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Approaching the Bar: An Analysis of Post-Graduation Bar Exam Study Habits

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APPROACHING THE BAR:

AN ANALYSIS OF POST-GRADUATION
BAR EXAM STUDY HABITS

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APPROACHING THE BAR: AN ANALYSIS OF POST- GRADUATION BAR EXAM STUDY HABITS

Authors: Joshua L. Jackson and Tiffane Cochran

INTRODUCTION

For most law graduates, passing the bar exam is the culmination and most critical outcome of their legal education. The typical two months spent preparing after law school graduation are essential to success. However, empirical understanding of post-graduation bar preparation is limited; only a few studies in the legal academy have examined this period.¹ Generally, law graduates are advised to treat bar preparation like a full-time job.² But we lack research and data on the specific time management strategies and tactics that are correlated with bar passage.³ Given impending changes to the bar exam, such inquiries are critical to determining what post-graduation study approaches are currently most effective and what adjustments, if any, should be made to prepare law students for the bar exam of the future.

In an effort to contribute to a better understanding of the post-graduation bar prep period, this report describes the results of a 2017 study AccessLex conducted in the seven weeks leading up to taking the July bar exam,

which examined the extent to which graduates' study habits and non-academic activities predicted their bar exam outcomes. With help from the University of San Diego School of Law and Themis Bar Review, we recruited recent California law school graduates to participate in a daily time-diary survey that would yield insights into how they managed their studies in the weeks leading up to the bar exam. During the seven-week period, survey respondents completed a daily record of their activities in 30-minute increments, based on nine predetermined categories: bar preparation, employment, job search, commuting, personal care, caregiving, leisure, sleep, and "other." In analyzing the data, we sought to answer the following questions:

1. To what extent is bar passage associated with the number of hours spent studying? To what extent is bar passage associated with study habits and patterns (e.g., number of study sessions per day)?
2. To what extent is bar passage associated with the amount of time spent on non-study activities?
3. To what extent is the amount of study time associated with negative experiences (e.g., feeling unprepared) and mindset during the bar exam?

Overall, this report makes the following observations:

- The likelihood of bar exam passage is strongly associated with the average number of hours spent studying *daily*.
- Although the average length of study session duration has no significant impact on bar passage, higher numbers of daily study sessions lead to a higher probability of bar exam success.

¹ See, e.g., Andrea A. Curcio, *A Better Bar: Why and How the Existing Bar Exam Should Change*, 81 NEB. L. REV. 363, 391 (2002), <https://heinonline.org/HOL/P?h=hein.journals/nebklr81&i=373>; Hong Jiang, Andrea A. Curcio & Kim D'Haene, *A Preliminary Study Looking Beyond LSAT and LGPA: Factors During the Bar Study Period That May Affect Bar Exam Passage* (June 2019), <https://www.airweb.org/docs/default-source/documents-for-pages/accesslex/curcioscholarlypaper-2.pdf>; Mario W. Mainero, *We Should Not Rely on Commercial Bar Reviews to Do Our Job: Why Labor-Intensive Comprehensive Bar Examination Preparation Can and Should Be a Part of the Law School Mission*, 19 CHAP. L. REV. 545 (2016), <https://heinonline.org/HOL/P?h=hein.journals/chlr19&i=569>; Keith A. Kaufman et al., *Passing the Bar Exam: Psychological, Educational, and Demographic Predictors of Success*, 57 J. LEGAL EDUC. 205 (2007), <https://heinonline.org/HOL/P?h=hein.journals/jled57&i=213>; Patrick E. Shrout et al., *The Effects of Daily Support Transactions During Acute Stress: Results from a Diary Study of Bar Exam Preparation*, in SUPPORT PROCESSES IN INTIMATE RELATIONSHIPS 175 (Kieran T. Sullivan & Joanne Davila eds., 2010), https://www.researchgate.net/publication/237687604_The_Effects_of_Daily_Support_Transactions_During_Acute_Stress_Results_From_a_Diary_Study_of_Bar_Exam_Preparation.

² Mainero, *supra* note 1, at 549.

³ Prior studies have found a link between academic success and time management strategies as well as self-regulated learning strategies. See, e.g., Darren George et al., *Time Diary and Questionnaire Assessment of Factors Associated with Academic and Personal Success Among University Undergraduates*, 56 J. AM. COLL. HEALTH 706 (2008); Amy Gortner Lahmers & Carl R. Zulauf, *Factors Associated with Academic Time Use and Academic Performance of College Students: A Recursive Approach*, 41 J. COLL. STUDENT DEV. 544 (2000); Carl R. Zulauf & Amy K. Gortner, *Use of Time and Academic Performance of College Students: Does Studying Matter?* (August 1999), <https://ageconsearch.umn.edu/bitstream/21547/1/sp99zu01.pdf>.

SAMPLE OVERVIEW

- Studying earlier in the day is more strongly associated with bar passage than studying at any other time of the day.
- Employment during the bar preparation period is negatively associated with bar success.
- Although graduates who study more hours per day are more likely to pass the bar exam, they are more likely to report running out of time on the multiple choice and essay sections of the bar exam. Graduates who studied an average of 10 or more hours per day are the main drivers behind this finding, indicating that there may be diminishing returns to daily averages of study beyond the 10-hour threshold.

Because this report focuses on a small group of first-time bar takers in California, the findings discussed have limited generalizability and should be considered exploratory in nature. We hope our approach serves as a methodological proof of concept that can be replicated among other legal education researchers and practitioners in other jurisdictions.

Our analysis is based on a sample of 107 graduates from 17 California law schools who sat for the July 2017 administration of the California bar exam. Table 1 displays the gender and racial demographics of the sample.⁴ Women are slightly overrepresented compared to the gender proportions in all California law schools, comprising approximately 61 percent of the sample but 56 percent of California law school graduates.⁵ White/Caucasian and Asian/Pacific Islander graduates are overrepresented in the sample. The proportion of Black law graduates in the sample (about 4 percent) is approximately representative of California law graduates overall (5 percent). The sample is also heavily skewed toward University of California-Berkeley, University of California-Davis, and the University of San Diego, comprising over 60 percent of the graduates we surveyed.⁶ Of those in the sample, 77 percent passed the bar exam (see appendix, Table A1), higher than California's first-time pass rate of 65 percent in July 2017.

⁴ We have a small sample of graduates with a limited geographic (California only) and temporal (one cohort) range, and these limitations should be kept in mind when considering the substantive impact of our results.

⁵ All numbers on California law schools come from data provided by the American Bar Association and analysis using Analytix by AccessLex. Total California enrollment figures are all J.D. degrees awarded in California in 2017.

⁶ Invitations to complete the time diary survey were sent to Spring 2017 California law graduates. Responses to the survey were strictly voluntary, and one limitation of this study is therefore that the sample is self-selected and less representative of the total population of California law school graduates than is ideal.

Table 1: Sample Overview

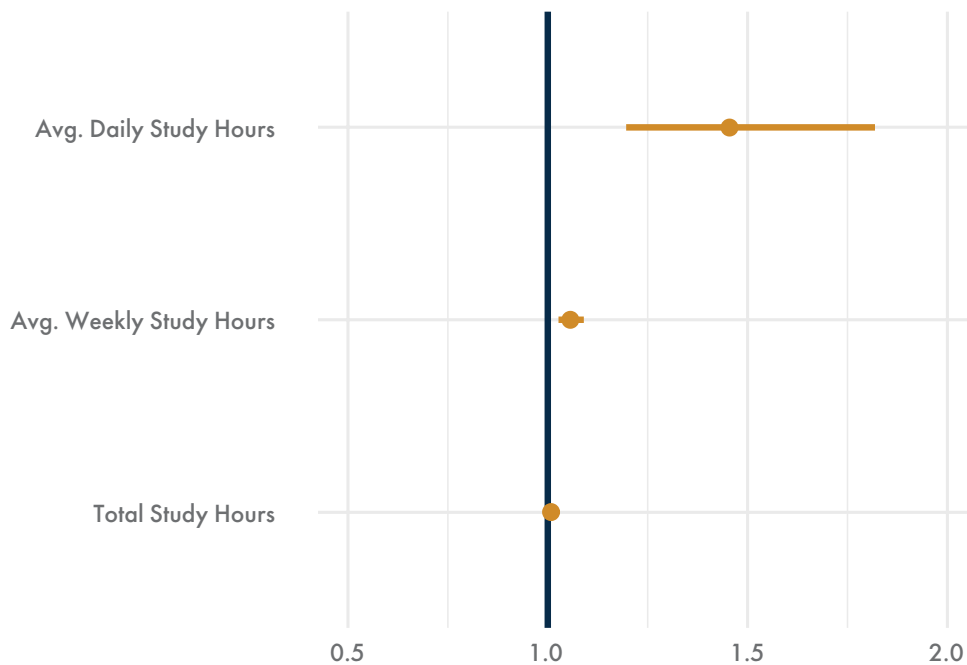
Variable	Category	Percent (Sample)	Percent (2017 CA Graduates)
Race	Asian/Pacific Islander	16.8	14.2
	Black/African American	3.7	5.0
	Hispanic/Latinx	7.5	14.9
	Remaining	4.7	13.7
	White/Caucasian	67.3	52.3
Gender	Male	37.4	44.3
	Female	60.7	55.6
	Unreported	1.9	0.1
Law School	University of San Diego	33.6	5.7
	University of California-Berkeley	17.8	8.6
	University of California-Davis	10.3	4.7
	California Western School of Law	32.0	81.1
	Loyola Marymount University - Los Angeles		
	McGeorge School of Law		
	Pepperdine University		
	Santa Clara University		
	Southwestern Law School		
	Stanford University		
	Thomas Jefferson School of Law		
	University of California-Hastings		
	University of California-Los Angeles		
	University of San Francisco		
	University of Southern California		
	Whittier Law School		
Other Law Schools (California Accredited)			

FINDINGS

The likelihood of bar exam passage increases with the number of hours spent studying.

As expected, results of the study indicate that graduates who average higher amounts of study time—whether daily, weekly, or overall—are significantly more likely to pass the bar exam.⁷ As Figure 1 demonstrates, the average of daily study hours is most strongly associated with passing the bar exam. Figure 2 illustrates the relative impact of study hours on bar passage likelihood by the average number of daily, weekly and total hours recorded over the seven-week observation period.

Figure 1: Study Hours and Bar Passage (Odds Ratios)



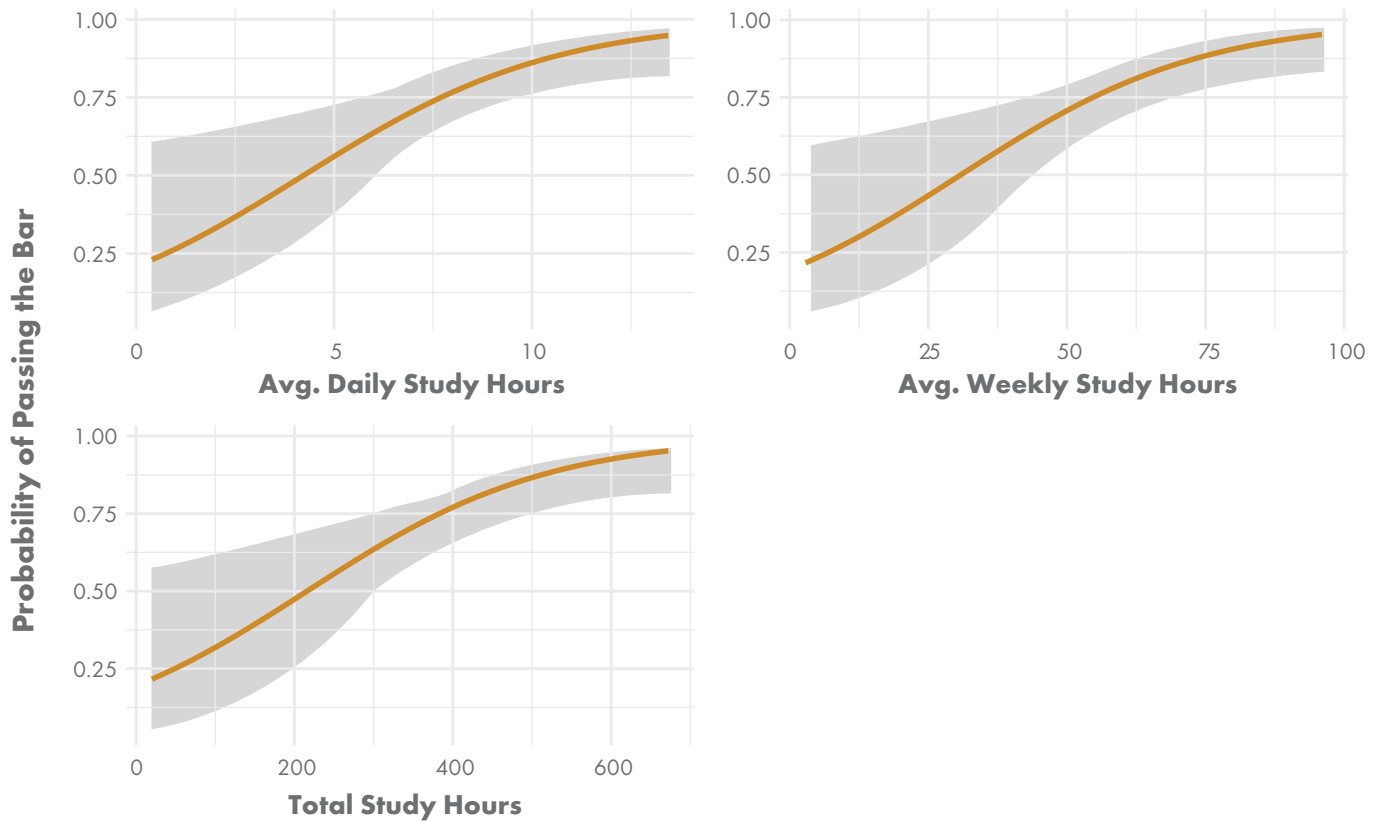
How to Interpret Plots of Odds Ratios and Confidence Intervals

Coefficient plots such as Figure 1 display *odds ratios*, the estimated impact, for each variable in the model, represented by the dots next to each variable name on the Y axis. Odds ratios represent the change in a variable relative to a null effect. An odds ratio of one indicates a null effect, or that the variable has no bearing on passing the bar. Odds ratios lying farther away from the vertical line “no effect” line in the plots indicate that the associated variable produces a larger impact.

Confidence intervals are represented by horizontal lines, or “whiskers,” that pierce the dots (odds ratios). A confidence interval is a range of plausible values for a given variable’s odds ratio. These are 90% confidence intervals, essentially meaning that there is a 90% chance that the true value of a given variable’s odds ratio is within the confidence interval. Confidence intervals lying entirely to one side of the vertical line are shaded gold, indicating that the variable is statistically significant.

⁷ All analyses and findings described in this report account for the graduates’ reported LSAT scores. In doing so, we can more confidently rule out differences in academic performance when attributing bar passage results to study hours and behaviors examined in our analyses.

Figure 2 : Predicted Probabilities of Study Hours on Bar Passage



For example, graduates who studied four hours per day had a 46 percent likelihood of bar passage. On the other hand, those who studied the median number of daily study hours (8.1 hours) had more than a 75 percent likelihood of bar passage, an increase of about 30 percentage points. Similar patterns emerge for weekly averages.

Overall, the effect of studying for the bar exam is strikingly linear and positive, with likelihood of bar passage increasing as the number of study hours increase. However, gains in bar passage likelihood start to diminish when graduates study 10 or more hours on average, daily. This, too, is valuable information—graduates should be aware that they may be expending unnecessary energy once they exceed a certain number of study hours per day. Taken together, these results underscore the emphasis that academic and bar success advisors place on committing significant time to bar preparation post-graduation.

How to Interpret Predicted Probability Graphs

Predicted probability plots show the practical impact of a variable (Figure 2). The gold line is the predicted likelihood of bar passage and is predicted for each value of the independent variable on the X-axis. The slope of the gold prediction line indicates the variable's effect size; flat lines mean no practical impact, and steep slopes indicate a large impact. The shading surrounding the prediction lines represents the confidence intervals; narrower confidence intervals indicate higher certainty that the prediction is accurate.

Averaging more study hours in the morning is positively associated with bar exam passage. Higher average daily study sessions are also associated with a higher probability of bar passage, irrespective of study session duration.

In addition to observing average and total hours of study, our analysis examined study hours by time of day as well as the average number of study sessions, defined as periods of study that preceded or followed a non-study activity. Figure 3 displays the results of six analyses evaluating the extent to which time of day, number of daily study sessions, and study session duration influence the likelihood of bar passage. As shown in the graph, higher averages of morning study hours are positively and significantly associated with bar passage, suggesting “the early bird catches the worm” adage rings true for the bar preparation period. This also dovetails with the previous finding on average daily study hours having a positive relationship with bar exam passage, in that those who get an early start are better positioned to reach 8-10 hours of study per day.

The results also suggest average afternoon and evening study hours are positively associated with bar passage; despite not being statistically significant, their odds ratios and confidence intervals are mainly positioned on the positive side of the graph. The figure also suggests a negative relationship between bar passage and studying late at night (between midnight and 6:00 am); however, very few respondents recorded study activity during this time period, so these results should be interpreted with caution.

Figure 3 also demonstrates the relationship between bar passage and study sessions. Despite finding a positive association between the average number of daily study hours and bar passage, this analysis shows the average number of hours per study session does not influence bar exam outcome. On the other hand, the average number of daily sessions is statistically significant, positively influencing the likelihood of bar passage.

Figure 3: Study Patterns and Bar Passage (Odds Ratios)

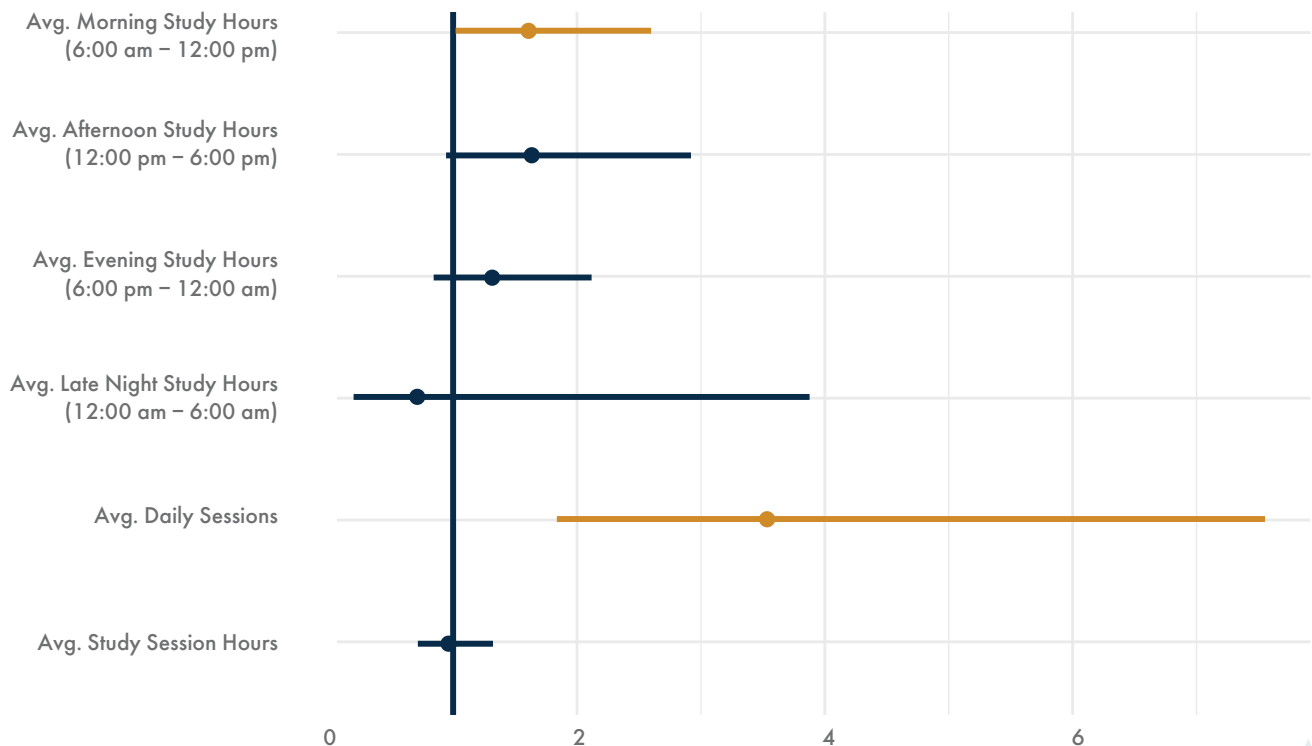
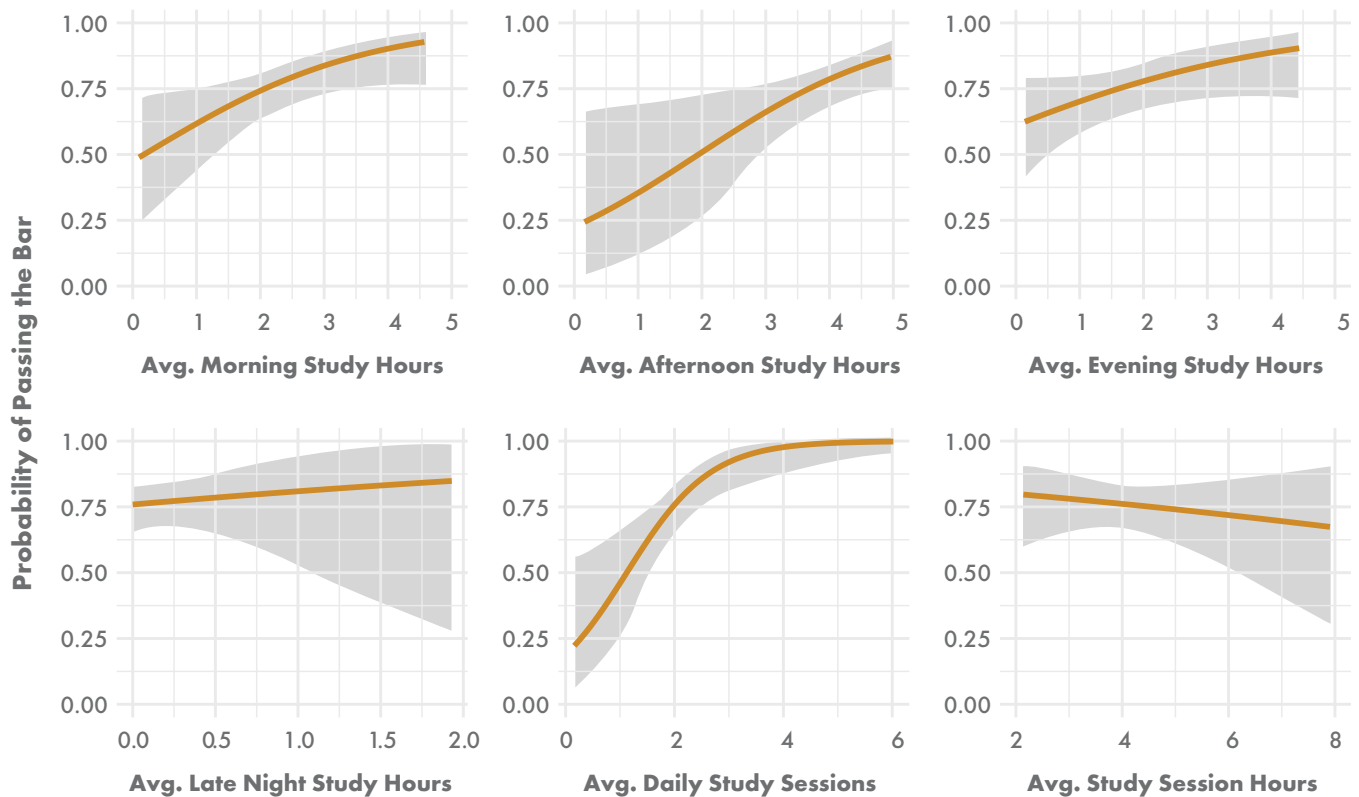


Figure 4 illustrates the influence of marginal increases in average study hours, study sessions, and study session duration on the probability of passing the bar exam. The top row shows that increasing the average number of study hours completed in the morning, afternoon, or evening has a substantive impact on bar success. For instance, averaging only an hour of study between 6:00 am and noon is associated with a 62 percent likelihood of passing the bar, while studying an average of three hours in the morning increases the likelihood to 79 percent.

Figure 4: Predicted Probabilities of Study Habits and Patterns on Bar Passage



The average duration of a study session had no effect on bar exam passage. This is further depicted on the bottom row of Figure 4, which shows a relatively flat line across average study session hours. However, the graph of average daily study sessions shows a substantially positive relationship with bar passage likelihood. On average, graduates in the sample recorded two to three study sessions daily. Those who studied only once per day had a 45 percent predicted probability of passing the bar exam, while those who averaged two study sessions per day had a likelihood of 75 percent, a 30 percentage point increase.

Taken together, these study session findings suggest graduates who average more study sessions per day are more likely to pass the bar exam compared to those who average a single study session daily. In more practical terms, our analysis finds that graduates who averaged more study sessions of at least two hours with at least a 30-minute break in between have higher odds of bar exam success. This finding is also consistent with the observed positive relationship between average daily study hours and bar exam passage, since those who study more hours per day are more likely to average more study sessions and breaks.

Employment during the bar prep period is negatively associated with bar success.

In addition to yielding information on respondents' bar study behaviors, our time diary analysis allowed us to observe and examine other ways these law graduates spent their time during the post-graduation bar prep period. Specifically, we asked respondents to report time spent on employment, job searching, commuting, personal care, caregiving, leisure, and sleep.⁸ We examine time spent on these activities to determine the extent to which responsibilities and non-study behaviors impact the likelihood of bar passage.⁹ Our findings are detailed below. For context, graduates in the study recorded a daily average of 8.5 hours of sleep, four hours of leisure, and two hours of personal care per day during the observed bar prep period.

Figure 5 shows the influence of these non-study activities on first-time bar passage. We find that hours of employment are statistically significant and negatively associated with bar passage. Although the other activities are not significant, we learn a few things from their odds ratio plots. First, hours spent on commuting and caregiving show wide confidence intervals, indicating unreliable estimates of their association with bar passage. We also see that hours spent on personal care are of almost no effect. However, sleep and leisure hours are mainly situated on the negative side of the graph.¹⁰ While this does not mean graduates should avoid sleep or leisure, it indicates there are tradeoffs to be managed when determining how much time to devote to each activity.

Figure 5: Non-Academic Activities and Bar Passage (Odds Ratios)

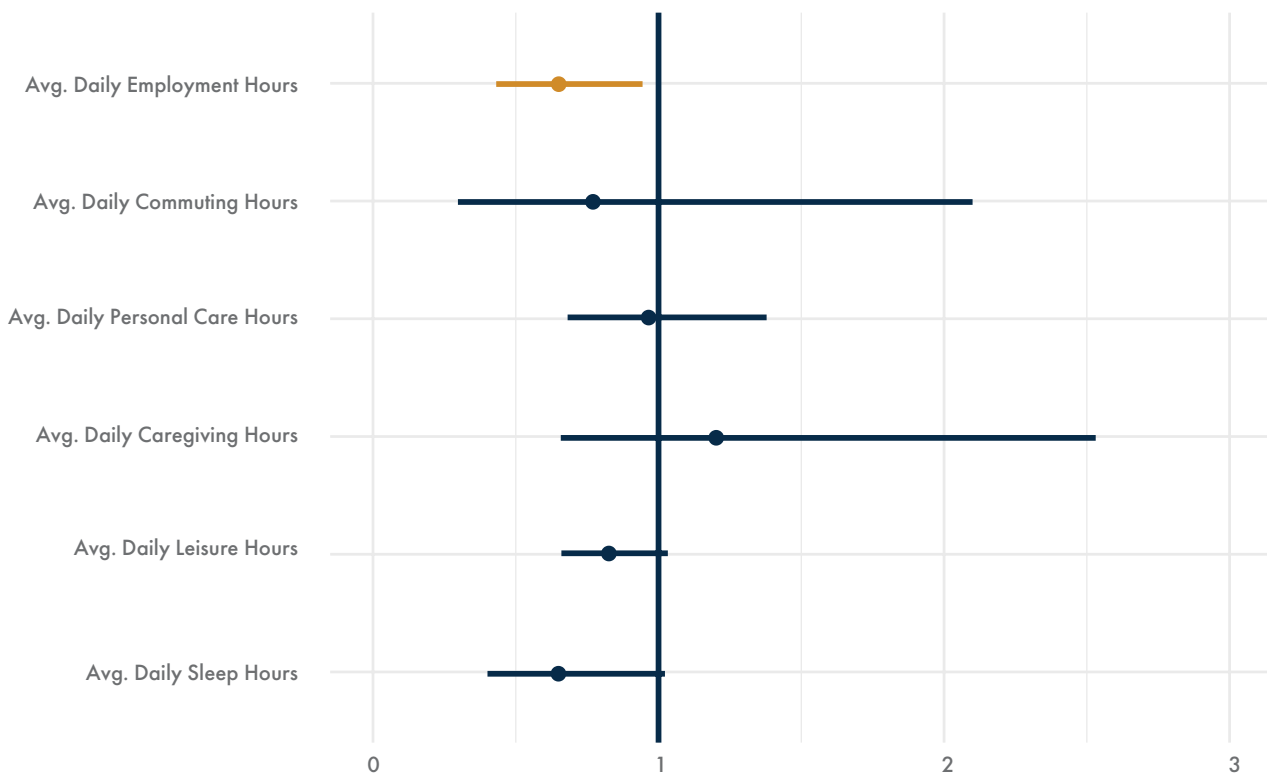


Figure 6 better demonstrates the former point. As illustrated, the average graduate who slept eight hours per day had a 77 percent likelihood of passing the bar exam. However, those sleeping more than the average

had a lower likelihood. For example, those who slept an average of 10 hours per day had a 62.5 percent likelihood of passing the bar.

⁸ Respondents did not provide details, but examples of each category were given to inform their category selection for a given activity.

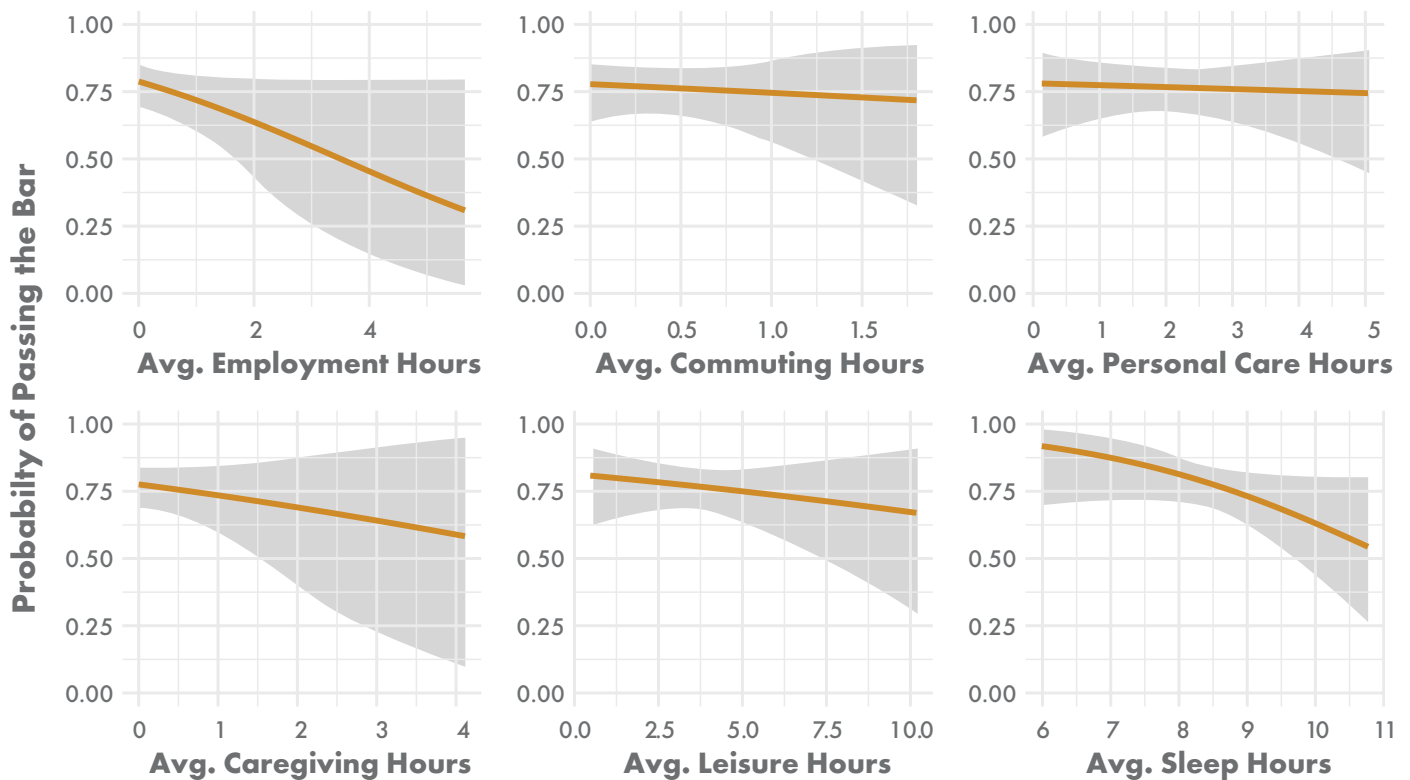
⁹ The model for Job Search is excluded due to extraordinarily large confidence intervals that make it difficult to plot. Job Search is not significant.

¹⁰ Sleep includes naps. Survey respondents were provided the following examples of leisure activities: social outings, vacation, watching TV, relaxing, and pet care.

Figure 6 also shows the deleterious influence of employment on bar passage likelihood. While reporting zero hours of employment is associated with a 78 percent chance of bar success, working an average of just two hours per day lowers bar success odds to about 63 percent. Increasing employment hours even more (say, to three average daily hours) is associated with an even lower probability of bar passage, although few in the sample reported working.¹¹

As noted earlier, these results should be considered exploratory. It is likely that a larger sample with a more representative group of law school graduates would offer more reliable estimates of the relationship between non-study activities and bar passage likelihood.

Figure 6: Predicted Probabilities of Non-Academic Activities on Bar Passage



Graduates who studied more hours per day were more likely to report running out of time on the multiple choice and essay sections of the bar exam. On the other hand, they were less likely to report feeling nervous, distracted, or other discomfort while taking the exam.

In addition to surveying the sample graduates about their daily activities during the bar prep period, we also asked them to complete a post-exam questionnaire about their experience taking the bar.¹² We hypothesized average daily

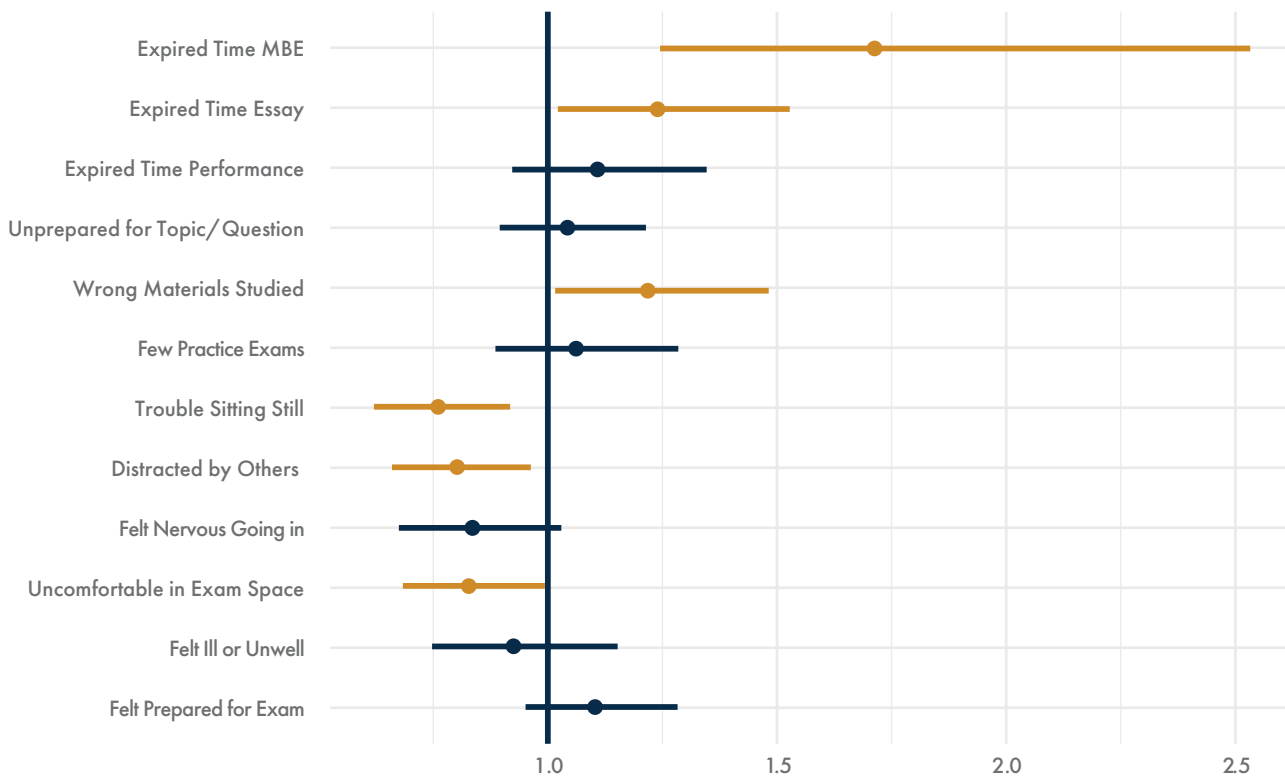
study hours would be negatively associated with negative bar exam experiences, such as feeling unprepared while taking the exam, so the results of our analysis of study hours and exam experiences (shown in Figure 7) were somewhat surprising. For instance, we find that higher averages of daily study hours are positively associated with running out of time on the Multistate Bar Examination (MBE), essay, and performance test portions of the bar exam. In the case of the MBE and essay sections, these relationships are statistically significant.¹³

¹¹ The wide confidence interval (gray shaded area) on higher values of *employment hours* reflects the fact that few graduates in the sample worked that many hours. Due to the lack of data, we do not discuss inferences based on higher average employment hours.

¹² See Table A6 in the appendix for a list of survey questions related to bar exam experiences.

¹³ Furthermore, we separately examine the relationship between hours spent studying MBE subjects and reporting running out of time on the MBE section. More average daily MBE study hours is not significantly associated with running out of time on the MBE.

Figure 7: Relationships Between Average Daily Study Hours and Exam Experiences



While these findings seem counterintuitive, it may be a matter of how some respondents interpreted this survey question—perhaps graduates who reported running out of time completed the exam section but reported running out of time because they felt rushed in doing so. In other words, some graduates may have reported running out of time because they were not able to complete the section comfortably (e.g., did not have time to review their answers before completing the exam section). Future studies could explore these hypotheses further through a more clearly worded survey item or more robust qualitative means.

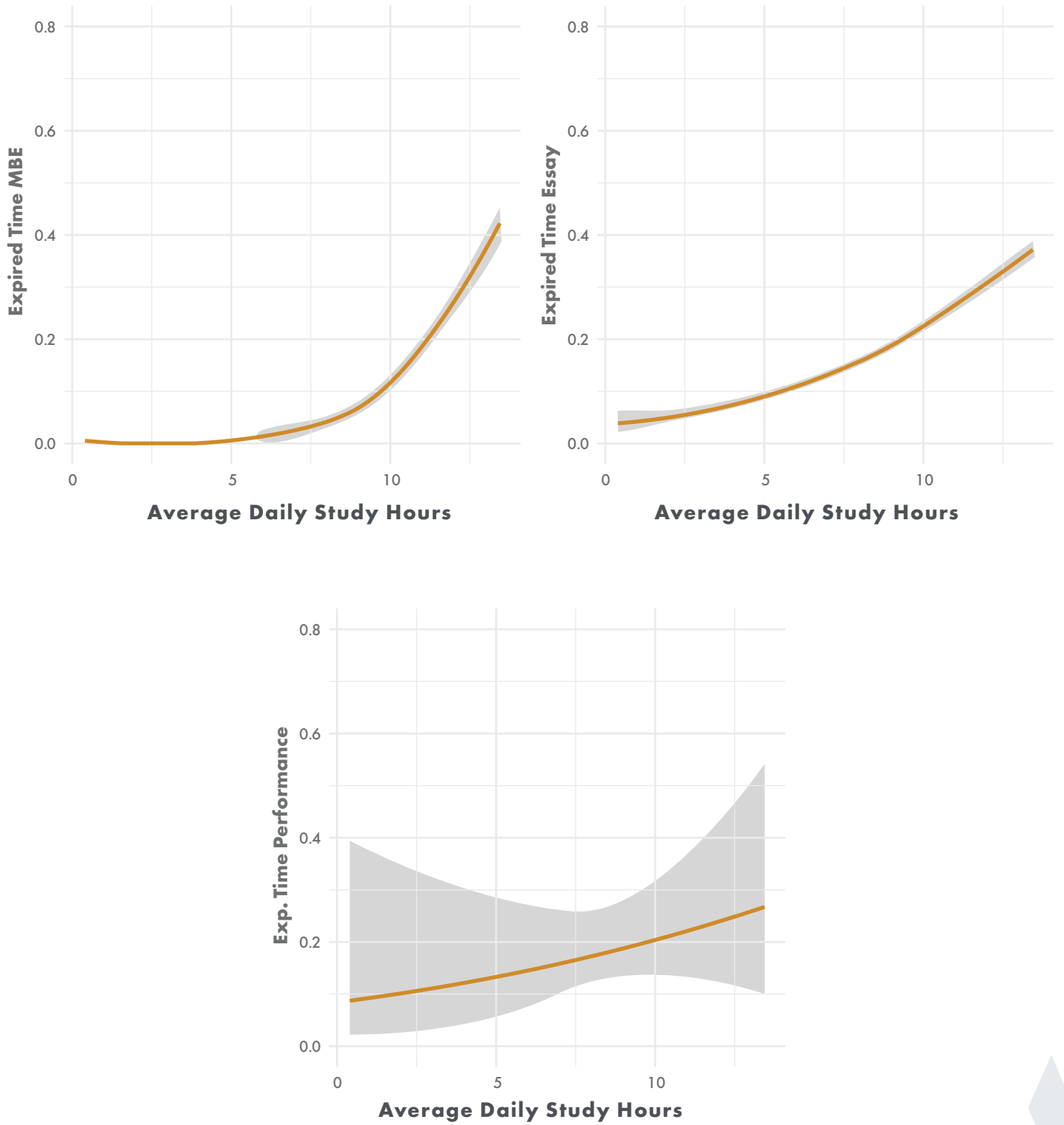
The next set of experiences listed in Figure 7 captures the extent to which graduates perceived a deficit in their preparation: feeling unprepared for a topic/question, feeling they studied the wrong materials, or feeling they took too few practice exams. While all three items were positive, only the relationship between studying the wrong material and average daily study hours was statistically significant.

The survey also asked graduates to report whether they experienced any of the following while taking the exam: trouble sitting still, distractions caused by others in the room, feeling ill, feeling nervous going into the exam, or feeling uncomfortable in the exam space. Each of these factors was negatively associated with average daily study hours, with three being statistically significant (see gold lines in Figure 7). This suggests that graduates who studied more on average were more prepared for the physicality of taking the exam and less anxious compared to those who studied fewer hours per day.

Finally, the post-exam survey asked respondents to rate their level of preparedness going into the bar exam. The answers fall into two categories, “less prepared” and “more prepared.”¹⁴ Although preparedness level is positively associated with average daily study hours, the relationship is not statistically significant.

¹⁴ The survey asks this question as a four-category question: somewhat unprepared, prepared, somewhat prepared, and very prepared. We re-categorized this as “prepared” and “unprepared.”

Figure 8: Predicted Probabilities of Average Study Hours on Exam Experiences Expired Time on Bar Exam Sections



Examining the marginal impact of these variables reveals a few notable observations. As noted above, hours spent studying has a positive relationship with reporting running out of time on exam sections. Figure 8 shows that graduates who averaged more than 10 hours of daily study time were more likely to report running out of time on the MBE compared to those studying fewer hours per day. Similarly, those who reported more than 10 hours of daily study time had a more than 20 percent likelihood of reporting running out of time on the essay section compared to 15 percent among those who studied eight hours per day. These observations provide support for our earlier hypothesis that graduates who reported running out of time likely completed the section but felt rushed in the process. They also suggest that

graduates who studied 10 or more hours per day were not as prepared for managing the time limits imposed during the bar exam.

We also find that graduates who averaged more than 10 hours of study per day were at least 25 percent likely to report feeling they studied the wrong material for the exam, compared to about 20 percent among those averaging eight hours of study per day (Figure 9). Coupled with the expired time finding, this suggests that increasing daily study hours past a certain point is not always better; optimizing study hours for efficient preparation is more likely to yield confidence in time management skills and content mastery on exam day.

Figure 9: Predicted Probabilities of Average Study Hours on Exam Experiences Psychological Factors

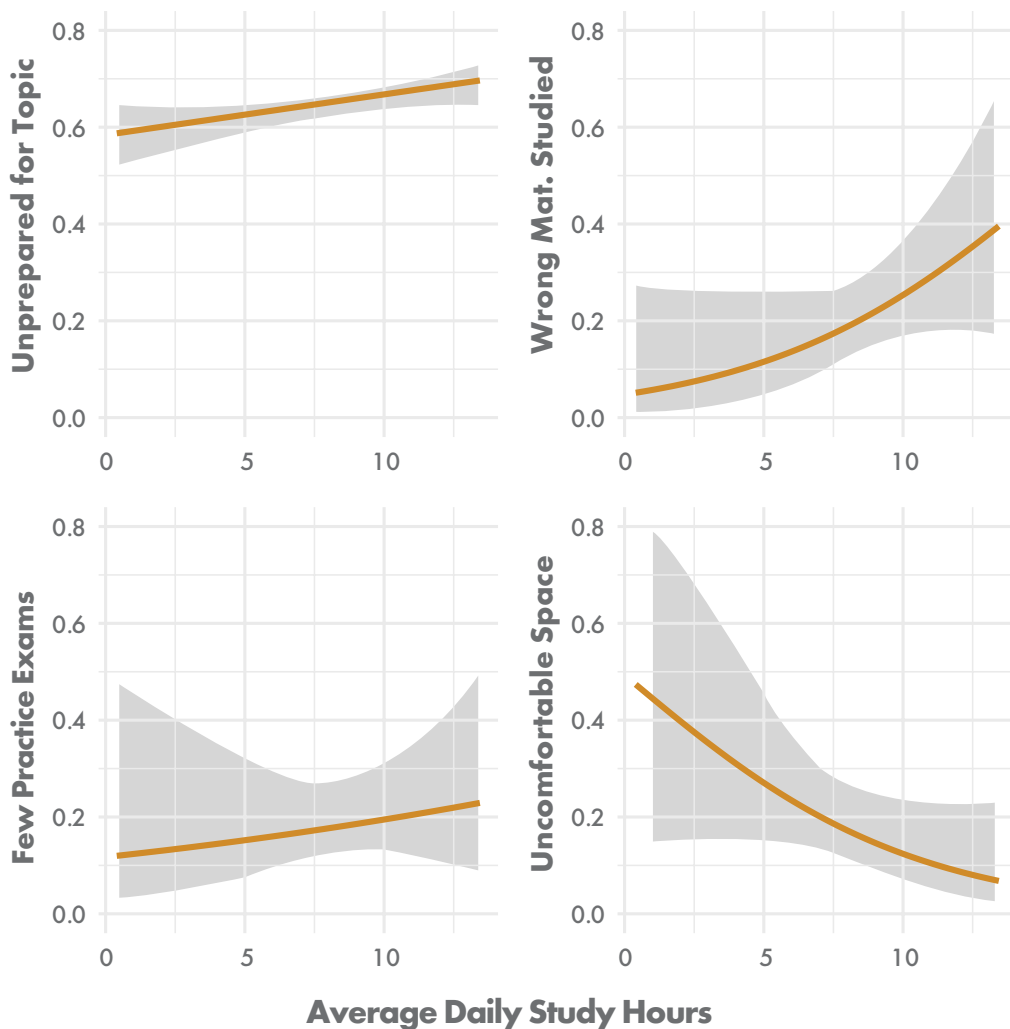
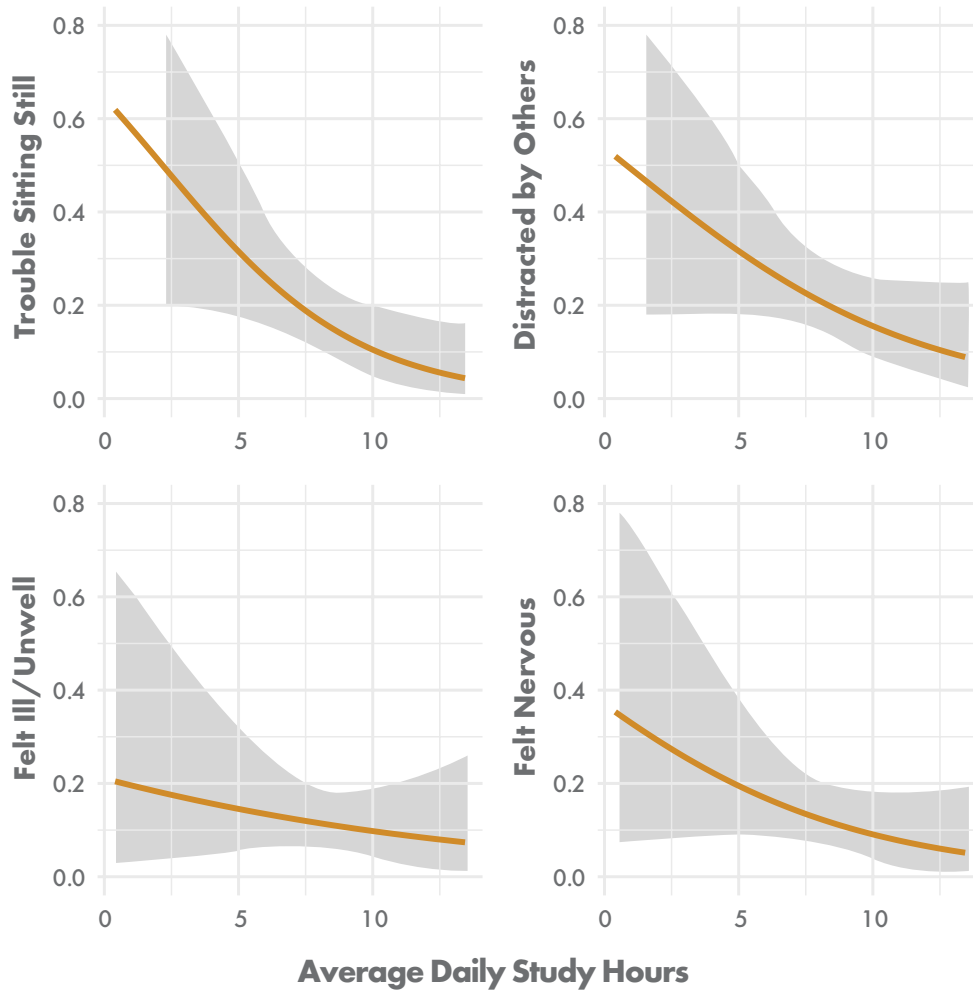


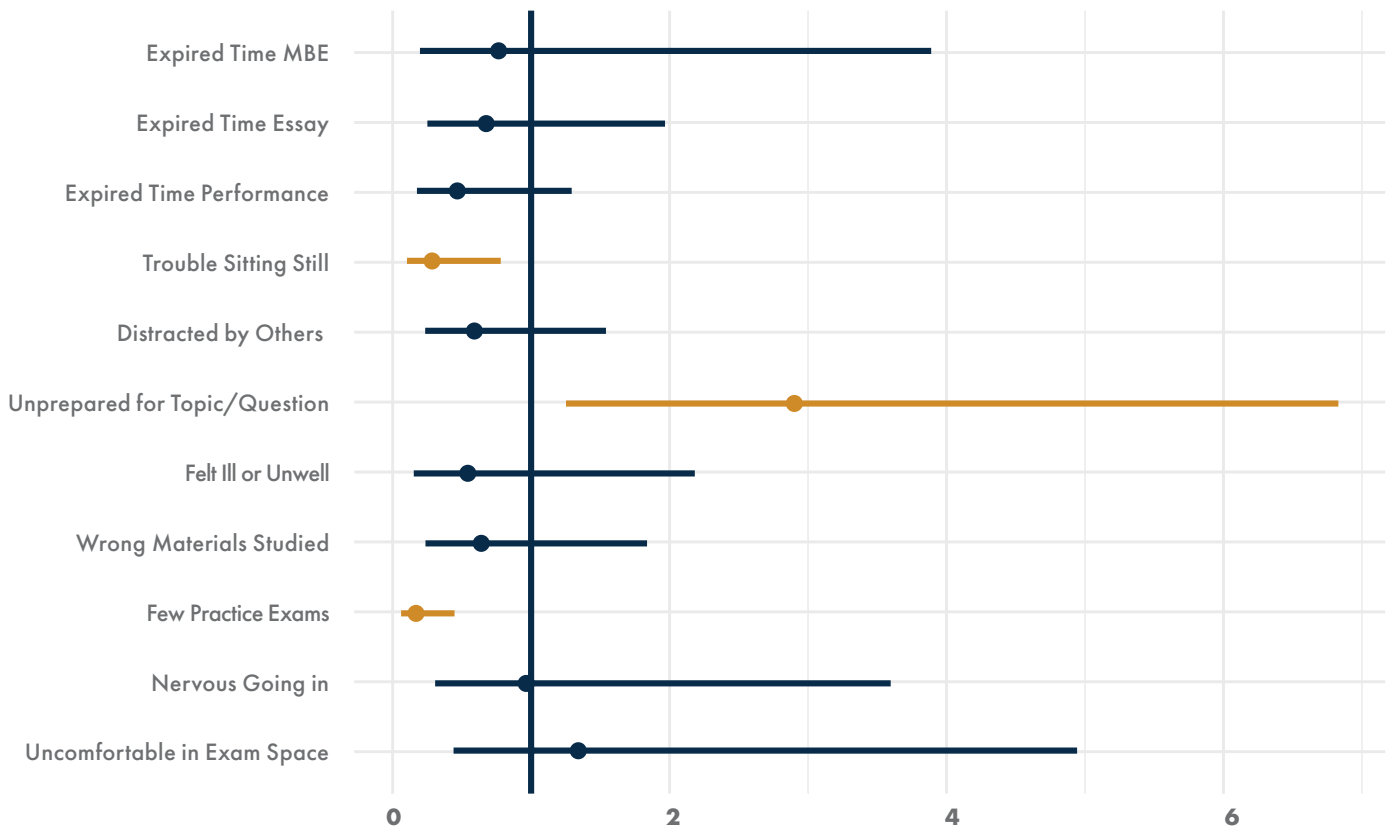
Figure 10: Predicted Probabilities of Average Study Hours on Exam Experiences
Psychological Factors, cont.



On the other hand, increasing daily study hours reduces the likelihood of having negative physical experiences during the exam. For instance, those who studied more hours per day were less likely to report having trouble sitting still while taking the bar (Figure 10). Graduates who studied the average of eight hours per day had an 18 percent likelihood of reporting this issue, but those who studied an average of five hours per day had a 31 percent chance. Similarly, graduates who studied five hours on average were more likely to report being distracted by others (31 percent likely) than those who studied eight hours on average (20 percent likely). The odds of reporting nervousness and discomfort during the exam also diminish as average daily study hours increase. These results suggest that studying more hours per day not only helps with absorbing bar exam material, but also better trains graduates to endure the two-day exam experience.

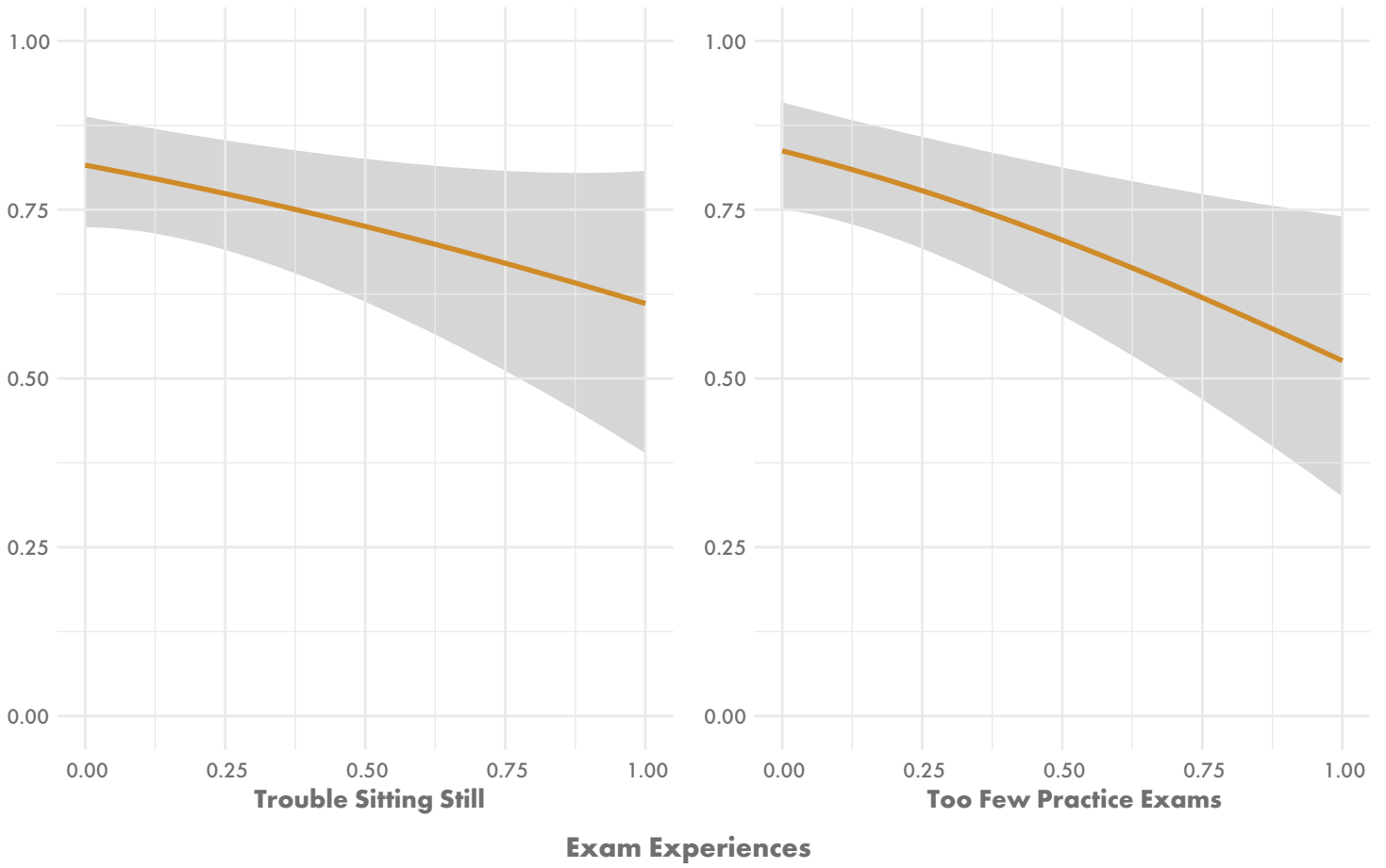
Considering the relationships between bar passage likelihood and the exam experiences described above brings the importance of study habits into greater focus. As shown in Figure 11, only three of the experiences listed in the post-exam survey are statistically significant, and only one, feeling unprepared for an exam topic/question, is positively associated with bar passage. This positive relationship makes sense considering that 67 percent of respondents reported encountering a topic or question for which they felt unprepared, yet 77 percent passed the bar exam. In other words, most test takers will report encountering a troubling topic or question—not an uncommon occurrence in professional licensing exams—yet will still pass the exam. So this result suggests most law graduates will encounter a troubling question or topic and thus it should not be interpreted as a meaningful indicator of bar passage.

Figure 11: Relationships Between Bar Passage and Exam Experiences



The other two statistically significant factors—reporting trouble sitting still and taking too few practice exams—are negatively associated with passing the bar, and both are associated with large substantive decreases in the likelihood of bar passage (Figure 12). Among graduates who did not report these experiences, the likelihood of bar passage was about 82 and 83 percent, respectively. However, having trouble sitting still during the exam is associated with a 20 percentage point decrease in the likelihood of bar passage, and reporting taking too few practice exams is associated with a decrease of about 31 percentage points. Coupled with earlier findings linking higher average study hours with better exam endurance, these results reinforce the benefit of sitting still and studying bar exam content for about 8-10 hours per day as well as practicing the exam itself when preparing for the bar.

Figure 12 : Bar Passage and Exam Experiences Predicted Probabilities



CONCLUDING THOUGHTS AND RECOMMENDATIONS

This exploratory analysis of law graduates' activities during the post-graduation bar preparation period underscores the significant time commitment required to improve the odds of bar exam passage. In summary, bar exam preparation is a training exercise that, according to these findings, requires an average of eight to nine hours of study per day (during a seven-day week) and multiple practice tests over the course of the post-graduation bar prep period. Studying more hours in the morning provides an early advantage to ensuring that adequate time is given to daily bar preparation. We also find that optimizing breaks between study sessions as well as sleep is associated with greater odds of bar success.

However, we are releasing this report at a time when recent law graduates, law schools, and bar examiners are still reeling from challenges associated with administering, rescheduling and taking the July 2020 bar exam—not to mention the tumultuous context in which that exam occurred, including but not limited to public health, political, racial, environmental, and economic adversities. And as we are looking back to determine the longer-term implications of these hardships, the legal education community is also looking ahead and pondering the future of the bar exam. The National Conference of Bar Examiners (NCBE) recently announced plans to significantly revise the bar exam over the next five years, which include administering the test on computer (but still in person) and eliminating the three distinct test sections to make way for one integrated format.¹⁵

In light of these planned bar exam changes, we offer the following recommendations with respect to the findings shared in this report:

Broaden understanding of successful study strategies during the post-graduation bar exam prep period.

The timing of the new bar exam will not change, and in most jurisdictions, the exam will still be administered after law degrees are awarded. As a result, how graduates spend their time preparing for the exam after graduation will

remain critical to their success. Given that our analyses and findings are exploratory and limited to a small sample of graduates who attended law school and took the bar exam in California, this study is ripe for expansion and replication in other jurisdictions to determine if these findings hold in other contexts. We hope the time-diary approach used for this report provides a useful framework that other legal education scholars can leverage to learn more about the nuances of the post-graduation period. We also suggest that future studies further disaggregate study activities into more meaningful categories, such as practice exams, to better understand how time spent on specific types of study activities influences the likelihood of bar passage. The more we know empirically about what drives bar passage during the post-graduation period, the better we can tailor these activities for the new bar exam on the horizon.

Begin identifying and implementing new preparation activities and practice techniques for the future bar exam.

The results of this study indicate that graduates who spend significant amounts of time studying for the bar exam are more likely to report running out of time on exam sections and feeling that they studied the wrong material. Further examination of these findings indicates graduates who studied 10 or more hours per day, on average, were the main drivers of these results. However, considering the high pass rate of the sample used for our analysis, we find that these exam experiences are inconsequential to bar exam outcome. Nonetheless, graduates should feel confident that the time invested in their bar preparation is well-spent, especially when it comes at the expense of other meaningful activities in their personal and professional lives.

A new bar exam will likely heighten the uncertainty graduates feel as they approach the test. And although some aspects of bar exam preparation will prove timeless and equally relevant for preparation for the new exam format, others may not. To that end, we encourage regular and ongoing communication between law schools and the NCBE to facilitate early preparation for the first class of graduates slated to pioneer the new exam. NCBE is already engaging law school stakeholders in developing the new test, so plans to prepare law schools and law graduates alike could already be underway.

¹⁵ Karen Sloan, *Modernized Bar Exam Gets the Green Light*, LAW.COM (Jan. 28, 2021, 2:45 PM), <https://www.law.com/therecorder/2021/01/28/modernized-bar-exam-gets-the-green-light-403-58436>.

Continue to investigate and promote effective bar preparation strategies for law school graduates with work and other responsibilities.

Our final recommendation centers on graduates with work and other obligations that sometimes challenge bar preparation and success. As our study confirms, employment during the post-graduation bar preparation period negatively influences the likelihood of passing the bar exam. However, only a small number of graduates in our sample reported post-graduation employment during the bar prep period. Future studies that include a more robust number of graduates juggling work, family and other responsibilities could help determine which study behaviors and tactics are best suited for those who have limited time, particularly during the day, to study for the exam.

Law schools and jurisdictions with high numbers of part-time graduates, particularly those from evening programs, would be ideal leaders or partners for this research. It would also be compelling to determine whether part-time graduates tend to perform better on certain exam sections compared to others. Since the new bar exam format will approximate the Multistate Performance Test (MPT), understanding any potential differences in performance on the MPT among groups of first-time takers, including those who work while preparing for the exam, would help ensure that the new exam format and preparation aids provide equitable footing for all law graduates to succeed.

METHODOLOGY

As noted in the sample overview, this study is based on 107 survey respondents who graduated from a California law school in spring 2017 and took the July bar exam in California that year. Graduates were asked to record their activities in daily time diaries in 30-minute increments using a pre-supplied categorical list of activities.¹⁶ Thus, each day reported includes 48 activity records per graduate.¹⁷

To analyze these activity records, we aggregated the data in several ways. For instance, analyses involving the impact of study hours on bar success aggregated study hours into daily averages, weekly averages, and other relevant measures expected to correlate with bar passage.¹⁸ To examine the relationship between bar exam passage and study behaviors, we combined strings of consecutive study activity into a single study session to calculate the average number of study sessions per day, average length of study hours per session, average number of study breaks per day, and average hours spent studying in the morning, afternoon, evening, and night. These transformations allowed us to derive time-based patterns in study behavior.

The small sample used for this study poses two notable limitations. First, the sample is not representative of California law graduates and, as a result, is not generalizable to California or any other meaningful law graduate population. Second, having a small sample size limited our ability to calculate robust estimates of bar exam passage using multiple control variables.¹⁹ To address this issue, we used LSAT score as the sole control variable given its correlation to other factors such as race and first-year law school GPA. Because respondents reported LSAT score as a categorical variable in ranges of five (e.g., 145-149; 150-154), we transformed each LSAT score range to a numeric variable equal to the midpoint of the category (e.g., 145-149 becomes 147). This procedure allowed us to measure LSAT scores, retain the variable's meaningful numerical value, and use only one degree of freedom instead of the eight degrees of freedom that would be required to use the categorical values.

¹⁶ Graduates could only fill out one activity per time slot. Categories of activities include employment, job search, commuting, personal care, caregiving, leisure, sleep, "other," and four categories of bar exam study.

¹⁷ Several respondents missed days in recording their activities and turned in incomplete time diaries. These missing days were excluded from the data. No graduate missed more than three total days, and data such as total hours spent studying is thus not severely affected by missing data. For graduates with at least one missing day, their averages were calculated using the appropriate total number of days they appeared in the data.

¹⁸ This study considers "bar passage" only and takes no account of bar exam scores.

¹⁹ A small sample limits degrees of freedom in the analysis, so the inclusion of many control variables would negatively impact the statistical power of the models. Relatedly, we use the $p < .10$ threshold to determine statistical significance due to limited sample size.

APPENDIX

Table A1: Summary Statistics

	Obs.	Mean	Median	Std. Dev.	Min	Max
Bar Passage	107	0.77	1	0.43	0	1
Study Hours per Session	107	4.05	3.92	1.39	1.16	9.34
Study Sessions per Day	107	2.24	2.16	0.86	0.16	6.02
LSAT Score	107	160	162	6.77	137	177
Activities						
Daily Study Hours	107	8.38	8.14	2.29	0.40	13.44
Daily Employment Hours	107	0.27	0	0.98	0	5.66
Daily Job Search Hours	107	0.06	0	0.15	0	0.82
Daily Commuting Hours	107	0.36	0.18	0.40	0	1.80
Daily Personal Care Hours	107	2.09	1.98	1.12	0.13	5.04
Daily Caregiving Hours	107	0.22	0	0.62	0	4.11
Daily Leisure Hours	107	3.73	3.56	1.89	0.47	10.18
Daily Sleep Hours	107	8.52	8.50	0.85	5.99	10.77
Exam Experiences						
Expired Time MBE	105	0.09	0	0.28	0	1
Expired Time Essay	105	0.18	0	0.39	0	1
Expired Time Performance	105	0.18	0	0.39	0	1
Trouble Sitting Still	105	0.17	0	0.38	0	1
Distracted by Others	105	0.21	0	0.41	0	1
Felt Ill	105	0.11	0	0.32	0	1
Unprepared for Topic	105	0.67	1	0.47	0	1
Too Few Practice Exams	105	0.18	0	0.39	0	1
Studied Right Materials	105	0.21	0	0.41	0	1
Nervous Entering Exam	105	0.12	0	0.33	0	1
Uncomfortable Exam Space	105	0.17	0	0.38	0	1

SUPPLEMENTAL TABLES

Table A2: Bar Study Hours and Bar Passage

	Dependent Variable		
	Bar Passage		
	(1)	(2)	(3)
Average Daily Study Hours	1.455 (1.154, 1.906)		
Average Weekly Study Hours		1.056 (1.022, 1.098)	
Total Study Hours			1.008 (1.003, 1.013)
LSAT Score	1.164 (1.070, 1.286)	1.164 (1.070, 1.286)	1.164 (1.070, 1.286)
Observations	107	107	107
Log Likelihood	-46.561	-46.350	-46.350
Akaike Inf. Crit.	99.123	98.700	98.700

Table A3 : Bar Study Patterns and Bar Passage

Dependent Variable

	Bar Passage					
	(1)	(2)	(3)	(4)	(5)	(6)
Average Morning Study Hours	1.897 (1.142, 3.283)					
Average Afternoon Study Hours		2.180* (1.292, 3.919)				
Average Evening Study Hours			1.619 (1.000, 2.774)			
Average Night Study Hours				1.161 (0.273, 9.269)		
Average Daily Study Sessions					3.535** (1.639, 8.855)	
Average Hours per Session						0.964 (0.676, 1.409)
LSAT Score	1.154 (1.062, 1.273)	1.162 (1.069, 1.282)	1.151 (1.063, 1.261)	1.144 (1.059, 1.252)	1.142 (1.052, 1.257)	1.144 (1.058, 1.252)
Observations	107	107	107	107	107	107
Log Likelihood	-48.755	-47.530	-49.925	-51.827	-45.906	-51.823
Akaike Inf. Crit.	103.510	101.059	105.851	109.654	97.813	109.647

Note: * $p < 0.10$; ** $p < 0.05$.

Table A4: Non-Study Activities and Bar Passage

Dependent Variable

	Bar Passage							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Employment	0.651 (0.394, 1.016)							
Job Search		3.033 (-)						
Commuting			0.771 (0.248, 2.572)					
Personal Care				0.966 (0.637, 1.479)				
Caregiving					1.202 (0.588, 2.985)			
Leisure						0.826 (0.631, 1.078)		
Sleep							0.649 (0.364, 1.114)	
Other								0.533 (0.219, 1.087)
LSAT Score	1.152 (1.063, 1.267)	1.140 (1.054, 1.249)	1.146 (1.060, 1.255)	1.145 (1.059, 1.254)	1.151 (1.061, 1.262)	1.158 (1.069, 1.271)	1.145 (1.058, 1.254)	1.134 (1.049, 1.242)
Observations	107	107	107	107	107	107	107	107
Log Likelihood	-50.053	-51.733	-51.747	-51.830	-51.729	-50.849	-50.621	-50.397
Akaike Inf. Crit.	106.106	109.466	109.493	109.660	109.459	107.697	107.242	106.794

Table A5: Bar Passage and Exam Experiences

Dependent Variable

	Bar Passage					
	(1)	(2)	(3)	(4)	(5)	(6)
Expired Time MBE	0.764 (0.154, 5.649)					
Expired Time Essay		0.677 (0.208, 2.450)				
Expired Time Performance			0.468 (0.145, 1.587)			
Sitting Still				0.285 (0.085, 0.952)		
Distracted					0.590 (0.197, 1.866)	
Felt Ill						0.542 (0.120, 2.937)
LSAT	1.133 (1.048, 1.240)	1.133 (1.048, 1.239)	1.135 (1.049, 1.242)	1.142 (1.054, 1.254)	1.121 (1.034, 1.229)	1.136 (1.050, 1.243)
Observations	105	105	105	105	105	105
Log Likelihood	-49.993	-49.845	-49.268	-47.962	-49.617	-49.754
Akaike Inf. Crit.	105.985	105.690	104.537	101.924	105.235	105.508

Table A5, cont.: Bar Passage and Exam Experiences

Dependent Variable

	Bar Passage				
	(7)	(8)	(9)	(10)	(11)
Unprepared for Topic	2.902* (1.065, 8.082)				
Wrong Materials		0.640 (0.196, 2.283)			
Few Practice Exams			0.168 (0.050, 0.539)		
Felt Nervous				0.964 (0.248, 4.793)	
Uncomfortable Space					1.341 (0.359, 6.581)
LSAT	1.117 (1.033, 1.221)	1.139 (1.051, 1.250)	1.148 (1.057, 1.266)	1.131 (1.047, 1.237)	1.131 (1.046, 1.237)
Observations	105	105	105	105	105
Log Likelihood	-47.871	-49.781	-45.565	-50.037	-49.952
Akaike Inf. Crit.	101.743	105.563	97.130	106.074	105.904

Note: * $p < 0.10$.

Table A6: Exam Experiences Survey Questions

Question	Responded "Yes" (%)
Ran out of time on the MBE	8.6
Ran out of time on the essay	18.1
Ran out of time on the performance test	18.1
Had trouble sitting still for the exam	17.1
Distracted by others in the room	21.0
Felt ill or unwell	11.4
Felt uncomfortable in the physical space	17.1
Felt flustered getting into the exam	12.4
Encountered topics/questions I wasn't prepared for	66.7
Felt like I didn't study the right materials	21.0
Felt like I didn't take enough practice exams	18.1



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