



## **Predicting Bar Success: The Mediating Effects of Law School GPA**

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### **Abstract**

Most American law schools evaluate candidates for admission based on final undergraduate GPA (UGPA) and Law School Admission Test (LSAT) scores, due in part to accreditation requirements and institutional bar passage goals. However, several studies have demonstrated racial and ethnic score disparities associated with the LSAT, and prior literature suggests that admissions metrics have limited utility for predicting bar passage — especially when accounting for academic performance in law school. This study uses data from nearly 20,000 lawyers who graduated from 39 law schools to build on previous literature. We propose statistical mediation to achieve a more accurate understanding of the relationship between, and predictive value of, law school admission factors, first-year law school GPA (1L LGPA), and first-time bar passage. We find that (1) statistical mediation is preferable to moderation, revealing that (2) 1L LGPA explains 81% and 73% of the predictive effects of final UGPA and LSAT, respectively, on first-time bar passage. Therefore, using LSAT score and UGPA to predict bar passage underemphasizes the role that law schools play in preparing their students for the bar exam and a legal career.

*Keywords: Law school, Law School Admissions Test, Statistical Mediation, Bar Passage, Undergraduate Grade-Point Average, Graduate Admissions*

## Introduction

The bar exam carries high stakes for law schools and their graduates. The typical law school graduate accrues around \$143,000 in debt during their legal studies (AccessLex, 2024), excluding any additional loans they may incur to finance their living and other expenses while preparing for the bar exam. Their ability to repay this debt largely depends on the increased earning potential conveyed by a Juris Doctor (J.D.) and gaining admittance to the bar (Carnevale et al., 2013). In nearly all jurisdictions, this means passing a bar exam. In fact, 84% of 2020 law school graduates accepted positions that require or are contingent upon being admitted to the bar, which pay a median salary approximately \$10,000 greater than positions for which a J.D. is advantageous but not required (National Association for Law Placement, 2022; 2023). Given the high stakes associated with bar passage for most aspiring attorneys, the accrediting branch of the American Bar Association's (ABA) Standard 503 requires that schools admit only those students with the potential to successfully pass the bar after completing their legal studies. Standard 316 provides a means of enforcing this requirement by stipulating that 75% of a school's graduates who sit for a bar exam must pass within two years of graduation (ABA, 2023).

Charged by their accrediting body to discern student bar exam potential at the time of application, law schools are challenged to make an educated guess based on the finite set of metrics available to admissions officials. As with most selective postsecondary degree programs, admissions consideration for J.D. programs hinges mostly on previous academic performance (in the form of grade point average [GPA]) and test scores (almost exclusively the Law School Admission Test [LSAT]). Reliance on the LSAT to predict eventual bar exam performance is contraindicated under guidance from the Law School Admission Council ([LSAC], 2014), the organization that creates, administers, and scores the LSAT. But with a dearth of valid metrics,

law school admissions offices often resort to using applicants' LSAT scores to predict bar performance as part of their efforts to remain compliant with ABA Standards (Haddon & Post, 2006). Extant literature examining the connection of undergraduate GPA (UGPA) and LSAT score to bar success does not strongly support the use of LSAT to extrapolate bar passage odds either (Anthony et al., 1999, 2016; Austin et al., 2017; Curcio et al., 2019; Farley et al., 2019; Georgakopoulos, 2013; Taylor et al., 2021; Wightman, 2000). In fact, Taylor et al. (2021) find that law school GPA (LGPA) predicts bar passage better than either LSAT score or UGPA, which predict bar passage with decreasing efficiency over the course of the J.D. program.

Considering previous findings evaluating a direct relationship between bar passage and LSAT score as well as final UGPA, the present study investigates the hypothesis that first-year (1L) LGPA mediates the relationships between bar passage and these traditional preadmission metrics. If 1L LGPA mediates these relationships, then previous findings on their relationship with bar exam passage may be spurious or epiphenomenal. If statistical mediation provides a more accurate explanation, the estimates from previous literature would be unreliable — either too high or too low. Although this distinction may seem pedantic, these findings will hopefully reframe beliefs that underlie perception and policy, particularly as it relates to the weight given to UGPA and LSAT score in admissions decisions. Particularly in a landscape where reliance on these underexamined measures disproportionately affects the number of underrepresented students of color accepted to and graduating from law school (Kidder, 2001; Taylor, 2019).

## **Research Questions**

We thus examine the following research questions:

1. To what extent does 1L LGPA mediate the relationship between LSAT score and first-time bar passage?

2. To what extent does 1L LGPA mediate the relationship between UGPA and first-time bar passage?

## **Background**

Annually, more than 60,000 applications are submitted to U.S. law schools — an average of 306 per school (AccessLex, 2024). Although some law schools request custom application items, the standard application for J.D. admission includes students' demographic characteristics, undergraduate transcripts (including UGPA), LSAT scores, admissions essays, and letters of recommendation. Even if each school only considered these items, the sheer volume of applications prohibits most, if not all, schools from comprehensively reviewing each application. This phenomenon is not unique to law schools, and it might explain why admissions departments lean more heavily on metrics that are reliable, seemingly interpretable, and familiar to a broad range of individuals.

Law school admissions policies are also guided by ABA's Section on Legal Education accreditation standards. Two standards directly contribute to law schools' heavy reliance on UGPA and LSAT scores. Standard 501 requires that law schools admit students "who appear capable of satisfactorily completing its program of legal education and being admitted to the bar," and Standard 503 requires that law schools require applicants to take a "valid and reliable admission test" and interpret those results in a way that is consistent with the administering agency's advice (ABA, 2022). Standard 501 therefore necessitates that law schools develop a way to identify potential success among students, and Standard 503 essentially dictates that the LSAT be used in admissions decisions (though the Graduate Record Examination [GRE] can also be used for some law schools), although it does not dictate how those scores be used or the emphasis they be given. An additional standard contributes to this phenomenon indirectly by

requiring that 75% of a law school's graduates who sit for the bar exam must pass it within two years of graduation. These stringent expectations increase the stakes for law schools' admissions choices and create an environment where it is tempting to connect UGPA and LSAT score to bar passage in the interest of complying with ABA standards. Additionally, the above standards do not expressly consider whether the information available in law school applications is truly sufficient to determine who will succeed on the bar exam.

However, since ABA standards do not dictate the weight that law schools should apply to UGPA and LSAT scores in their admissions decisions, the extent to which schools rely on them varies by institution. Traditionally, schools will seek a target median for each credential, a decision that is reinforced by the race to retain positioning in law school rankings such as those from *U.S. News and World Report*. Specific subsets of law schools may have different target medians in mind. For example, minority-serving institutions may accept students with lower average UGPAs and LSAT scores, or accept more underrepresented students (e.g., people of color or first-generation students) who tend to have weaker entering credentials (Fordyce et al., 2017; Hill, 2019; Kidder, 2001; Rothstein & Yoon, 2008; Taylor, 2017; Taylor & Christensen, 2017). Weaker aggregate credentials among underrepresented students are not an indication that these groups are not cut out for law school, but rather an indication of systemic inequality at all levels of the education systems in the United States (Carter & Welner, 2013; Chetty & Hedren, 2018; Kidder, 2001; Taylor 2017; Taylor 2018; Taylor & Christensen, 2017).

Additionally, a large body of evidence finds that both LSAT scores and bar exam results produce well-documented racial disparities in favor of Asian and White students (Fordyce et al., 2017; Hill, 2019; Kidder, 2001; Taylor & Christensen, 2017). Utilizing a test that historically disadvantages underrepresented people of color to predict performance on a later test that has the

same history may very well exacerbate this cumulative disadvantage. The issue of racial disparities takes on greater importance in our present environment, following the Supreme Court's decision in *Students for Fair Admissions v. Harvard*, which effectively made race-conscious admissions in higher education illegal. This is one reason that we hope to emphasize the importance of what happens in law school by establishing the statistical power of 1L LGPA to explain any relationship between students entering credentials and bar passage.

The use of statistical mediation provides a deeper understanding of how apparent relationships between variables function. Therefore, mediation is a method well-suited for testing whether a relationship between two variables — in this case, the relationship between final UGPA or LSAT score and first-time bar passage — is more accurately explained by their relationship with a third variable (i.e., 1L LGPA: Hayes, 2009; 2013; MacKinnon et al., 2012). We hope to encourage law schools to take a more holistic and non-cognitive approach to admissions decisions by deconstructing the assumption that entering credentials can predict performance years down the road.

## **Literature Review**

UGPA and LSAT score have practical utility for admissions committees. Both are related to law school performance (Austin et al., 2017; Farley et al., 2019; Georgakopoulos, 2013), and both are seemingly interpretable, reliable, and familiar to a broad range of individuals, from applicants to faculty and staff, to administrators, and to laypeople. The reliance on UGPA and LSAT has propagated several studies on their relationship with students' educational outcomes. Moreover, the use of LSAT scores became popular as an attempt to protect against discrimination in law school admissions (Haddon & Post, 2006).

A swath of research suggests a modest predictive relationship between LSAT score and UGPA with LGPA (Anthony et al., 1999, 2016; Curcio et al., 2019; Georgakopoulos, 2013; Taylor et al., 2021; Wightman, 2000). However, some researchers find that these relationships are neither statistically nor practically significant (Austin et al., 2017; Fordyce et al., 2017).

Whether or not UGPA and LSAT scores can be used to predict bar performance in the interest of complying with ABA Standards is a different story. Although some research on these relationships also acknowledges that LGPA is a relatively strong predictor of bar passage (Georgakopoulos, 2013; Taylor et al., 2021), it rarely grapples with the temporal gap between measurement of final UGPA or LSAT score and bar exam performance — typically four or more years. It thereby underemphasizes the role that law schools play in preparing their students for the bar exam, attributing student performance on the bar exam to predetermination based on static criteria and not on the preparation, growth, and development that occurs during law school.

On the other hand, Farley et al. (2019) tested the capability of several relevant variables to predict bar passage at one law school: students' demographic characteristics, admissions variables (UGPA, selectivity of the undergraduate institution and major, and LSAT score), LGPA at various stages, and number of upper-level bar courses taken. In the final model that included all variables together, findings indicate that selectivity of the undergraduate institution, LGPA (1L and final), and upper-level bar courses were significantly related to bar passage. Of those statistically significant relationships, only 1L and final LGPA were also *practically* important.

Additional studies support the findings from Farley and colleagues (2019). Taylor et al. (2021) use data from 20 partner law schools and the Law School Survey of Student Engagement to examine these interrelationships. The researchers find that UGPA and LSAT score significantly predict first-time bar performance ( $p < 0.05$ ), but their effect sizes shrink when

accounting for 1L LGPA. For example, the odds ratio (OR) predicting bar passage for UGPA shrinks 20% (from 1.44 to 1.19) when 1L LGPA is included in the model. The OR for LSAT score also diminishes 30% (from 1.71 to 1.14). The resultant odds ratios are about one-fourth the size of 1L LGPA (OR = 4.24). Austin et al. (2017) similarly find that UGPA and LSAT score predict bar exam performance on their own. However, when controlling for 1L or final LGPA, neither UGPA nor LSAT score retained a statistically or practically significant relationship with bar passage.

The superior performance of 1L LGPA compared to LSAT score and final UGPA is reasonable considering the emphasis the law school curriculum places on bar-tested material and practice skills. The 75% bar passage requirement in ABA Standard 316 influences not only admissions policies, but also required coursework and the doctrinal 1L curricula — which at most law schools are virtually interchangeable (The Princeton Review, 2024). Many law schools also offer bar preparation courses or discounted bar study materials to students (Schulze, 2019). Finally, regardless of bar-focused curriculum or preadmission factors, the rigors of law school breed important practical and metacognitive skills that may help students prepare for the bar exam and other challenges (Dykstra, 2016; Rusco, 2022).

These patterns in the literature demonstrate the importance of law school courses in preparing students to successfully pass the bar exam. Furthermore, they suggest that rather than UGPA or LSAT score having an additive effect with LGPA to predict bar passage, it is more likely that LGPA intervenes and explains their relationship with bar passage. This implies a potentially meaningful mediating effect that has not yet been explored in legal education literature.



While previous studies have contributed valuable insight into how admissions factors, law school performance, and bar exam performance are interrelated, none of them have tested whether the relationships between UGPA, LSAT score, and first-time bar performance are explained by law school performance. Statistical mediation is a logical choice for examining the aforementioned variables to determine whether the “third variable” in this problem, 1L LGPA, intervenes to explain the apparent relationships (Hayes, 2009; 2013; MacKinnon et al., 2012). This examination is relevant and timely, given the majority opinion in *Students for Fair Admissions v. President and Fellows of Harvard College*; *Students for Fair Admissions v. University of North Carolina*, which severely limits the consideration of applicant race in admission, and the subsequent renewed push among schools for holistic review and consideration of other cognitive and non-cognitive factors in admissions (Sedlacek, 2004; Westrick, 2017).

### **Theoretical Framework and Conceptual Model**

We approach these concepts through the lens of Attribution Theory (Weiner, 1972; 1985), which posits that people attribute others’ motivations or behaviors differently based on a host of factors. Behaviors or even accomplishments are typically attributed to either an internal cause (e.g., “they are smart”) or an external cause (e.g., “they had a lot of help”). Whether someone attributes a behavior internally or externally changes based on context and in accordance with individual biases but is largely an unintentional process. The subconscious nature of attributions makes it difficult to account for in a context like admissions. For example, a wealthy applicant to a law school program may have a higher LSAT score than an otherwise similar but less affluent applicant. An attribution error made by an admissions committee may be that the wealthy student is more prepared for law school, when they likely had more resources to study and take practice

tests than the less affluent student (see Curtis, 2019). The difference in scores is attributed to ability (internal) when it is really a question of the right combination of resources (external).

We posit that the importance placed on UGPA and LSAT score in law school admissions creates the potential for an error of attribution. Evaluating applicants with biased metrics rather than a holistic understanding of the limitations or barriers that they have overcome, and their potential to succeed, risks attributing applicant potential as future lawyers and advocates to numbers on an application rather than ability. Moreover, it attributes bar performance to performance prior to the three years of law school, discounting the work of law students, faculty, and staff in learning and teaching the law. Our conceptual model of mediation attempts to properly contextualize UGPA and LSAT score as predictors of early law school performance by emphasizing the knowledge and skills acquisition that students experience in law school and how *that* ultimately relates to the outcome of bar passage.

Furthermore, considering the naturally longitudinal nature of the relationships between final UGPA, LSAT score, 1L LGPA, and the bar exam, a statistical mediation model is logical (Hayes, 2009; 2013; MacKinnon et al., 2012). Nearly every expert on statistical mediation modeling and processes finds that the ideal data structure is longitudinal and requires that the independent variable occurs before the mediating variable (e.g., MacKinnon et al., 2012). While this is something that can be built into experimental designs for the purpose of testing mediation, in legal education it occurs by necessity of gaining admission to law school. However, this does not rule out a moderating relationship (i.e., an interaction) between our predictors and mediator or a covariate relationship, rather than a true mediation model. We therefore test and compare moderation and mediation models to ensure ours is correctly specified.

Additionally, to determine whether the knowledge, skills, and abilities learned in law school truly mediate the relationship between UGPA, LSAT score, and bar passage, we would need a variable that encapsulates those concepts perfectly. However, and as always, no such perfect mediator exists. We therefore rely on 1L LGPA as an imperfect proxy and the mediator in this study. First and foremost, we choose 1L LGPA over final LGPA because most law students take their core, bar-tested coursework in their first year, and the sequence is similar across schools (Austin et al., 2017; Farley et al., 2019; Taylor et al., 2021; Weller, 2021). Moreover, we believe that this is an appropriate proxy, based on extant literature on the extent to which student interest in educational topics lends itself to improved academic and employment outcomes (e.g., Harackiewicz et al., 2016). Although UGPA and LGPA are both measures of academic achievement, undergraduate education evaluates students on a broader knowledge base including general education courses that may not relate to their chosen major or interests. Conversely, we can assume that LGPA, based solely on legal coursework, is related to students' interests by nature of their application to, acceptance to, and participation in law school.

## **Hypotheses**

Given our theoretical framework, conceptual model, and the previous literature on law school admissions, we have several predictions about our potential findings. First, we predict that the relationships discussed fit a statistical model of mediation, rather than moderation. We will accomplish this by comparing a moderation and mediation model with UGPA predicting first-time bar exam passage, and 1L LGPA as a moderator and as a mediator, and then repeating this process with LSAT score as the predictor. Second, if mediation is supported as the correct form of these relationships, we expect that the relationships will be completely mediated, rather than partially mediated (see Analytic Plan).

## Method

### Sample

Data were obtained via institutional partnerships with 39 individual law schools and includes student-level information for 15,068 students across 10 graduating classes, from 2014 to 2023. These data capture information about each student's demographic characteristics, undergraduate academic performance, undergraduate institution's characteristics, law school academic performance, and bar exam result (pass or fail). Wherever possible, we also match participants' undergraduate institutions to acceptance rates from the Integrated Postsecondary Education Data System (IPEDS). All schools are anonymized in accordance with our institutional agreements. This includes anonymizing the jurisdictions in which graduates sat for the bar exam, because identifying these jurisdictions could lead to the identification of individual law schools.

### *Sample Characteristics*

Table 1 details the summary statistics for our sample as well as the population of ABA-approved law schools during the study period.

**Table 1**  
Summary Statistics and Sample Representation

<u>Variable/Level</u>	<u>Sample</u>			<u>Population</u>		
	<i>n</i>	%	<i>Mean</i>	<i>N</i>	%	<i>Mean</i>
Final UGPA*	14,599	-	3.31	1,814 <sup>1</sup>	-	3.42
LSAT Score*	14,871	-	154	1,814 <sup>1</sup>	-	156
First-Time Bar Passage: Pass*	11,376	75.5	-	198,641	81.6	-
Race: Asian*	734	5.8	-	23,123	6.8	-
Race: Black*	954	7.6	-	30,787	9.0	-
Race: Hispanic	1,695	13.4	-	44,524	13.0	-
Race: Multiracial*	237	1.9	-	12,702	3.7	-
Race: White	8,132	64.5	-	217,886	63.7	-
Race: Remaining*	313	2.5	-	13,029	3.8	-
Race: Unknown	543	4.3	-	15,361	4.3	-
Gender: Female*	7,536	52.7	-	108,893	54.3	-
Gender: Male*	6,772	47.3	-	91,810	45.7	-
Undergraduate Transfer: Yes	2,450	66.5	-	- <sup>2</sup>	-	-

Age at Graduation	13,163	-	28.6	- <sup>2</sup>	-	-
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\*Difference between population means/proportions is statistically significant ( $p < 0.05$ ).

<sup>1</sup>Population data reported as a school-level median.

<sup>2</sup>No population data reported.

As the table shows, the data in our sample reasonably represents the population of law students during the study period. According to the ABA Standard 509 Information Reports and Bar Passage Data, the racial and ethnic composition of our sample is nearly identical to that of the population of law students during the study period. The sample's mean LSAT score is also nearly identical to that of the population. Even where a sample mean or proportion differs from the population to a statistically significant degree, the difference typically lacks practical significance and is attributable to the large sample size.

There are two exceptions to this generalization. First, our sample has a first-time bar passage rate about six percentage points lower than that of the population of first-time bar examinees during the study period ( $p < 0.001$ ). Second, our sample has a mean final undergraduate GPA about 0.10 grade points lower than that of the population ( $p < 0.001$ ). Despite these deviations, we believe the data is otherwise sufficiently representative of the population to yield broadly generalizable conclusions from analysis.

## Measures and Materials

Prior to analysis, we  $z$ -standardize all continuous variables around their group mean (i.e., by law school) to account for between school variation (see Analytic Plan). See Table 1 for descriptive statistics on the raw variables of interest.

### *Predictor Variables*

The two predictor variables of interest to the present study are final, cumulative undergraduate GPA and LSAT score. Most undergraduate institutions report final GPA on a scale from 0.0 to 4.0, though some use a larger or different scale. All students in our sample have a

final UGPA reported on the traditional 4.0 scale, as this is how undergraduate GPAs are reported to law schools in the application process. Typically, law schools collect information on average and highest LSAT scores, as some students take the LSAT multiple times to increase their score and give themselves the best chance of gaining admission to a higher ranked law school (Lauth et al., 2014). We use students' highest reported LSAT score in our analyses, as that is what most law schools consider in their admissions decisions and report to reporting agencies (Kuris, 2022).

### ***Mediating Variable***

We use law school GPA (LGPA) from the first year (1L) as the mediating variable. We choose 1L LGPA over final LGPA because the LSAC recommends that the LSAT only be used to predict *early* law school performance. 1L LGPA is also beneficial because the course sequence for students' 1L year is more similar than it is at later points across all law schools. Students' second- and third-year coursework is based more on specialization and interest and therefore, later LGPAs may be built on different course sequences between students even at the same school. Law schools also seek ways to determine whether students should be put on academic probation or suspension (i.e., are perhaps not expected to succeed in further legal education or at the bar exam). Using 1L LGPA provides law schools with a relevant metric to accomplish this early on during legal study. Additionally, at least one study finds that 1L LGPA predicts bar passage as well as or better than final LGPA (Austin et al., 2017).

Furthermore, we find that 1L LGPA and final LGPA are correlated at  $r = 0.90$  overall, and between  $r = 0.78$  and  $r = 0.95$  for individual law schools, which indicates that these variables are functionally equivalent. Two schools in our sample reported LGPAs on an alternative scale (e.g., 0-95 points). For the purposes of summary statistics, we converted these LGPAs to a 0-4.0 scale using the *scale* function in R studio before standardizing it.

### ***Outcome Variable***

We use first-time bar exam passage as our outcome variable in all analyses. Specifically, we use the bar exam result in the administration period following a law student's graduation: for spring semester graduates, we use the July exam result; for fall or winter graduates, we use the February bar exam result. The focus on first-time bar passage owes to a relevant facet of the bar exam and our data set. Jurisdictional reporting of bar exam results to law schools themselves varies widely, with only a handful of jurisdictions reporting more than the ultimate result (pass/fail) to an examinee's alma mater. Consequently, bar exam scores are reported for only a small subset of our sample.

We focus on first-time bar result rather than eventual or ultimate bar result (bar passage within two years of graduation, as defined by ABA Standard 316) because preparation for the bar exam bears considerable costs, both financially and socioemotionally, for the examinee. Therefore, law school graduates benefit tangibly and intangibly by passing on their first attempt. Law schools themselves are also interested in their students' performance on their first bar attempt, as they often provide additional support to those graduates between their first and second attempts and these supports redirect resources that might otherwise be aimed toward current students. Moreover, for analytical purposes, there is greater variation in the rates of passing on the first attempt relative to ultimate passage. In aggregate, the first-time pass rate for the graduating cohort of 2019 was 80% whereas the overall pass rate for the same class was 91%. Since regression analysis seeks to estimate the variation in an outcome, the greater variation in pass and fail results is beneficial to our modeling approach.

Our outcome variable is subject to missingness. We have 3,012 observations for whom we have an LSAT score, final UGPA, and 1L LGPA but no bar exam result. These students are

necessarily dropped from our analysis, but it is worth considering why this data is missing. Data, particularly outcome data, that are not missing completely at random could lead to biased results which would affect the external validity of our findings (Newman, 2014).

In our sample, 67% of the missing bar exam results are due to attrition; the students either transferred to another law school, withdrew for their own reasons, or were dismissed either for academic or other reasons. ABA Standard 308 dictates that law schools adopt an academic standards policy that specifically includes circumstances that are cause for student academic dismissal (ABA, 2023). To adhere to this standard, most law schools have policies that require students to meet a minimum cumulative LGPA, in some cases resulting in probationary placement and/or dismissal of students who fall below the LGPA threshold. In our sample, 6% were dismissed from law school for academic reasons following their first year and 9% thereafter. Given that these dismissals are based on law school GPA, missing observations due to attrition would likely result in a lower, more conservative estimate of 1L LGPA's mediating effect.

Among the remaining 33% of the students who are missing bar exam results, we find that they have *lower* mean final UGPAs, LSAT scores, and 1L LGPAs than those students for whom we have bar exam data. To the extent that students may have been reluctant to sit for the exam due to a lack of confidence stemming from their experiences and grades in law school, this missingness would also lead to a more conservative estimate of 1L LGPA's mediating effect. However, the true rationale behind the decision to postpone or forgo taking the bar exam might be unrelated or also involve other factors, including illness, needing to work during the traditional study period between graduation and the first bar exam administration, or needing to provide care for a dependent.



It is difficult, if not impossible, to disentangle students' decisions not to sit for the bar exam. In light of the various possibilities, we conduct sensitivity analyses to determine whether missingness on bar exam result biases or substantially alters our findings (see Analytic Plan section below).

### ***Control Variables***

We consider a wide range of control variables, including whether a student transferred undergraduate institutions; the undergraduate institution's admissions rate from which the student graduated; a student's race, gender, age at graduation, and graduation year; and the jurisdiction in which the student sat for the bar exam. Our data is nested within schools and cohorts, so we include both as fixed effects in our analyses. Ultimately, we exclude a bar exam jurisdiction fixed effect because the inclusion of both school and jurisdictions variables introduces multicollinearity, meaning that there is a strong association between the school a student attended and the jurisdiction in which they sat for the bar exam and that the inclusion of both variables translates to inflated standard errors, rendering the results less reliable. Since school and bar exam jurisdiction are collinear, the inclusion of a school fixed effect, to some extent, also serves to control for the jurisdiction in which students sat for the bar exam.

### **Analytical Plan**

Prior to modeling, we examine the bivariate relationships between our predictor, mediator, control, and outcome variables. Variables that are related to a predictor, the mediator, or our outcome of first-time bar passage are included in the final models, unless they do not improve model fit (see Tables A.2 and A.4). We begin modeling by examining whether an intra-class correlation (ICC) indicates that the between-school variability is substantial enough to warrant multilevel modeling. The ICC for first-time bar passage is 0.12, indicating that 88% of

the variation in first-time bar passage lies within schools. Consequently, we account for the nesting of observations within schools by applying a school fixed effect rather than utilizing a mixed effects approach. Each resulting model utilizes bootstrap standard errors derived from 1,000 bootstrapped samples and clustered by law school.

We also compare moderation and mediation models for each of our predictor variables. This results in our testing four individual models: two for highest LSAT score and two for final UGPA. Moderation is indicated if the interaction term of UGPA or LSAT score with 1L LGPA is statistically significant. If it is not statistically significant, mediation is likely a more appropriate representation of the relationship (MacKinnon et al., 2012). We consider partial mediation successful if including the indirect effect of 1L LGPA decreases the strength of the direct effects of UGPA and LSAT score on first-time bar passage and the indirect effect is statistically significant (Hayes, 2009). We consider complete mediation successful if the direct effect is statistically insignificant while the indirect effect achieves statistical significance. This is an extremely high threshold, particularly given the relationship between sample size and statistical significance. With a sample of this size, even minute differences may be statistically significant.

Although we do not include a control variable for bar exam jurisdiction given collinearity concerns, we test the extent to which variation in jurisdiction affects our findings. To do this, we apply our mediation and moderation models to a subset of our sample comprising only those who sat for the Uniform Bar Examination (UBE). This means that all students in this subsample took the same test, although the threshold constituting a passing score varies by jurisdiction. We then evaluate how our results change based on this restriction. If the results from our sensitivity analysis do not meaningfully deviate, then we consider it evidence that our results are robust to varying specifications of bar exam jurisdictions. Finally, to test whether missingness on bar exam

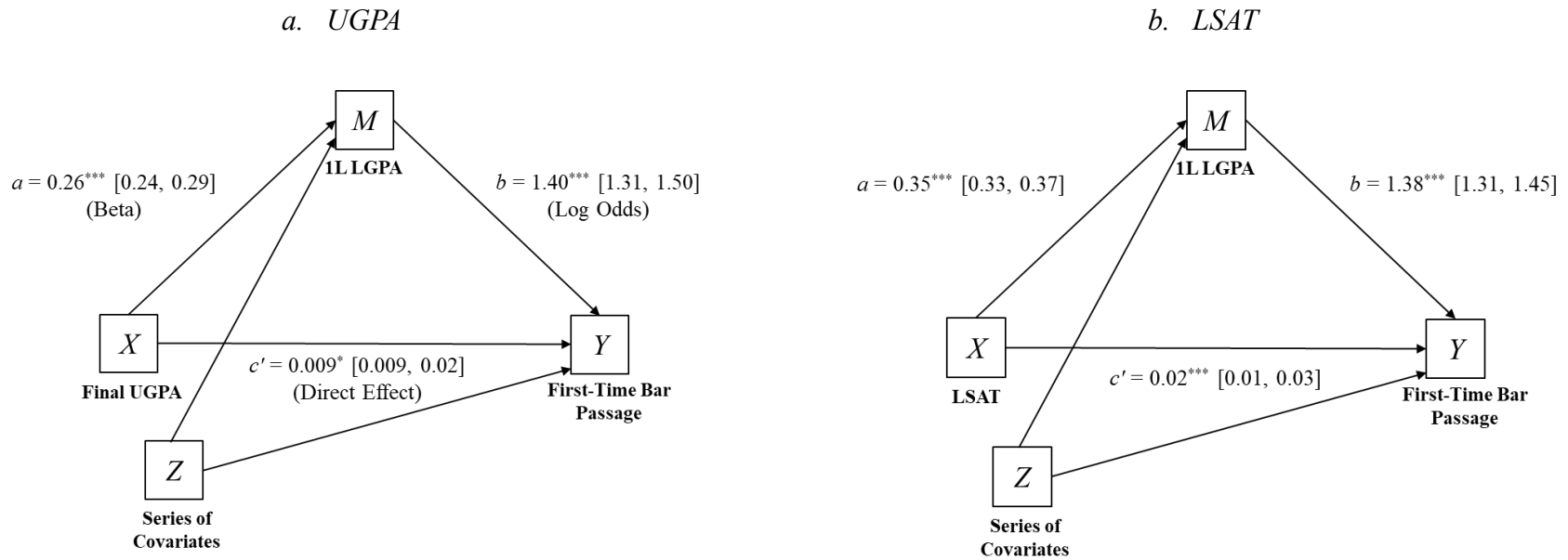
result biases our findings, we test the same models on a hypothetical sample in which we assume each student with a missing exam observation would have failed. This is a strong assumption and one which would probably not hold if all of these students had taken the exam, but if our main results do not differ meaningfully in this extreme, we can be confident that our findings regarding the mediating effects of 1L LGPA are robust to the possibility that these students would have hypothetically failed the bar exam.

## Results

As described above, we create one mediation model and one moderation model for each of our predictor variables, final UGPA and LSAT score. In each case, we treat first-time bar passage as the outcome and first-year LGPA as the mediating variable. However, one model utilizes final UGPA as the predictor variable, and the other utilizes LSAT score as the predictor variable. In each case, we find the moderation effect lacks statistical significance (See Tables A.2 and A.4). Therefore, statistical mediation is the more appropriate method for modeling and interpreting the relationships between our predictor, mediating, and outcome variables of interest.

Figure 1 depicts our model structures, direct effects ( $c'$ ) and indirect effects ( $a$  and  $b$ ) for each causal pathway. Overall, we find that the effects of both preadmission variables of interest on first-time bar passage — final UGPA and LSAT score — although statistically significant, are substantially mediated by 1L LGPA.

For each mediation model, we compare the direct and indirect effects in greater detail below, illustrating the extent to which law school academic performance mediates each preadmission factor's effect on first-time bar passage.



**Figure 1.** 1L LGPA Partially Mediates the Relationship Between First-Time Bar Exam Result and Final UGPA (left) and LSAT Score (right)

*Note:*  $*p < .05$ ,  $**p < .01$ ,  $***p < .001$ ; covariates Z are race and undergraduate selectivity for final UGPA (left) and race and gender for LSAT score (right).

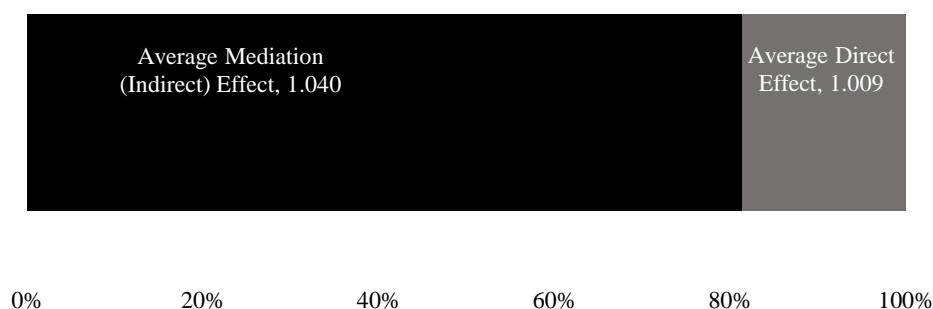
## Final UGPA

We find that 81% of the effect observed between a student's final UGPA and bar exam result is mediated by their 1L LGPA (see Figure 2). This means that when final UGPA is used to explain first-time bar passage without considering a student's law school academic performance, the size of the relationship is exaggerated. When we account for 1L LGPA, the direct effect of final UGPA itself on first-time bar passage is negligible at an odds ratio of 1.009 ( $p = 0.036$ ; see Figure 2). A one standard deviation increase in final UGPA is associated with an improvement in the predicted odds of first-time bar passage of just one percentage point, approximately. In our sample, the standard deviation of final UGPA is 0.44 grade points. Therefore, although the average direct effect of final UGPA on first-time bar passage is statistically significant at  $p < 0.05$ , it lacks practical significance given the marginal payoff associated with such a large improvement in final UGPA. As noted above, the statistical significance of the result is driven largely by the sample size rather than the magnitude of the effect.

The direct effect of final UGPA appears especially modest in comparison to the indirect effect, which accounts for the relationships between final UGPA, 1L LGPA, and first-time bar passage. The mediation effect is roughly quadruple the direct effect in magnitude at an odds ratio of 1.04 ( $p < 0.001$ ), meaning that a one standard deviation improvement in final UGPA corresponds to gains in 1L LGPA resulting in a four-percentage point increase in the odds of first-time bar passage (See Figure 2). Given the difficulty associated with a one standard deviation improvement in 1L LGPA, this effect is still quite small despite its strength when compared to the direct effect of final UGPA on first-time bar passage.

These results remain relatively unchanged when we restrict our sample to those individuals who sat for the UBE and when we assign a bar failing result to those individuals for

whom one is missing. When analyzing only schools within a UBE jurisdiction, we find that the proportion mediated by 1L LGPA increases by one percentage point. This may also suggest that final UGPA is less strongly related to the UBE than all possible exam compositions in our full sample. When we conduct the analyses under the assumption that students with a missing bar exam result would have hypothetically failed the exam, we find that the mediation effect decreases from 81% to 65% and retains its statistical significance.



**Figure 2.** 1L LGPA Mediates 81% of the Relationship Between Final UGPA and First-Time Bar Passage. Total Effect:  $OR = 1.05$ .

This means that most of the covariation between first-time bar passage and final UGPA can be explained by the relationship between first-time bar passage and 1L LGPA. Law school academic performance is more important than undergraduate academic performance for predicting first-time bar passage. Therefore, screening out law school applicants based on undergraduate GPA may not be a viable or justifiable avenue toward improving institutional bar passage rates.

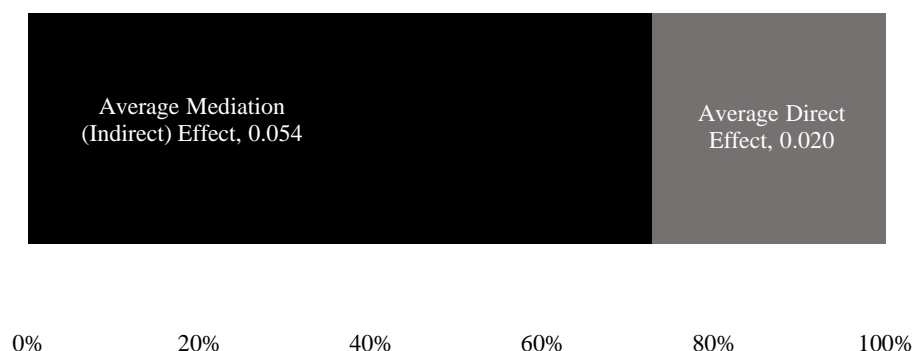
### LSAT Score

We find that 73% of the relationship between a student's highest LSAT score and bar exam result is mediated by their 1L LGPA (see Figure 3). This means that when LSAT score is used to explain first-time bar passage without considering a student's early law school academic

performance, the magnitude of the observed effect is biased upward. When accounting for 1L LGPA, we find that a one-standard-deviation increase in highest LSAT score (approximately 6.7 points in our sample) is associated with a two-percentage point increase in first-time bar passage odds ( $OR = 1.021, p < 0.001$ ). Given the marginal corresponding improvement in the predicted probability of first-time bar passage achieved by increasing LSAT scores, we conclude that the relationship lacks *practical* significance despite the fact that it attains *statistical* significance. The statistical significance of the result here informs us that we can be confident that the practical significance is limited.

The direct effect of LSAT score on first-time bar passage is less than half the size of the indirect effect, which accounts for the interrelationships between LSAT score, 1L LGPA, and first-time bar passage. The indirect effect of LSAT score on first-time bar passage is an odds ratio of 1.056 ( $p < 0.001$ ). This means that a one-standard-deviation improvement in LSAT score corresponds to gains in predicted 1L LGPA associated with a six-percentage point increase in the odds of first-time bar passage. This indirect effect is stronger than the direct effect described above, but it is still small in practical terms.

Similar to our findings regarding final UGPA, we find these results are robust to differences in exam composition based on UBE jurisdictions and missingness of exam data.



**Figure 3.** 1L LGPA Mediates 73% of the Relationship Between LSAT Score and First-Time Bar Passage. Total Effect = 0.07.

When analyzing only schools within a UBE jurisdiction, we find that the proportion mediated by 1L LGPA decreases by two-percentage points. If we conduct the analyses under the assumption that students with a missing bar exam result would have hypothetically failed the exam, we find that the mediation effect increases from 73% to 84% and retains its statistical significance.

Like final UGPA above, utilizing highest LSAT score to shape law school entering classes to meet institutional bar passage targets may not be prudent.

Collectively, these findings suggest that 1L LGPA does indeed substantially mediate the relationships between bar passage and final UGPA and LSAT score. Consequently, neither UGPA nor LSAT score are particularly predictive of bar success; instead, their usefulness should be reserved for predicting early law school performance.

## Discussion



The distinction between whether UGPA and/or LSAT predict bar passage directly or whether they do so indirectly via 1L LGPA may seem academic, but it is necessary for accurate attribution. Assuming a direct relationship between these preadmission factors and bar passage suggests that students are predetermined for success or failure before they even step foot on campus. This mentality assumes that student potential is fixed rather than malleable; furthermore, it increases reliance on a metric with a well-documented history of racial disparities to determine such potential (Taylor & Christensen, 2017; Taylor, 2017, 2018).

Our findings demonstrate that final UGPA and LSAT score *directly* predict very little in the way of bar passage. Instead, 1L LGPA explains (i.e., mediates) the statistical relationship between final UGPA, LSAT score, and first-time bar passage. The interrelationships tested here contribute to the field of legal education by confirming that first-time bar passage odds are more directly attributable to law school performance than preadmission factors. By contextualizing LSAT score and final UGPA as predictors of LGPA rather than bar passage, we open the door to consider different or new criteria that may have been previously discounted as insignificant predictors of bar success, but that are instead focused on predicting early law school performance.

This finding also clarifies a body of research exploring the relationships between preadmission factors, 1L LGPA, and first-time bar passage. Whereas previous studies have identified that the inclusion of 1L LGPA as a covariate in a bar passage model diminishes the effects of LSAT score and UGPA, our models take this line of inquiry one step further, demonstrating that the phenomenon is better characterized as a mediating relationship — and one that virtually negates the capacity of LSAT score and final UGPA to predict first-time bar passage (Farley et al., 2019; Taylor et al., 2021).

As we note in the Method and Results sections above, we considered various circumstances that might bias our analyses and findings. First, we tested our mediation models using a sample restricted to students who took the UBE to investigate whether our findings are sensitive to the jurisdiction in which a student took the exam. We find that our results do not meaningfully vary when we limit our analyses to those who sat for the UBE. Second, we assume that any student for whom a bar exam result is missing would have failed the exam. This is an extremely conservative and somewhat cynical assumption based on two arguments we have encountered when discussing this project: students with lower LGPAs might elect to not sit for the bar exam because either they lack confidence and presume that they will fail; or they are discouraged from doing so by their law school as a means to improve their institution's bar passage outcomes. To be clear, we think it implausible that all students who elect not to sit for the bar exam would fail. As we note in our Methods section, there are several alternative and perhaps more apt explanations for why a student does not attempt the bar exam. Regardless of the reasoning, counting these students among those who failed the bar exam on their first attempt does not substantively change the findings, nor our conclusions. We still find that 1L LGPA significantly explains the relationship between first-time bar passage and both final UGPA and highest LSAT score.

Therefore, relying on traditional preadmission metrics to predict first-time bar passage (1) constitutes an error of attribution, and (2) may needlessly penalize applicants who would otherwise pass the bar exam with training from the law school. Instead, law schools should consider adjusting their admissions process to admit students who are capable of succeeding in their first year of law school. Likewise, the accreditation arm of the ABA should consider revising the Standards to remove or deemphasize likelihood of bar passage as an admission

consideration and instead emphasize first-year academic performance, since our findings indicate that application criteria may be insufficient to accurately predict who will succeed beyond the first year of law school.

By properly contextualizing the predictive ability of these preadmission factors to early academic performance rather than first-time bar passage, we hope that schools will reconsider the weight these factors receive in admissions. Schools should likewise be emboldened to identify preadmission factors beyond LSAT score and final UGPA that predict early academic success without yielding racially disparate outcomes. This is especially important given *Students for Fair Admissions*. As we discussed in the literature review, several studies demonstrate differential LSAT performance among racial and ethnic groups, disadvantaging students of color in the admission process (e.g., Taylor & Christensen, 2017). Now that admissions offices can no longer compensate for these disparities using race-conscious admissions, law schools should seek very strong justifications for their continued emphasis on LSAT scores and actively seek alternatives to predicting future academic performance — not just bar exam performance.

Other professional schools have already improved diversity by enhancing holistic admissions at the expense of relying on or even considering traditional test scores (Hossler et al., 2019; Francis et al., 2022). For example, one study of STEM programs in the University of California system found that eliminating the GRE score from applicants' application packages naturally created a much more diverse incoming cohort (Posselt et al., 2023).

Law schools may consider moving in this direction as well. Although the American Bar Association (ABA) still requires that law schools use a “valid and reliable” test to determine applicant suitability, it does not prevent law schools from adjusting the weight of this test in admissions — nor does it preclude them from utilizing alternative metrics to enhance equity. The

ABA is increasingly granting Standard 503 variances for alternative examinations, in addition to allowing 10% of the class to be admitted without a test score.

Some of these tests, like the GRE and GMAT, may produce similar racial scoring disparities to the LSAT; others may not. The ABA has granted variances to approximately 50 law schools allowing them to utilize a promising new test in admissions: JD-Next (ABA, 2024). JD-Next consists of a law school preparation course that culminates in the JD-Next exam, which aims to measure student potential for learning and growth. Preliminary research suggests that the JD-Next exam is a valid and reliable predictor of early law school performance and introduces far fewer racial scoring disparities than the LSAT (Findley et al., 2023). As law schools search for race-neutral means to foster student-body diversity post-*SFFA*, alternative metrics like JD-Next will become critical tools to consider.

Overall, our analysis suggests that law schools hoping to improve their first-time bar passage rates should focus their efforts on curriculum, academic support interventions, and other institutional supports, as opposed to increasing the stringency of their admissions policies vis-à-vis LSAT score and final UGPA. Although our models indicate that the effects of LSAT score and final UGPA on first-time bar passage are not *completely* mediated by 1L LGPA, the findings confirm that a sufficiently large proportion of either effect is mediated as to eliminate the functional utility of LSAT score and UGPA in predicting bar passage. This makes intuitive sense given the temporal distance between these preadmission factors and first-time bar passage — and given the undeniable role law schools play in preparing their students for the bar exam. Law schools should take pride in more fully attributing student bar success to educational experiences during law school rather than to innate student characteristics upon admission.

## **Limitations**

Future research may expand on these findings by collecting and analyzing more granular data about the law school experience. Although we believe 1L LGPA is an adequate proxy for the knowledge, skills, and abilities students acquire during law school, future analyses may consider utilizing a broader range of factors including extracurricular engagement, study time and strategies, and curriculum. Other researchers may also consider refining the approach taken here to overcome methodological limitations of the current study. For example, our sample necessarily excludes (1) applicants who did not receive admission to any law school and (2) applicants who entered but did not graduate from law school.

## **Conclusion**

Law school academic performance substantially (although not fully) mediates the effects of LSAT score and final UGPA on bar passage. This has important implications for law school admissions and bar success professionals. Although LSAT score and final UGPA can help predict 1L LGPA, their use in making admissions decisions should not extend to predicting later outcomes — particularly, first-time bar passage. Instead, law schools should continue to take active responsibility for the bar success of admitted students, recognizing that bar passage potential is chiefly developed during law school. Doing so may open the door for more racially equitable admissions metrics focused on predicting early law school outcomes.

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## Appendix

**Table A.1**  
**Influence of Final UGPA and 1L LGPA on First-Time Bar Passage**  
 Mediation Model

Effect Type	Effect Size (Confidence Interval)
$a$ = effect of Final UGPA on 1L LGPA (beta)	0.26*** (0.24, 0.29)
$b$ = effect of 1L LGPA on Bar Passage (log odds)	1.40*** (0.31, 1.50)
$ab$ = indirect effect of Final UGPA on Bar Passage	0.04*** (0.04, 0.04)
$c'$ = direct effect of Final UGPA on Bar Passage	0.01* (0.01, 0.02)
$c = ab + c'$ = total effect of Final UGPA	0.04928*** (0.04150, 0.06)
$ab/c$ = proportion of total effect mediated by 1L LGPA	0.81*** (0.70, 0.97)

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Table A.2**  
**Influence of Final UGPA on 1L LGPA and First-Time Bar Passage**  
 Mediation Component Models and Moderation Model

	Effect of UGPA on 1L LGPA ( $\beta$ )	Effect of Both on Bar Passage (log odds)	Moderation Effect (log odds)
Final UGPA	0.26 *** (0.01)	0.08 * (0.04)	0.09 * (0.05)
1L LGPA		1.40 *** (0.05)	1.40 *** (0.05)
Final UGPA Given 1L LGPA			0.01 (0.05)
College Acceptance Rate	-0.06 *** (0.01)	-0.04 (0.04)	-0.04 (0.04)
Race: Black	-0.31 *** (0.07)	-0.06 (0.19)	-0.06 (0.19)
Race: Hispanic	-0.13 (0.07)	0.23 (0.19)	0.23 (0.19)
Race: Two or More	0.18 * (0.09)	-0.10 (0.26)	-0.10 (0.26)
Race: Remaining	-0.12 (0.12)	0.46 (0.34)	0.46 (0.34)
$R^2$	0.12		
Adj. $R^2$	0.12		
Num. obs.	6378	6378	6378
AIC		4888.27	4890.19
BIC		5037.01	5045.69
Log Likelihood		-2422.14	-2422.10
Deviance		4844.27	4844.19

Note: School effects excluded for brevity; continuous covariates standardized at school level; \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Table A.3**  
**Influence of LSAT Score and 1L LGPA on First-Time Bar Passage**  
 Mediation Model

Effect Type	Effect Size (Confidence Interval)
$a$ = effect of LSAT Score on 1L LGPA (beta)	0.35*** (0.33, 0.37)
$b$ = effect of 1L LGPA on Bar Passage (log odds)	1.38*** (1.31, 1.45)
$ab$ = indirect effect of LSAT Score on Bar Passage	0.05*** (0.05, 0.06)
$c'$ = direct effect of LSAT Score on Bar Passage	0.02*** (0.01, 0.03)
$c = ab + c'$ = total effect of LSAT Score	0.07*** (0.07, 0.08)
$ab/c$ = proportion of total effect mediated by 1L LGPA	0.73*** (0.67, 0.79)

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

**Table A.4**  
**Influence of LSAT Score on 1L LGPA and First-Time Bar Passage**  
 Mediation Component Models and Moderation Model

	Effect of LSAT Score on 1L LGPA ( $\beta$ )	Effect on Bar Passage (log odds)	Moderation Effect (log odds)
LSAT Score	0.35 *** (0.01)	0.18 *** (0.03)	0.18 *** (0.03)
Year One LGPA		1.38 *** (0.03)	1.38 *** (0.03)
LSAT Score Given 1L LGPA			0.00 (0.03)
Gender: Male	-0.13 *** (0.02)	0.12 * (0.05)	0.12 * (0.05)
Race: Black	-0.07 (0.05)	-0.07 (0.13)	-0.07 (0.13)
Race: Hispanic	0.06 (0.04)	0.18 (0.12)	0.18 (0.12)
Race: Two or More	0.17 * (0.07)	-0.08 (0.21)	-0.08 (0.21)
Race: Remaining	-0.03 (0.07)	-0.03 (0.20)	-0.03 (0.20)
$R^2$	0.16		
Adj. $R^2$	0.16		
Num. obs.	11955	11955	11955
AIC		9533.92	9535.92
BIC		9873.81	9883.20
Log Likelihood		-4720.96	-4720.96
Deviance		9441.92	9441.92

Note: School effects excluded for brevity; continuous covariates standardized at school level; \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$