

Admissions Profile as Predictors of Academic Performance in a New Medical School

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Abstract

Higher Education Institutions (HEIs) in the Philippines are committed to deliver quality education and produce competent, highly efficient graduates equipped with values, skills, and knowledge ready to participate in the workforce. This research study determined the admission profiles of the first two group of graduates of the Doctor of Medicine Program of La Consolacion University Philippines, College of Medicine in Bulacan and correlated them to the graduates' overall academic performance. The admissions' profile used were age at the time of admission, sex, collegiate course, general weighted average (GWA) from the collegiate course, National Medical Admissions Test (NMAT) percentile rank, work experience and licensure examination passed. These factors were used and correlated to the student's general weighted average (GWA) from the Doctor of Medicine Program from first to fourth year. In determining the relationship of variables of the admission criteria and the student's overall performance and the significant predictor of students' success, regression analysis was utilized. The research study was subjected to and adhered to the Research and Ethics Committee of the university. Regression analysis revealed that among the admissions' criteria, the students' General Weighted Average (GWA) from their collegiate course, licensure examination passed and National Medical Admissions Test (NMAT) percentile rank were associated with success in the program with a p value result of 0.004, 0.002 and 0.000 respectively. However, it can be concluded that NMAT percentile rank, based on obtained Beta coefficients, is the best predictor of success in the Doctor of Medicine program.

Keywords: medical school admission, academic performance predictors, quality assurance in education, Doctor of Medicine program, predictive validity

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Introduction

In general, the goal of every Higher Education Institution offering a variety of programs is to produce competent and efficient graduates ready to participate in the workforce. La Consolacion University Philippines started the Doctor of Medicine Program in 2017 with very few enrollees. Majority were transferees from other institutions. These aspiring doctors were given a chance to pursue their dream job, which is becoming a doctor to heal and treat patients using their skills, knowledge and most specially a heart that understands every patient condition.

Previous studies in the Philippines revealed that regardless of the type of teaching method and curriculum, the undergraduate general weighted average best correlated with academic performance in medical school (Brizuela et al., 2002; Cunanan, 2020; Villamor & Reyes, 2016). For a Philippine Catholic University, both undergraduate general weighted average (uGWA) and National Medical Admissions Test (NMAT) percentile rank have been found to have a significant moderate linear correlation with the medical school performance (Cunanan, 2020). Factors like positive environment, good teaching style of professors, parents' supervision, social networking, strong motivation for achievement, a clear goal, and ensuring enough sleep during exams have been found to affect the medical student's academic performance (Khan et al., 2020; Shawwa et al., 2015). While there are other factors that may contribute to the medical students' overall performance, this study mainly focused on the admission profile of the students.

This study is delimited to the pioneering and second cohorts of the Doctor of Medicine program at La Consolacion University Philippines during the 2021–2022 academic year. To maintain the focus of the inquiry, subsequent year levels were excluded from the sample. Data collection was facilitated through the University Registrar following the procurement of voluntary informed consent from the participants. For transfer students, academic performance from previous medical institutions was integrated into the computation of their cumulative general weighted average (GWA). Variables were operationalized as follows: “age” refers to the chronological age at the time of matriculation, and the National Medical Admission Test (NMAT) performance was recorded as the overall percentile rank, adhering to the standard two-year validity period of the results.

This research determined the admission profiles of the first two group of graduates of the Doctor of Medicine Program of La Consolacion University Philippines, College of Medicine in Bulacan and correlated them with the graduates' overall academic performance. It also identified the admission criteria which made a significant contribution to the student's overall performance. The results will serve as a basis for improvement of the minimum criteria set by the Commission on Higher Education to ensure student's survival through the rigors of medical school.

Theoretical Framework

The research is theoretically grounded in the premise that a multifaceted admissions profile functions as a reliable predictor of medical students' scholastic success. Specifically, it examines the correlative relationship between academic performance and a suite of independent variables, ranging from prior collegiate performance and standardized test scores to professional licensure and work experience.

Methodology

Adopting a quantitative approach, this study utilizes a descriptive-correlational research design to examine the relationship between the admission profiles of students and their subsequent scholastic achievement. This design is particularly suited for determining the existence, nature, and magnitude of associations between the identified variables. The study focuses on the total population of graduates from the Doctor of Medicine program at the sole medical institution in Bulacan. Academic performance was operationalized through the cumulative General Weighted Average (GWA) derived from Year Levels I to III. Data collection involved a systematic review of secondary records and admission documents retrieved from the University Registrar. To ensure the highest standards of participant protection and data privacy, the research protocol was submitted to and approved by the La Consolacion University Philippines Research Ethics Committee.

Respondents of the Study

A total of forty (40) medical graduates from the 2021 and 2022 cohorts were selected as the primary research participants. Utilizing a universal sampling methodology, the study encompassed the entire population of graduates within the specified timeframe to mitigate sampling bias. Adherence to ethical protocols was prioritized, ensuring that informed consent was obtained from all individuals before accessing their academic records for analysis.

Data Collection and Analysis

The data for this inquiry were derived from archival institutional records, specifically the admission credentials submitted by students upon matriculation. Following the procurement of formal informed consent, participant records were extracted from the University Registrar's database. To ensure strict adherence to data privacy protocols and maintain respondent anonymity, all datasets were de-identified and redacted prior to processing. Ethical confidentiality was rigorously maintained across all stages of the research. Methodologically, a multiple linear regression analysis was employed to model the predictive utility of various admission metrics in relation to cumulative academic achievement. This statistical approach allowed for the determination of the relative weight and significance of each entry variable as a predictor of student success. Ultimately, the findings serve as an empirical foundation for the proposed refinement of the institution's admission criteria.

Results and Discussions

This section presents empirical findings concerning the predictive relationship between student admission profiles and longitudinal academic performance in the Doctor of Medicine program. The results are systematically analyzed and synthesized with existing literature to provide a comprehensive interpretation of the factors that most significantly influence scholastic achievement within the institutional context.

The demographic analysis reveals that a majority of the cohort is female (57%), a finding consistent with global trends in health profession education. The average age of the participants is 24, with a broad age range reflecting a diverse student population. Notably, 72% of the graduates transferred from other Higher Education Institutions (HEIs), corroborating the observation that the institution provides a pivotal pathway for medical education. The undergraduate General Weighted Average (GWA) averaged 2.14, while the

National Medical Admission Test (NMAT) score averaged 62.3. These demographic findings provide the necessary context for the subsequent analytical results.

Table 1

Demographic Profile of Respondents

Demographic Profile	Summary (Mean)
Age: Mean (range)	24 (21–32)
Gender: count (percentage)	
Male	17 (43%)
Female	23 (57%)
NMAT Score (mean)	62.3
Collegiate Course: count (percentage)	
Nursing	22 (55%)
Medical Technology	8 (20%)
Other Allied Medical Courses	4 (10%)
Non-Allied Medical Courses	6 (15%)
Undergraduate GWA: mean (range)	2.14 (1.41–3.00)
Licensure Exam Passed: count (percentage)	14 (35%)
Admissions Status: count (percentage)	
Freshman	11 (28%)
Transferee	29 (72%)
General Weighted Average (GWA) in COM: mean (range)	2.44 (1.89–2.82)

Table 2

Admission Profile Affecting Academic Performance

Admissions Profile	Coefficient	P Value
Age	-0.001	0.68
Gender	0.037	0.368
NMAT Percentile Rank	0.029	< 0.001
Collegiate Course	0.020	0.329
Undergraduate GWA	0.143	0.004
Licensure Exam Passed	0.205	0.002
Admission Status	-0.129	0.017

The analysis revealed that only four admission profile variables demonstrated a statistically significant linear correlation with academic performance ($p < 0.05$). The following details examine the three most prominent predictors identified in the model.

First, the most robust positive determinant of academic success was the possession of a prior professional license. With a coefficient of 0.205 ($p = 0.002$), this factor emerged as the most reliable predictor within the study. This suggests that prior achievement in a rigorous professional context—specifically where knowledge is applied under high-stakes testing conditions—serves as a dependable forecast for higher achievement in medical education.

Second, undergraduate GWA was validated as a statistically significant positive predictor (coefficient = 0.143, $p = 0.004$). While this finding aligns with established academic literature, its predictive strength ranked behind licensure status within this specific cohort.

Third, the NMAT Percentile Rank was found to be a highly significant predictor ($p < 0.001$); however, it exhibited an inverse relationship characterized by a negative coefficient. This outcome warrants further investigation, as it suggests that the NMAT's utility as a positive predictor, when isolated from GWA and licensure status, may be less direct than traditionally hypothesized.

The variables of admission status, gender, and undergraduate academic background were identified as significant negative determinants of scholastic achievement—operationalized as GWA—within the studied medical cohort.

Conclusion

In conclusion, the research demonstrated that undergraduate GWA, NMAT percentile rank, and particularly the attainment of prior professional licensure exhibits a significant linear correlation with academic performance within the medical program. These findings align with existing literature in medical education, confirming that objective academic metrics remain reliable indicators of student success. However, the unique demographic profile of the institution—characterized by a high proportion of transfer students—has positioned prior licensure status as the most robust positive predictor within the admissions model. This insight is particularly salient for nascent or expanding institutions that must evaluate a diverse applicant pool, including those seeking a secondary pathway to medical education.

Based on this empirical evidence, the following recommendations are proposed:

1. Longitudinal Expansion of the Study: It is recommended that this research be extended to evaluate whether the identified entry-level profiles also serve as significant predictors of success in the Physician Licensure Examination (PLE).
2. Institutionalization of a Predictive Scoring System: Most importantly, the institution should establish a validated predictive model for the admissions process. This scoring system should apply evidence-based weights to prior licensure status, undergraduate GWA, and NMAT results to optimize the selection of candidates most likely to achieve academic excellence.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

The authors acknowledge the use of Gemini for language editing and structural rephrasing to improve the manuscript's readability and precision. This assistance was strictly limited to stylistic and linguistic improvements; no other AI technologies were used. The authors reviewed and edited the output to ensure the integrity of the research findings.

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