

Association Between Admission Criteria and Written Summative Examination Performance Among Medical Students: A Retrospective Cohort Study

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Abstract. Medical schools combine prior academic achievement, aptitude tests, interviews, and other measures to select applicants, but the predictive contribution of each component is context-dependent, and the study institution's own weighted admission composite had not been evaluated against its written examinations since its adoption. This retrospective cohort study evaluated the association between admission criteria and subsequent performance on the written summative examination in a Philippine medical program. The analytic cohort comprised 318 students admitted across eight cohorts from 2007 to 2014 who completed the academic curriculum through Year Level 3 by 2017, enrolled through total enumeration of all students meeting eligibility criteria. Data came from institutional admission records (undergraduate school and course, Latin honors, weighted point average [WPA], mental ability test, personality assessment, National Medical Admission Test component and percentile scores, interview score, and essay score) and registrar-recorded scores from 19 end-of-course written summative examinations. These measures were drawn directly from official institutional registrar and admissions records rather than newly collected instruments, and records were cross-checked for completeness before analysis. Frequencies, percentages, means, and ranges described the sample; Spearman correlation assessed categorical and ordinal admission variables, and simple and multiple linear regression assessed continuous admission variables against the Total Summative Score (TSS). The existing composite Total Admission Score (TAS) significantly predicted TSS: each one-point increase in the composite was associated with a 0.352-point increase in examination performance (95% CI 0.256–0.448; $p < .001$). In the multivariable model, WPA ($B = 0.505$, 95% CI 0.314–0.696; $p < .001$) and Latin honors ($B = 1.324$, 95% CI 0.299–2.349; $p = .011$) remained significant, while the aptitude, admission-test, and interview variables did not. Students with no remedial examinations had a higher mean WPA at admission than students with increasing numbers of remedials (88.7 versus 86.8, 84.9, and 83.9). Prior academic achievement was the most consistent predictor of written examination performance. The current composite showed statistically significant but limited predictive utility, and exact reweighting of admission components should not be implemented without reanalysis of the original data, internal validation, and evaluation against broader outcomes including clinical, professional, and community-based performance.

Keywords: Admission Criteria; Health Science; Medical Students; Written summative examination performance; Retrospective Cohort Study

Introduction

Selection into medical school is a consequential institutional process. Admission decisions must identify applicants who are academically prepared for an intensive curriculum while also supporting fairness, diversity, professional formation, and the future health-workforce needs of the community. No single selection method captures all of these purposes. Consequently, most medical schools combine measures of prior academic achievement, standardized cognitive tests, interviews, written exercises, and indicators of personal or professional attributes.

The study medical school uses a problem-based, community-oriented curriculum and historically combined several admission components into a weighted Total Admission Score (TAS). These components included the applicant's undergraduate institution and degree program, undergraduate weighted point average (WPA), Latin honors, a mental ability test, a personality assessment, National Medical Admission Test (NMAT) scores, an interview, and an essay. The weighting system had been used for several cohorts without a contemporary evaluation against the school's own end-of-course written assessments.

Research gap. Three gaps in the evidence motivated this study. First, although the admission weighting system had been in continuous use for multiple cohorts, no contemporary study had examined whether its components actually predicted the school's own written summative examination outcomes. Second, prior academic achievement, admission-test scores, and non-academic measures such as the interview and essay had never been compared directly within this institution to determine which, if any, carried independent predictive value once the others were accounted for. Third, the archived source analysis on which this reconstruction draws contained internally inconsistent and non-reproducible exploratory findings, leaving open whether any revision of the admission formula could be responsibly recommended from that analysis alone. The present study addressed the first two gaps directly and, in reporting only the verifiable findings from the archived analysis, treats the third as a reason for caution rather than a basis for a new weighting recommendation.

Research Questions

This study therefore aimed to determine whether the existing composite admission score predicted written summative examination performance, identify which individual admission criteria were independently associated with that outcome, and provide evidence to guide future review of the admission system. Specifically, it sought to:

1. Determine whether the composite Total Admission Score (TAS) significantly predicted the Total Summative Score (TSS)
2. Determine which individual admission criteria, academic and non-academic, were significantly associated with TSS in univariable analysis
3. Determine which of these criteria remained independently significant predictors of TSS after mutual adjustment in a multivariable model
4. Determine whether admission WPA was associated with the number of remedial examinations required during the academic curriculum.

Scope and Delimitation of the Study

This study was limited to the association between admission criteria and written summative examination performance among students admitted to one Philippine medical school across eight cohorts, school years 2007 to 2014, who completed the academic curriculum through Year Level 3 by 2017. It covered only students who completed that curriculum; those who withdrew for non-academic reasons, failed and left the program, or remained retained in an earlier year level at the close of follow-up were excluded, so the findings do not describe those students' admission-outcome relationship. The study assessed statistical association between existing institutional records; it did not collect new admission or examination data, did not evaluate outcomes beyond written summative examinations (such as clinical, professional, or licensure performance), and did not re-derive or validate a new admission weighting formula. Because the source data were collected and archived some years prior to this manuscript's preparation and are reported here without a fresh applicant-level reanalysis, the findings describe the cohorts as they were assessed and are offered as verified, reconstructed evidence rather than as a current validation study.

Literature Review

Predictive Validity of Selection Methods

The evidence base consistently shows that the predictive validity of selection methods depends on the outcome being predicted. Prior grades and admission-test scores tend to predict knowledge-based assessments more strongly than clinical or professional outcomes, whereas interviews and other non-academic tools may be more relevant to interpersonal or behavioral performance. Systematic reviews have therefore cautioned against judging a selection system through a single outcome or assuming that a tool has the same validity across institutions and curricula (Fayolle et al., 2016; Patterson et al., 2016; Rees et al., 2016). More recent cohort studies reinforce this pattern: admission pathway and high school degree type have been shown to predict graduation likelihood and graduation grade point average in a Jordanian medical school (Tamimi et

al., 2023), while undergraduate degree background, health-related versus biomedical-science-focused, has been associated with differences in subsequent academic performance in an Australian medical program (Aston-Mourney et al., 2022).

Prior Academic Achievement as a Predictor

Prior academic achievement is among the most reproducible predictors of academic performance in medical school. Studies in different educational systems have reported that undergraduate grade point average or equivalent school achievement often contributes more to prediction than general aptitude tests, although standardized tests can add incremental information when combined with grades (Donnon et al., 2007; Julian, 2005; Poole et al., 2012; Shulruf et al., 2012). More recent cohort studies similarly found that cognitive admission measures predict academic outcomes more consistently than the non-academic characteristics assessed in the same selection process (Almarabheh et al., 2022; Althewini & Al Baz, 2022; Zuljevic & Buljan, 2022). Additional recent evidence corroborates the predictive role of prior academic measures: preclinical grades and admission-test scores have been used to model the risk of underperformance on licensing examinations in North American medical programs (Desy et al., 2021; Zhong et al., 2021), and admission-test performance has similarly predicted preclinical academic success in an Indonesian medical school (Diarsvitri et al., 2024). Within the Philippine setting specifically, premedical general weighted average and National Medical Admission Test (NMAT) scores have been found to significantly correlate with first-year academic performance at another local medical school (Banal et al., 2024), and a nationwide analysis linking NMAT scores to Physician Licensure Examination outcomes among more than 42,000 examinees found that higher NMAT performance was independently associated with a greater likelihood of eventual licensure success, supporting the continued, though modest, predictive value of this admission criterion in the local context (Vergeire-Dalmacion et al., 2026).

Non-Academic and Interview-Based Measures

Interview performance has shown variable predictive validity. Structured approaches, including multiple mini interviews, can improve reliability and may predict some clinical or professional outcomes, but findings are sensitive to interview design, assessor training, and the criterion used for validation (Husbands & Dowell, 2013; Rees et al., 2016). The same caution applies to essays and personality-oriented measures. A selection tool may add value by assessing communication, integrity, motivation, or fit with institutional mission even when it has little association with written examination scores.

Methodology

Research Design

This study used a retrospective cohort design, drawing on archived admission and academic records to evaluate the association between admission criteria and subsequent written examination performance. All data pertained to students already admitted and assessed; there was no intervention and no prospective follow-up beyond the academic monitoring already conducted by the institution. This design is consistent with established quantitative research design principles for examining relationships among naturally occurring variables without researcher-manipulated intervention (Creswell, 2014).

Sampling Technique

Total enumeration was used in place of probability sampling. The population of interest, all students admitted to the institution across the eight study cohorts, was finite and fully documented in institutional records, so every eligible student's admission and examination records were included and no sample was drawn. This approach removes sampling error for the population as defined, but it also means that findings generalize only to that population and to institutions with comparable admission systems and curricula, a limitation acknowledged in the interpretation of the results.

Research Locale

The study was conducted at a private medical school in the Philippines with an integrated, problem-based and community-oriented curriculum. Written end-of-course examinations assessed the cognitive or working-problem strand during the first three-year levels. The source cohort spanned eight admission years, from school year 2007 through school year 2014, with academic follow-up continuing until students had completed Year Level 3 by 2017.

Research Participants

All 343 students admitted during the study period were assessed for eligibility. Students were excluded when they had withdrawn for non-academic reasons ($n=11$), had failed and left the program ($n=10$), or remained retained in an earlier year level at the close of follow-up ($n=4$). The analytic cohort therefore comprised 318 students who completed the academic curriculum through Year Level 3. The cohort disposition by admission year is presented in Table 1 in the Results and Discussion section.

Research Instrument

Admission data included undergraduate school, undergraduate degree program, Latin honors, undergraduate weighted point average (WPA), mental ability test score (OLMAT), personality assessment score (IPAT), National Medical Admission Test (NMAT) aptitude score, NMAT special-areas score, NMAT percentile rank, interview score, and essay score. The historical composite Total Admission Score (TAS) assigned 2% each to undergraduate school and degree program, 30% to WPA, 9% each to OLMAT and IPAT, 8% to NMAT percentile rank, 26% to the interview, and 14% to the essay. Additional points were added for Latin honors: one point for cum laude, two for magna cum laude, and three for summa cum laude. Because these additions could raise the total above 100, the TAS should be interpreted as an institutional composite rather than a percentage. Because this study relied on pre-existing institutional records rather than a newly administered survey or test instrument, no expert content-validation panel was applicable; instead, the admission and examination records retrieved from institutional files were cross-checked against the registrar's and admissions office's original source files for completeness and accuracy before analysis. The primary outcome was the Total Summative Score (TSS), calculated as the mean of 19 end-of-course written summative examinations administered from Year Level 1 through Year Level 3. The examinations were multiple-choice assessments intended to measure knowledge, problem solving, and critical thinking. The number of remedial examinations was summarized as a secondary indicator of academic difficulty.

Data Gathering Procedure

Data were gathered in the following sequence: permission to access and use institutional admission and examination records was first requested from and obtained from the school administration and registrar's office prior to data retrieval; admission records for all 343 students admitted from School Year 2007 to 2014 were then retrieved from institutional files, including undergraduate school and program, Latin honors, WPA, OLMAT, IPAT, NMAT component and percentile scores, interview score, and essay score; written examination scores for the same students were retrieved from the registrar's records, and the Total Summative Score was computed as the mean of 19 end-of-course written summative examinations from Year Level 1 through Year Level 3; students who withdrew for non-academic reasons, failed and left the program, or remained retained in an earlier year level at the close of follow-up were identified and excluded, yielding an analytic cohort of 318 students; the composite Total Admission Score was then computed for each remaining student using the institution's historical weighting formula, and the number of remedial examinations taken by each student was tabulated; finally, the records were encoded in a spreadsheet and analyzed using SPSS and R, with only de-identified aggregate results available in the archived analysis used in preparing the manuscript.

Results and Discussions

Research Question 1: Did the composite Total Admission Score (TAS) significantly predict the Total Summative Score (TSS)?

Table 1. Cohort disposition by admission year, 2007–2014

Admission year	Admitted	Dropped	Failed	Retained	Completed Year 3
2007	34	1	2	0	31
2008	34	1	1	0	32
2009	41	0	2	0	39
2010	45	3	0	0	42
2011	45	0	3	0	42
2012	49	1	1	0	47
2013	47	4	0	1	42
2014	48	1	1	3	43
Total	343	11	10	4	318

Table 1 shows the cohort distribution according to admission year, from 2007 to 2014. Of 343 admitted students, 318 were included in the analytic cohort (92.7%). Women comprised 193 participants (60.7%) and

men 125 (39.3%). Most participants had completed undergraduate degrees at either the study university (145, 45.6%) or another major state university in the city (124, 39.0%). Nursing was the most common undergraduate program (228, 71.7%), followed by biology (66, 20.8%). Seventy-two students (22.6%) had Latin honors: 58 cum laude, 13 magna cum laude, and one summa cum laude. The mean WPA was 87.0, while the mean composite TAS was 88.6, ranging from 71.20 to 107.25 because categorical and Latin-honor points were added to the weighted continuous components. The mean TSS across 19 examinations was 63.1 (range 50.78–77.69). Admission-score distributions are shown in Table 2.

Table 2. Descriptive statistics for admission measures (n=318)

Admission measure	Possible maximum	Mean	Minimum	Maximum
Weighted point average (WPA)	100	87.0	79.00	95.66
OLMAT	Not specified	75.7	32	150
IPAT	100	46.6	1	99
NMAT percentile rank	100	48.6	1	99
NMAT aptitude	800	361.5	212	749
NMAT special areas	800	492.0	309	678
Interview score	120	105.7	73	120
Essay score	100	85.3	71	99
Total Admission Score	100*	88.6	71.20	107.25

The composite TAS significantly predicted TSS in simple linear regression. Each one-point increase in TAS was associated with a 0.352-point increase in TSS (95% CI 0.256–0.448; $p < .001$). The fitted intercept was 31.935 (95% CI 23.400–40.469; $p < .001$). The archived narrative also reported a zero-order correlation of 0.376. Because another section incorrectly described the regression coefficient of 0.352 as a correlation coefficient, the regression estimate is treated as the verified primary result and the exact zero-order correlation should be confirmed through reanalysis. The composite admission score, as currently weighted, is positively and statistically significantly associated with subsequent written examination performance. The magnitude of the slope, just over a third of a point of TSS per point of TAS, indicates that the composite contains real predictive information. A significant slope of this size is compatible with the composite functioning as intended in direction but weakly in magnitude. Because only admitted students were analyzed, and applicants with low composite scores had already been screened out, the true relationship across the full applicant pool, rather than the restricted range of admitted students, is likely stronger than what is observed here. The composite should be retained as a general screening tool but should not be treated as a precise individual-level predictor. Its retention is defensible; treating it as sufficient in itself is not. The restricted-range interpretation follows the broader medical education literature (Ferguson et al., 2002; Patterson et al., 2016), which similarly cautions against interpreting correlations in the admitted cohort as estimates of validity across the full applicant pool.

Research Question 2: Which individual admission criteria were significantly associated with TSS in univariable analysis?

Table 3. Univariable associations of admission criteria with Total Summative Score

Admission variable	Association measure	Estimate	95% CI	P-value
Undergraduate school	Spearman rho	-0.037	–	.515
Undergraduate degree program	Spearman rho	-0.042	–	.455
Latin honors	Spearman rho	0.389	–	<.001
WPA	B	0.762	0.605 to 0.919	<.001
OLMAT	B	0.156	0.091 to 0.220	<.001
IPAT	B	-0.010	-0.034 to 0.014	.398
NMAT percentile rank	B	0.068	0.046 to 0.091	<.001
NMAT aptitude	B	0.014	0.008 to 0.020	<.001
NMAT special areas	B	0.025	0.018 to 0.033	<.001
Interview score	B	0.107	0.055 to 0.160	<.001
Essay score	B	0.097	-0.005 to 0.199	.063

In univariable analyses, WPA, OLMAT, all three NMAT measures, interview score, and Latin honors were positively associated with TSS. Undergraduate school, undergraduate degree program, IPAT, and essay score were not statistically significant. The Latin-honors row in the archived univariable regression table contained internally inconsistent test statistics and confidence limits; consequently, its verified Spearman correlation ($\rho = 0.389$, $p < .001$) is reported instead.

Seven of the eleven admission measures assessed were significantly associated with TSS on their own: WPA, OLMAT, all three NMAT measures, interview score, and Latin honors. Undergraduate school, undergraduate degree program, IPAT, and essay score showed no significant univariable association. The significant measures span both academic (WPA, OLMAT, NMAT, Latin honors) and non-academic (interview) domains, so univariable significance alone does not identify which component actually carries independent predictive weight once the others are considered; that question is addressed in the multivariable model that follows. Categorical variables such as undergraduate school and program add little value to this composite and could be reconsidered as scored components, though any such change requires the reanalysis described in the Methodology. The pattern of academic measures outperforming non-academic measures at the univariable stage is consistent with the broader literature on medical school selection (Donnon et al., 2007; Julian, 2005; Poole et al., 2012; Shulruf et al., 2012).

Research Question 3: Which admission criteria remained independently significant predictors of TSS after mutual adjustment?

Table 4. Multiple linear regression predicting Total Summative Score (n=318)

Predictor	B	95% CI	p-value
Weighted point average	0.505	0.314 to 0.696	<.001
OLMAT	0.049	-0.027 to 0.126	.206
NMAT percentile rank	0.016	-0.055 to 0.087	.656
NMAT aptitude	-0.003	-0.016 to 0.009	.597
NMAT special areas	0.008	-0.008 to 0.024	.342
Interview score	0.026	-0.022 to 0.075	.288
Latin honors	1.324	0.299 to 2.349	.011
Constant	8.068	-10.639 to 26.776	.397

In the multiple linear regression model, only WPA and Latin honors remained significant. A one-point increase in WPA was associated with a 0.505-point increase in TSS (95% CI 0.314–0.696; $p<.001$). Latin honors were associated with a 1.324-point higher TSS (95% CI 0.299–2.349; $p=.011$). OLMAT, NMAT percentile rank, NMAT aptitude, NMAT special areas, and interview score were no longer statistically significant after adjustment (Table 4).

Only two of the seven variables entered into the multivariable model remained independently significant: WPA and Latin honors. Both reflect prior undergraduate academic achievement rather than aptitude, admission test performance, or interview performance. The attenuation of OLMAT, NMAT measures, and interview scores may reflect overlap among cognitive predictors, restricted score ranges after selection, limited measurement precision, or an outcome most closely aligned with previous academic performance. The absence of an independent interview association should not be interpreted as evidence that the interview has no value; interviews are generally intended to assess attributes, such as communication, ethical judgment, and motivation, not fully represented by grades or standardized tests, and their utility depends on whether later outcomes measure those same constructs. Undergraduate academic achievement, not aptitude or interview performance, is the component of this admissions system that specifically performs predictive work for written examination outcomes. Any reweighting exercise should start from this finding rather than from the archived, non-reproducible exploratory weights. This attenuation pattern matches national and multicenter findings that admission GPA often explains more variance in medical-school assessment results than general aptitude tests (Dunleavy et al., 2013; Julian, 2005; Poole et al., 2012; Wilkinson et al., 2008), and that interview validity depends on structure and criterion alignment (Husbands & Dowell, 2013; Rees et al., 2016).

Research Question 4: Was admission WPA associated with the number of remedial examinations required?

Table 5. Remedial examinations and mean weighted point average at admission (n=318)

Number of remedial examinations	Students, n	Percent	Mean admission WPA
0	99	31.1	88.7
1–5	155	48.7	86.8
6–10	50	15.7	84.9
11–15	14	4.4	83.9
16 or more	0	0.0	Not applicable
Total	318	100.0	–

Ninety-nine students (31.1%) completed all 19 examinations without a remedial examination. A further 155 (48.7%) had one to five remedials, 50 (15.7%) had six to ten, and 14 (4.4%) had 11 to 15; none had 16 or

more. Mean WPA decreased across groups with increasing numbers of remedial examinations: 88.7 among students with no remedials, compared with 86.8, 84.9, and 83.9 among those with one to five, six to ten, and 11 to 15 remedials respectively (Table 5)

The table shows a graded, monotonic decline in mean admission WPA as the number of remedial examinations increases, from 88.7% among students with no remedials to 83.9% among those with the most. This descriptive gradient is consistent with and reinforces the multivariable finding that WPA independently predicts TSS: students with lower admission WPA not only scored lower on average across 19 examinations but also required more remedial examinations to pass. However, using 88.7 as a cut point would be inappropriate without a formal threshold analysis reporting sensitivity, specificity, predictive values, calibration, and consequences for equity and class composition. Admission WPA offers an accessible institutional signal of subsequent academic difficulty, but converting a single historical cohort directly into an admission exclusion rule would be premature and is not recommended from this analysis alone. The graded association between prior achievement and subsequent academic difficulty is consistent with the broader finding that prior grades predict knowledge-based performance more reliably than non-academic measures (Ferguson et al., 2002; Patterson et al., 2016).

Ethical Considerations

This study was conducted prior to the establishment of the institution's Ethics Review Board (ERB), which was constituted in 2020. At the time of conduct, the study protocol was reviewed and approved by the institution's Research Committee. Data privacy, confidentiality, and other applicable institutional guidelines were observed throughout data collection and analysis, and only de-identified, aggregate-level admission and academic records were used. *Risk and harm.* Participation posed no physical risk, as the study involved only a retrospective review of institutional records, rather than direct interaction with living participants at the time of manuscript preparation. The principal foreseeable harm was informational: admission and examination records are personally identifiable at the source. This risk was managed by analyzing and reporting only de-identified, aggregate-level data; no individual student is identified by name or student number in any output of this study. *Benefits.* No individual student received any payment or other inducement, nor was any sought, since data were drawn from archived institutional records rather than from new participant contact. The anticipated benefits are indirect and institutional: evidence for the admissions committee to evaluate the predictive value of its own composite score, and a documented baseline against which any future revision of the admissions formula can be assessed. *Plagiarism.* All literature drawn upon in this study is cited in the text and listed in the reference list. This manuscript is derived from a master's thesis completed in 2018, which is disclosed here as the source of the data and is not reproduced verbatim; the manuscript has been checked for unattributed text reuse, including the original thesis. *Honesty and integrity.* The findings are reported as obtained from the archived analysis, with several internally inconsistent values in the source report explicitly flagged and substituted with the verified figures available in that same report, rather than silently corrected or omitted. The exploratory reweighting result was excluded from the conclusions specifically because it could not be verified, not because it was unfavorable. The interval between the original data collection and the preparation of the present manuscript is disclosed, as is the fact that the manuscript has not been published previously in any form.

Conclusion

The following conclusions are drawn in relation to the study's four objectives. The composite Total Admission Score (TAS) significantly predicted the Total Summative Score (TSS), with each one-point increase in TAS associated with a 0.352-point increase in TSS; however, the association, while statistically significant, was modest in magnitude. In the univariable analysis, seven of the eleven individual admission criteria—WPA, OLMAT, the three NMAT measures, interview score, and Latin honors—were significantly associated with TSS, whereas undergraduate school, undergraduate degree program, IPAT, and essay score were not. After mutual adjustment in the multivariable model, only WPA and Latin honors remained independently significant predictors of TSS, while aptitude, admission-test, and interview measures did not. Admission WPA was also associated with the number of remedial examinations required, with mean WPA declining progressively from 88.7% among students with no remedial examinations to 83.9% among those with the most remedials. Taken together, prior academic achievement, represented by undergraduate WPA and Latin honors, emerged as the strongest and most consistent predictor of written summative examination performance in this cohort. Although the existing composite admission score was positively associated with subsequent examination scores, its predictive utility was limited and should not be used as the sole basis for admission decisions. No exact reweighting should be adopted from the archived exploratory analysis.

Recommendations

The following recommendations are addressed to the parties in a position to act on them. To the institution's Admissions Committee. Prior undergraduate academic achievement, specifically WPA and Latin honors, should continue to be weighted substantially in the admission composite, given its demonstrated independent association with written examination performance; aptitude, admission-test, and interview components should be retained for the distinct, non-examination-related purposes they serve rather than removed, since their absence of association with TSS specifically does not establish an absence of value more broadly. To the institution's Research Office and Graduate School. A fresh reanalysis of the original applicant-level dataset, including explicit variable coding, prespecified performance metrics, and internal validation through bootstrapping or cross-validation, should be conducted before any revision to the admission weighting formula is implemented. The exploratory ridge-regression weights reported in the archived thesis should not be adopted, given the internal inconsistencies identified in this manuscript. To researchers and medical education evaluators more broadly. Future work should extend this analysis to outcomes beyond written examinations, including clinical clerkship assessments, objective structured clinical examinations, professionalism indicators, completion, and licensure results, and should assess predictive validity in more recent admission cohorts to determine whether the relationships observed here still hold.

References

- Almarabbeh, A., Shehata, M. H., Ismaeel, A., Atwa, H., & Jaradat, A. (2022). Predictive validity of admission criteria in predicting academic performance of medical students: A retrospective cohort study. *Frontiers in Medicine*, 9, 971926. <https://doi.org/10.3389/fmed.2022.971926>
- Althewini, A., & Al Baz, N. (2022). Prediction of admission tests for medical students' academic performance. *Advances in Medical Education and Practice*, 13, 1287–1292. <https://doi.org/10.2147/AMEP.S355474>
- Aston-Mourney, K., McLeod, J., Rivera, L. R., McNeill, B. A., & Baldi, D. L. (2022). Prior degree and academic performance in medical school: Evidence for prioritising health students and moving away from a bio-medical science-focused entry stream. *BMC Medical Education*, 22, 700. <https://doi.org/10.1186/s12909-022-03769-x>
- Banal, R. A. R., Malijan, M. C. B., Solidum, F. P., Clamor, M. M., & Rio, P. C. (2024). The predictive value of admission qualifications on the academic performance of first-year medical students in Pamantasan ng Lungsod ng Maynila (PLM) College of Medicine. *Journal of Education and Learning*, 13(6), 115. <https://doi.org/10.5539/jel.v13n6p115>
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.
- Desy, J., Coderre, S., Veale, P., Busche, K., Woloschuk, W., & McLaughlin, K. (2021). Can we predict failure in licensure exams from medical students' undergraduate academic performance? *Canadian Medical Education Journal*, 12(6), 6–13. <https://doi.org/10.36834/cmej.72315>
- Diarsvitri, W., Gariato, E., Indrawati, R., & Sulistiani, W. (2024). Estimating students' academic success in the preclinical stage of undergraduate medical education using the admission test approach. *Journal of Advances in Medical Education & Professionalism*, 12(4), 235–242. <https://doi.org/10.30476/jamp.2024.101936.1949>
- Donnon, T., Paolucci, E. O., & Violato, C. (2007). The predictive validity of the MCAT for medical school performance and medical board licensing examinations: A meta-analysis of the published research. *Academic Medicine*, 82(1), 100–106. <https://doi.org/10.1097/01.ACM.0000249878.25186.B7>
- Dunleavy, D. M., Kroopnick, M. H., Dowd, K. W., Searcy, C. A., & Zhao, X. (2013). The predictive validity of the MCAT exam in relation to academic performance through medical school: A national cohort study of 2001–2004 matriculants. *Academic Medicine*, 88(5), 666–671. <https://doi.org/10.1097/ACM.0bo13e3182864299>
- Fayolle, A. V., Passirani, C., Letertre, E., Ramond, A., Perrotin, D., Saint-Andre, J. P., & Richard, I. (2016). Predictive validity of selection process in medical school, a systematic review of the literature. *La Presse Medicale*, 45(5), 483–494. <https://doi.org/10.1016/j.lpm.2016.03.007>
- Ferguson, E., James, D., & Madeley, L. (2002). Factors associated with success in medical school: Systematic review of the literature. *BMJ*, 324(7343), 952–957. <https://doi.org/10.1136/bmj.324.7343.952>
- Husbands, A., & Dowell, J. (2013). Predictive validity of the Dundee multiple mini-interview. *Medical Education*, 47(7), 717–725. <https://doi.org/10.1111/medu.12193>

- Julian, E. R. (2005). Validity of the Medical College Admission Test for predicting medical school performance. *Academic Medicine*, 80(10), 910–917. <https://doi.org/10.1097/00001888-200510000-00010>
- Kreiter, C. D., & Axelson, R. D. (2013). A perspective on medical school admission research and practice over the last 25 years. *Teaching and Learning in Medicine*, 25(Suppl. 1), S50–S56. <https://doi.org/10.1080/10401334.2013.842910>
- Patterson, F., Knight, A., Dowell, J., Nicholson, S., Cousans, F., & Cleland, J. (2016). How effective are selection methods in medical education? A systematic review. *Medical Education*, 50(1), 36–60. <https://doi.org/10.1111/medu.12817>
- Poole, P., Shulruf, B., Rudland, J., & Wilkinson, T. (2012). Comparison of UMAT scores and GPA in prediction of performance in medical school: A national study. *Medical Education*, 46(2), 163–171. <https://doi.org/10.1111/j.1365-2923.2011.04078.x>
- Rees, E. L., Hawarden, A. W., Dent, G., Hays, R., Bates, J., & Hassell, A. B. (2016). Evidence regarding the utility of multiple mini-interview for selection to undergraduate health programs: A BEME systematic review. *Medical Teacher*, 38(5), 443–455. <https://doi.org/10.3109/0142159X.2016.1158799>
- Shulruf, B., Poole, P., Wang, G. Y., Rudland, J., & Wilkinson, T. (2012). How well do selection tools predict performance later in a medical programme? *Advances in Health Sciences Education*, 17(5), 615–626. <https://doi.org/10.1007/s10459-011-9324-1>
- Tamimi, A., Hassuneh, M., Tamimi, I., Juweid, M., Shibli, D., AlMasri, B., & Tamimi, F. (2023). Admission criteria and academic performance in medical school. *BMC Medical Education*, 23, 273. <https://doi.org/10.1186/s12909-023-04251-y>
- Vergeire-Dalmacion, G. R., Sana, E. A., Garcia, F. B., Jr., Dilidili, A. L., San Antonio, D. M., & Baja, E. S. (2026). The National Medical Admission Test and medical student selection: Rethinking cutoff validity and fairness. *Korean Journal of Medical Education*, 38(1), 74–81. <https://doi.org/10.3946/kjme.2025.070>
- Wilkinson, D., Zhang, J., Byrne, G. J., Luke, H., Ozolins, I. Z., Parker, M. H., & Peterson, R. F. (2008). Medical school selection criteria and the prediction of academic performance. *Medical Journal of Australia*, 188(6), 349–354. <https://doi.org/10.5694/j.1326-5377.2008.tb01653.x>
- Wilkinson, D., Zhang, J., & Parker, M. (2011). Predictive validity of the Undergraduate Medicine and Health Sciences Admission Test for medical students' academic performance. *Medical Journal of Australia*, 194(7), 341–344. <https://doi.org/10.5694/j.1326-5377.2011.tb03002.x>
- Zhong, Q., Wang, H., Christensen, P., McNeil, K., Linton, M., & Payton, M. (2021). Early prediction of the risk of scoring lower than 500 on the COMLEX 1. *BMC Medical Education*, 21, 70. <https://doi.org/10.1186/s12909-021-02501-5>
- Zuljevic, M. F., & Buljan, I. (2022). Academic and non-academic predictors of academic performance in medical school: An exploratory cohort study. *BMC Medical Education*, 22, 366. <https://doi.org/10.1186/s12909-022-03436-1>