Supplemental Digital Table 1

**Multiple Linear Regression Models for Individual Study Behaviors and First-Attempt USMLE Step 1 Score, University of Michigan Medical School, 2014 and 2015**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Multiple linear regression models** | **Variable** | **Coefficient**  **(95% CI)a** | **Standardized β** | ***P* valueb** |
| **S1: Controls + Early study**  **(n = 232)**  R = 0.72, adj R2 = 0.50,  ΔR2 = 0.029,  F = 47.3, *P* < .001 | Female sex | -1.48 (-4.68, 1.72) | -0.05 | NS |
| MCAT score | 1.02 (0.51, 1.54) | 0.20 | < .001 |
| Preclinical score | 1.99 (1.61, 2.37) | 0.50 | < .001 |
| Score goal | 0.29 (0.18, 0.41) | 0.26 | < .001 |
| Early study | 6.81 (3.13, 10.50) | 0.17 | < .001 |
| **S2: Controls + Review book passes (n = 226)**  R = 0.72, adj R2 = 0.51,  ΔR2 = 0.034,  F = 48.1, *P* < .001 | Female sex | -1.57 (-4.82, 1.68) | -0.05 | NS |
| MCAT score | 1.05 (0.53, 1.57) | 0.20 | < .001 |
| Preclinical score | 1.90 (1.52, 2.29) | 0.48 | < .001 |
| Score goal | 0.23 (0.11, 0.36) | 0.20 | < .001 |
| Review book passes | 3.84 (1.92, 5.76) | 0.19 | < .001 |
| **S3: Controls + Unique questions**  **(n = 231)**  R = 0.74, adj R2 = 0.54,  ΔR2 = 0.071,  F = 55.4, *P* < .001 | Female sex | -0.92 (-4.00, 2.16) | -0.03 | NS |
| MCAT score | 1.09 (0.59, 1.59) | 0.21 | < .001 |
| Preclinical score | 1.87 (1.51, 2.23) | 0.47 | < .001 |
| Score goal | 0.23 (0.12, 0.35) | 0.20 | < .001 |
| Unique questionsc | 0.45 (0.30, 0.59) | 0.28 | < .001 |
| **S4: Controls + Repeat questions**  **(n = 231)**  R = 0.71, adj R2 = 0.49,  ΔR2 = 0.019,  F = 44.9, *P* < .001 | Female sex | -1.83 (-5.07, 1.41) | -0.06 | NS |
| MCAT score | 0.96 (0.44, 1.49) | 0.19 | < .001 |
| Preclinical score | 1.96 (1.57, 2.34) | 0.50 | < .001 |
| Score goal | 0.28 (0.17, 0.40) | 0.25 | < .001 |
| Repeat questionsc | 0.26 (0.08, 0.43) | 0.14 | < .01 |

Abbreviations: Controls indicates female sex, MCAT score, preclinical score, and score goal; USMLE, United States Medical Licensing Exam; CI, confidence interval; MCAT, Medical College Admission Test; NS, not significant at the α = 0.05 level.  
aUnstandardized beta coefficient, with 95% confidence interval.  
b*P* value indicates coefficient significance.

cQuestion variables are in 100-question units.

Supplemental Digital Table 2

**Sensitivity Analysis of Multiple Linear Regression Models for First-Attempt USMLE Step 1 Score With and Without Self-Identified Score Goal, University of Michigan Medical School, 2014 and 2015**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **A. Multiple linear regression with score goal** | **Variable** | **Coefficient**  **(95% CI)a** | **Standardized β** | ***P* valueb** |
| **Control Model, n = 232**  R = 0.70, adj R2 = 0.48,  *P* < .001 | (Constant) | -41.5 (-80.9, -2.1) |  |  |
| Female sex | -1.82 (-5.10, 1.46) | -0.06 | NS |
| MCAT score | 0.95 (0.45, 1.51) | 0.19 | < .001 |
| Preclinical score | 1.92 (1.53, 2.31) | 0.49 | < .001 |
| Score goal | 0.31 (0.19, 0.43) | 0.27 | < .001 |
| **Master Model, n = 225**  R = 0.76, adj R2 = 0.56,  ΔR2 = 0.092, *P* < .001 | (Constant) | -39.5 (-76.7, -2.2) |  |  |
| Female sex | -0.90 (-4.00, 2.19) | -0.03 | NS |
| MCAT score | 1.10 (0.61, 1.60) | 0.21 | < .001 |
| Preclinical score | 1.96 (1.59, 2.33) | 0.49 | < .001 |
| Score goal | 0.18 (0.06, 0.30) | 0.16 | < .001 |
| Early study | 4.23 (0.55, 7.91) | 0.11 | .03 |
| Review book passes | 2.29 (0.32, 4.26) | 0.11 | .02 |
| Unique questionsc | 0.35 (0.18, 0.52) | 0.21 | < .001 |
| Repeat questionsc | 0.01 (-0.17, 0.19) | 0.01 | NS |
| **B. Multiple linear regression without score goal** | **Variable** | **Coefficient**  **(95% CI)a** | **Standardized β** | ***P* valueb** |
| **Control Model, n = 269**  R = 0.65, adj R2 = 0.42,  *P* < .001 | (Constant) | 1.61 (-33.5, 36.7) |  |  |
| Female sex | -3.53 (-6.67, -0.40) | -0.11 | .03 |
| MCAT score | 1.51 (1.01, 2.01) | 0.29 | < .001 |
| Preclinical score | 2.05 (1.67, 2.42) | 0.51 | < .001 |
| **Master Model, n = 260**  R = 0.75, adj R2 = 0.54,  ΔR2 = 0.12, *P* < .001 | (Constant) | -12.7 (-44.7, 19.2) |  |  |
| Female sex | -1.64 (-4.49, 1.21) | -0.05 | NS |
| MCAT score | 1.43 (0.98, 1.88) | 0.28 | < .001 |
| Preclinical score | 2.01 (1.66, 2.36) | 0.50 | < .001 |
| Early study | 4.29 (0.89, 7.68) | 0.11 | .01 |
| Review book passes | 2.76 (0.92, 4.60) | 0.14 | < .01 |
| Unique questionsc | 0.36 (0.20, 0.52) | 0.22 | < .001 |
| Repeat questionsc | 0.02 (-0.16, 0.19) | 0.01 | NS |

Abbreviations: USMLE indicates United States Medical Licensing Exam; CI, confidence interval; MCAT, Medical College Admission Test; NS, not significant at the α = 0.05 level.  
aUnstandardized beta coefficient, with 95% confidence interval.  
b*P* value indicates coefficient significance.  
cQuestion variables are in 100-question units.

Supplemental Digital Appendix 1

**United States Medical Licensing Exam (USMLE) Step 1 Study-Behaviors Survey Instrument, University of Michigan Medical School**

*(The formatting may be unusual due to translating a live survey to a static PDF document.)*



