	0.441*
SCHOOL 010	29	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 011	93	0.227*	0.196	0.235*	N/AV	N/AV	0.259*	0.240*	0.101	0.271*	0.203	0.277*	0.252*	0.142
SCHOOL 012	133	0.496*	N/AV	0.514*	N/AV	N/AV	0.324*	0.411*	0.312*	0.315*	0.063	0.314*	0.275*	0.257*
SCHOOL 013	64	0.135	0.194	0.011	N/AV	N/AV	0.091	0.071	-0.080	0.008	0.139	0.088	0.143	-0.032
# OF SIGNIFICANT COEFFICIENTS		7	3	4	0	0	6	6	3	4	4	6	4	5
VALID N		9	7	7	1	0	9	9	9	9	9	9	9	9
PERCENT SIGNIFICANT		78%	43%	57%	0%	0%	67%	67%	33%	44%	44%	67%	44%	56%
MEDIAN		0.312	0.211	0.235	-0.042	0%	0.295	0.284	0.132	0.156	0.202	0.229	0.143	0.192

N/AV - GRADES NOT AVAILABLE

\* Significant coefficient (p<.05).

Table 8: Optometry School Track VI Grades: Clinic Correlated with OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	UNDER GRAD GPA	MATH & SCIENCE GPA	OTHER GPA	OPTION 1	OPTION 2	OPTOMETRY ADMISSION TEST								
							TS	ACAD AVG	QUANTI-TATIVE	READING-COMP.	PHYSICS	BIOLOGY	GENERAL CHEM.	ORGANIC CHEM.	
SCHOOL 001	42	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 002	104	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 003	63	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 004	85	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 005	153	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 006	95	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 007	38	0.269	0.258	0.196	N/AV	N/AV	0.282	0.217	0.005	-0.124	0.382*	0.014	0.083	0.412*	
SCHOOL 008	95	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 009	68	0.161	0.064	N/AV	N/AV	N/AV	0.069	0.088	0.097	0.065	0.015	0.127	0.115	0.013	
SCHOOL 010	29	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 011	93	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 012	133	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 013	64	0.131	-0.082	0.219	N/AV	N/AV	-0.068	-0.037	0.086	0.113	0.099	-0.143	0.169	0.081	
# OF SIGNIFICANT COEFFICIENTS		0	0	0	0	0	0	0	0	0	1	0	0	1	
VALID N		3	3	2	0	0	3	3	3	3	3	3	3	3	
PERCENT SIGNIFICANT		0%	0%	0%	0%	0%	0%	0%	0%	0%	33%	0%	0%	33%	
MEDIAN		0.161	0.064	-0.012	0%	0%	0.069	0.088	0.005	0.065	0.015	0.014	0.115	-0.013	

N/AV - GRADES NOT AVAILABLE

\* Significant coefficient (p<.05).

Table 9: Optometry School Track VII Grades: Other Correlated with OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	UNDER GRAD GPA	MATH & SCIENCE GPA	OTHER GPA	OPTION 1	OPTION 2	OPTOMETRY ADMISSION TEST							
							TS	ACAD AVG	QUANTI-TATIVE	READING-COMP.	PHYSICS	BIOLOGY	GENERAL CHEM.	ORGANIC CHEM.
SCHOOL 001	42	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 002	104	0.167	0.061	0.061	N/AV	N/AV	0.026	0.073	0.069	0.181	0.078	-0.028	-0.058	-0.050
SCHOOL 003	63	0.075	0.043	0.122	N/AV	N/AV	0.090	0.035	-0.238	0.060	0.207	0.036	-0.161	0.123
SCHOOL 004	85	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 005	153	0.159	N/AV	0.152	N/AV	N/AV	0.170*	0.143	-0.056	-0.045	0.095	0.104	0.150	0.117
SCHOOL 006	95	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 007	38	0.526*	0.435*	0.556*	N/AV	N/AV	0.412*	0.438*	0.314	0.412*	0.316	0.252	0.201	0.388*
SCHOOL 008	95	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 009	68	0.386*	0.353*	N/AV	N/AV	N/AV	0.276*	0.346*	0.234	0.377*	0.054	0.226	0.282*	0.309*
SCHOOL 010	29	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 011	93	0.127	0.109	0.055	N/AV	N/AV	0.179	0.143	0.076	0.161	0.161	0.187	0.123	0.157
SCHOOL 012	133	0.260*	N/AV	0.277*	N/AV	N/AV	0.096	0.175*	0.101	0.316*	0.019	0.092	0.098	0.063
SCHOOL 013	64	0.021	-0.010	0.029	N/AV	N/AV	0.079	0.124	0.072	0.119	0.116	0.146	-0.024	0.040
# OF SIGNIFICANT COEFFICIENTS		3	2	2	0	0	3	3	0	3	0	0	1	2
VALID N		8	6	7	0	0	8	8	8	8	8	8	8	8
PERCENT SIGNIFICANT		38%	33%	29%	0%	0%	38%	38%	0%	38%	0%	0%	13%	25%
MEDIAN		0.163	0.085	0.122	0%	0%	0.133	0.143	0.074	0.171	0.105	0.125	0.110	0.120

N/AV - GRADES NOT AVAILABLE

\* Significant coefficient (p<.05).

Table 10: First-Year Optometry School Overall GPAs Regressed on OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	OAT SCALES ONLY*	OAT & Math/Science GPA	OAT, Math/Science & Overall GPAs	OAT, Math/Science, Overall & Other GPAs	OAT, Math/Science, Overall & Other GPAs & Options
SCHOOL 001	42	0.670	0.676	0.698	N/AV	N/AV
SCHOOL 002	104	0.309	0.395	0.398	0.396	N/AV
SCHOOL 003	63	0.547	0.566	0.566	0.567	N/AV
SCHOOL 004	85	0.363	0.363	0.387	N/AV	N/AV
SCHOOL 005	153	0.377	N/AV	N/AV	N/AV	N/AV
SCHOOL 006	95	0.480	0.545	0.557	N/AV	N/AV
SCHOOL 007	38	0.729	0.790	0.805	0.812	N/AV
SCHOOL 008	95	0.526	0.574	0.576	N/AV	N/AV
SCHOOL 009	68	0.656	0.709	0.735	N/AV	N/AV
SCHOOL 010	29	0.325	0.537	0.600	0.604	0.837
SCHOOL 011	93	0.450	0.493	0.496	0.496	N/AV
SCHOOL 012	133	0.572	N/AV	N/AV	N/AV	N/AV
SCHOOL 013	64	0.383	0.416	0.431	0.461	N/AV
MEDIAN R		0.480	0.545	0.566	0.532	0.837
VARIANCE ACCOUNTED FOR (MEDIAN R-SQUARE)		23.1%	29.7%	32.1%	28.3%	70.0%

N/AV - GRADES NOT AVAILABLE

\* OAT scales include quantitative reasoning, reading comprehension, biology, general and organic chemistry, and physics.

Table 11: Second-Year Optometry School Overall GPAs Regressed on OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	OAT SCALES ONLY*	OAT & Math/Science GPA	OAT, Math/Science & Overall GPAs	OAT, Math/Science, Overall & Other GPAs	OAT, Math/Science, Overall & Other GPAs & Options
SCHOOL 001	42	0.354	0.371	0.426	N/AV	N/AV
SCHOOL 002	104	0.270	0.378	0.427	0.436	N/AV
SCHOOL 003	63	0.540	0.588	0.597	0.598	N/AV
SCHOOL 004	85	0.252	0.300	0.396	N/AV	N/AV
SCHOOL 005	153	0.407	N/AV	N/AV	N/AV	N/AV
SCHOOL 006	95	0.410	0.499	0.520	N/AV	N/AV
SCHOOL 007	38	0.757	0.810	0.844	0.850	N/AV
SCHOOL 008	95	0.521	0.611	0.618	N/AV	N/AV
SCHOOL 009	68	0.630	0.700	0.736	N/AV	N/AV
SCHOOL 010	29	0.375	0.657	0.707	0.718	0.826
SCHOOL 011	93	0.405	0.464	0.483	0.483	N/AV
SCHOOL 012	133	0.539	N/AV	N/AV	N/AV	N/AV
SCHOOL 013	64	0.425	0.499	0.499	0.501	N/AV
MEDIAN R VARIANCE ACCOUNTED FOR (MEDIAN R-SQUARE)		0.410	0.499	0.520	0.550	0.826
		16.8%	24.9%	27.1%	30.2%	68.3%

N/AV - GRADES NOT AVAILABLE

\* OAT scales include quantitative reasoning, reading comprehension, biology, general and organic chemistry, and physics.

Table 12: Optometry School Track I Grades: Optics Regressed on OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	OAT SCALES ONLY*	OAT & Math/Science GPA	OAT, Math/Science & Overall GPAs	OAT, Math/Science, Overall & Other GPAs	OAT, Math/Science, Overall & Other GPAs & Options
SCHOOL 001	42	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 002	104	0.304	0.386	0.386	0.386	N/AV
SCHOOL 003	63	0.502	0.539	0.586	0.588	N/AV
SCHOOL 004	85	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 005	153	0.486	N/AV	N/AV	N/AV	N/AV
SCHOOL 006	95	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 007	38	0.668	0.743	0.749	0.749	N/AV
SCHOOL 008	95	0.453	0.512	0.520	N/AV	N/AV
SCHOOL 009	68	0.633	0.700	0.738	N/AV	N/AV
SCHOOL 010	29	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 011	93	0.351	0.367	0.367	0.374	N/AV
SCHOOL 012	133	0.579	N/AV	N/AV	N/AV	N/AV
SCHOOL 013	64	0.486	0.504	0.511	0.515	N/AV
MEDIAN R VARIANCE ACCOUNTED FOR (MEDIAN R-SQUARE)		0.486 23.6%	0.512 26.2%	0.520 27.0%	0.515 26.5%	

N/AV - GRADES NOT AVAILABLE

\* OAT scales include quantitative reasoning, reading comprehension, biology, general and organic chemistry, and physics.

Table 13: Optometry School Track II Grades: Biomedical Science Regressed on OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	OAT SCALES ONLY*	OAT & Math/Science GPA	OAT, Math/Science & Overall GPAs	OAT, Math/Science, Overall & Other GPAs	OAT, Math/Science, Overall & Other GPAs & Options
SCHOOL 001	42	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 002	104	0.324	0.382	0.425	0.432	N/AV
SCHOOL 003	63	0.533	0.565	0.572	0.573	N/AV
SCHOOL 004	85	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 005	153	0.423	N/AV	N/AV	N/AV	N/AV
SCHOOL 006	95	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 007	38	0.728	0.761	0.778	0.793	N/AV
SCHOOL 008	95	0.539	0.598	0.599	N/AV	N/AV
SCHOOL 009	68	0.641	0.689	0.716	N/AV	N/AV
SCHOOL 010	29	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 011	93	0.280	0.354	0.360	0.364	N/AV
SCHOOL 012	133	0.522	N/AV	N/AV	N/AV	N/AV
SCHOOL 013	64	0.436	0.474	0.516	0.535	N/AV
MEDIAN R VARIANCE ACCOUNTED FOR (MEDIAN R-SQUARE)		0.522 27.3%	0.565 32.0%	0.572 32.7%	0.535 28.6%	

N/AV - GRADES NOT AVAILABLE

\* OAT scales include quantitative reasoning, reading comprehension, biology, general and organic chemistry, and physics.

Table 14: Optometry School Track III Grades: Vision Science Regressed on OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	OAT SCALES ONLY*	OAT & Math/Science GPA	OAT, Math/Science & Overall GPAs	OAT, Math/Science, Overall & Other GPAs	OAT, Math/Science, Overall & Other GPAs & Options
SCHOOL 001	42	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 002	104	0.335	0.418	0.418	0.418	N/AV
SCHOOL 003	63	0.397	0.449	0.464	0.482	N/AV
SCHOOL 004	85	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 005	153	0.359	N/AV	N/AV	N/AV	N/AV
SCHOOL 006	95	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 007	38	0.769	0.795	0.819	0.827	N/AV
SCHOOL 008	95	0.440	0.485	0.486	N/AV	N/AV
SCHOOL 009	68	0.607	0.663	0.689	N/AV	N/AV
SCHOOL 010	29	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 011	93	0.346	0.404	0.423	0.423	N/AV
SCHOOL 012	133	0.554	N/AV	N/AV	N/AV	N/AV
SCHOOL 013	64	0.328	0.349	0.409	0.439	N/AV
MEDIAN R VARIANCE ACCOUNTED FOR (MEDIAN R-SQUARE)		0.397 15.8%	0.449 20.2%	0.464 21.5%	0.439 19.3%	

N/AV - GRADES NOT AVAILABLE

\* OAT scales include quantitative reasoning, reading comprehension, biology, general and organic chemistry, and physics.



Table 15: Optometry School Track IV Grades: Ocular Health Science Regressed on OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	OAT SCALES ONLY*	OAT & Math/Science GPA	OAT, Math/Science & Overall GPAs	OAT, Math/Science, Overall & Other GPAs	OAT, Math/Science, Overall & Other GPAs & Options
SCHOOL 001	42	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 002	104	0.249	0.347	0.455	0.478	N/AV
SCHOOL 003	63	0.550	0.553	0.554	0.554	N/AV
SCHOOL 004	85	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 005	153	0.265	N/AV	N/AV	N/AV	N/AV
SCHOOL 006	95	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 007	38	0.518	0.547	0.599	0.600	N/AV
SCHOOL 008	95	0.338	0.501	0.501	N/AV	N/AV
SCHOOL 009	68	0.485	0.563	0.622	N/AV	N/AV
SCHOOL 010	29	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 011	93	0.374	0.447	0.468	0.469	N/AV
SCHOOL 012	133	0.425	N/AV	N/AV	N/AV	N/AV
SCHOOL 013	64	0.333	0.515	0.590	0.591	N/AV
MEDIAN R VARIANCE ACCOUNTED FOR (MEDIAN R-SQUARE)		0.374 14.0%	0.515 26.5%	0.554 30.7%	0.554 30.7%	

N/AV - GRADES NOT AVAILABLE

\* OAT scales include quantitative reasoning, reading comprehension, biology, general and organic chemistry, and physics.

Table 16: Optometry School Track V Grades: Clinical Science Regressed on OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	OAT SCALES ONLY*	OAT & Math/Science GPA	OAT, Math/Science & Overall GPAs	OAT, Math/Science, Overall & Other GPAs	OAT, Math/Science, Overall & Other GPAs & Options
SCHOOL 001	42	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 002	104	0.260	0.348	0.405	0.410	N/AV
SCHOOL 003	63	0.418	0.433	0.452	0.455	N/AV
SCHOOL 004	85	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 005	153	0.290	N/AV	N/AV	N/AV	N/AV
SCHOOL 006	95	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 007	38	0.394	0.395	0.741	0.786	N/AV
SCHOOL 008	95	0.508	0.555	0.555	N/AV	N/AV
SCHOOL 009	68	0.568	0.669	0.708	N/AV	N/AV
SCHOOL 010	29	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 011	93	0.322	0.360	0.366	0.368	N/AV
SCHOOL 012	133	0.494	N/AV	N/AV	N/AV	N/AV
SCHOOL 013	64	0.246	0.300	0.327	0.344	N/AV
MEDIAN R VARIANCE ACCOUNTED FOR (MEDIAN R-SQUARE)		0.394 15.5%	0.395 15.6%	0.452 20.5%	0.410 16.8%	

N/AV - GRADES NOT AVAILABLE

\* OAT scales include quantitative reasoning, reading comprehension, biology, general and organic chemistry, and physics.

Table 17: Optometry School Track VI Grades: Clinic Regressed on OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	OAT SCALES ONLY*	OAT & Math/Science GPA	OAT, Math/Science & Overall GPAs	OAT, Math/Science, Overall & Other GPAs	OAT, Math/Science, Overall & Other GPAs & Options
SCHOOL 001	42	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 002	104	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 003	63	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 004	85	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 005	153	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 006	95	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 007	38	0.545	0.556	0.570	0.590	N/AV
SCHOOL 008	95	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 009	68	0.202	0.211	0.350	N/AV	N/AV
SCHOOL 010	29	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 011	93	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 012	133	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 013	64	0.375	0.377	0.420	0.440	N/AV
MEDIAN R VARIANCE ACCOUNTED FOR (MEDIAN R-SQUARE)		0.375	0.377	0.420	0.515	
		14.1%	14.2%	17.6%	26.5%	

N/AV - GRADES NOT AVAILABLE

\* OAT scales include quantitative reasoning, reading comprehension, biology, general and organic chemistry, and physics.

Table 18: Optometry School Track VII Grades: Other Regressed on OAT Scores, undergraduate GPAs, Math & Science GPAs, and Other GPAs

SCHOOL	NUMBER OF STUDENTS	OAT SCALES ONLY*	OAT & Math/Science GPA	OAT, Math/Science & Overall GPAs	OAT, Math/Science, Overall & Other GPAs	OAT, Math/Science, Overall & Other GPAs & Options
SCHOOL 001	42	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 002	104	0.221	0.245	0.367	0.371	N/AV
SCHOOL 003	63	0.414	0.417	0.417	0.420	N/AV
SCHOOL 004	85	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 005	153	0.207	N/AV	N/AV	N/AV	N/AV
SCHOOL 006	95	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 007	38	0.528	0.569	0.668	0.669	N/AV
SCHOOL 008	95	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 009	68	0.468	0.554	0.554	N/AV	N/AV
SCHOOL 010	29	N/AV	N/AV	N/AV	N/AV	N/AV
SCHOOL 011	93	0.232	0.240	0.240	0.314	N/AV
SCHOOL 012	133	0.330	N/AV	N/AV	N/AV	N/AV
SCHOOL 013	64	0.238	0.239	0.253	0.255	N/AV
MEDIAN R		0.284	0.331	0.392	0.371	
VARIANCE ACCOUNTED FOR (MEDIAN R-SQUARE)		8.1%	10.9%	15.4%	13.8%	

N/AV - GRADES NOT AVAILABLE

\* OAT scales include quantitative reasoning, reading comprehension, biology, general and organic chemistry, and physics.

Optometry Admission Test Program  
Department of Testing Services  
211 East Chicago Avenue, Suite 600  
Chicago, Illinois 60611-2637

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