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RESEARCH SPOTLIGHT

In this new column series, Raising the Bar features summaries of important advances in research related to academic and bar success.

Productive Mindset Interventions Mitigate Psychological Friction and Improve Well-Being for Bar Exam Takers

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By participating in a brief productive mindset intervention, prospective lawyers improved their well-being and performance on the California Bar Exam. Those are the initial results of the research conducted by our interdisciplinary, multi-institutional research team with support from AccessLex Institute and in partnership with the State Bar of California. It did so by mitigating psychological friction and helping test takers reframe stressful experiences. This column discusses our findings and the implications for efforts to make evidence-based gains in bar exam performance, well-being, and attorney licensure systems.¹

Psychological Friction Impedes Performance on the Bar Exam

Productive mindsets matter in law school and during bar exam preparation. They are important ingredients for success, alongside a high-quality legal education and adequate financial aid. Worries about ability, potential, belonging, and performance are pervasive and occur for all students during the transition into law school, within law school classes, and while preparing for the bar exam. These worries create psychological friction preventing students from achieving their potential.² They drain students' executive functioning

and cognitive resources, which lowers persistence and performance on standardized exams, among other harms.³

Worries about ability and potential are exacerbated when a person endorses a fixed mindset, which is the belief that intelligence is fixed and that one's potential cannot be changed. Contrast this pessimistic view of the malleability of human characteristics⁴ with the growth mindset belief that intelligence is malleable and that potential can be developed and improved with effort and learning. Fixed mindsets cause people to interpret struggle as a sign that they have reached the limits of their ability. The result is lower motivation to persist when studying and lower performance on high-stakes exams.

Worries about fit and connection with others reflect a concern with social belonging. These worries can interfere with intellectual achievement, self-control, test performance, and well-being.

In stressful situations such as the bar exam, a stress-is-debilitating mindset can cause worries about being stressed that then undermine performance. In contrast, a stress-is-enhancing mindset can improve outcomes, such as learning and growth.⁵ Brief exercises designed to generate such adaptive stress mindsets can improve learning and performance.⁶

Prospective lawyers face considerable psychological friction when preparing for the bar exam, our research shows. These conclusions flowed from a variety of qualitative and quantitative methods, including surveys, randomized-controlled trials, and focus groups. For example, focus groups revealed that people studying for the California bar exam experienced marked stress and anxiety. They worried about failing, having too much to memorize and too little time to do it, lacking focus, and tackling subjects not studied in law school. The demands of studying also strained their relationships, reduced their self-care, and impinged on the work hours they needed to make ends meet. Applicants reported poor sleep, anxiety attacks, consumption of

¹ Joan W. Howarth and Judith Welch Wegner, *Ringling Changes: Systems Thinking About Legal Licensing*, 13 FIA L. REV. 383 (2019); James C. Coyle, *Report of the National Task Force on Lawyer Well-Being and the Role of the Bar Admissions Community in the Lawyer Well-Being Movement*, 87 THE BAR EXAMINER 8 (2018).

² Mary C. Murphy, Claude M. Steele, and James J. Gross, *Signaling Threat: How Situational Cues Affect Women in Math, Science, and Engineering Settings*, 18 PSYCHOLOGICAL SCIENCE. 879 (2007).

³ Gregory M. Walton and Geoffrey L. Cohen, *A Question of Belonging: Race, Social Fit, and Achievement*, 92 J. PERSONALITY & SOCIAL PSYCHOLOGY 82 (2007); Gregory M. Walton and Geoffrey L. Cohen, *A Brief Social-Belonging Intervention Improves Academic and Health Outcomes of Minority Students*, 331 SCIENCE 1447 (2011).

⁴ See, e.g., Carol S. Dweck, *MINDSET: THE NEW PSYCHOLOGY OF SUCCESS* (2006).

⁵ Alia J. Crum, Peter Salovey, and Shawn Achor, *Rethinking Stress: The Role of Mindsets in Determining the Stress Response*, 104 J. PERSONALITY & SOCIAL PSYCHOLOGY 716 (2013)

⁶ See, e.g., Alia J. Crum, et al., *The Role of Stress Mindsets in Shaping Cognitive, Emotional, and Psychological Responses to Challenging and Threatening Stress*, 30 ANXIETY, STRESS & COPING 379 (2017)

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junk food and alcohol, reduced time with loved ones, and lack of exercise. Their interpersonal relationships suffered, which reduced their well-being and made stress and anxiety harder to handle. These and related psychological factors affected performance on California's bar exam. We also found that confidence in one's ability to pass the exam predicted stronger performance, whereas limiting beliefs about one's potential to succeed and the feeling that one does not have what it takes to meet the demands of preparing for the exam predicted weaker performance.

Reducing Psychological Friction and Improving Well-Being Enhances Performance

To improve test takers' experiences and performance, we developed a productive mindset intervention that helps bar exam takers interpret challenges, obstacles, and negative psychological experiences as common, surmountable, and even useful. The program reframes test takers' struggles as learning (not failure), challenges (not threats), and guides to productive (not futile) investments of effort and attention.

The program began in mid-March 2018, by inviting bar exam registrants to opt in. Participants consented to the program and to analysis of their bar exam results. To create a randomized-controlled trial (RCT), enrollees were divided to ensure random dispersal between conditions of student traits such as GPA and demographic details. In May, participants gained access to an online learning program that included an introductory film, audio, written stories from prior test takers, and a module in which participants wrote letters telling future test takers how to use the program's insights and strategies.

Initial Analyses Indicate that the Program Is Effective

The program produced promising initial results. The estimated probability of passing the bar exam in the treatment condition increased by a range between 7.4 percent and 18.2 percent, controlling for LSAT and depending upon the test of efficacy used, compared to the control condition.

The lower end of the efficacy range resulted from our intent-to-treat (ITT) analysis of enrollees in the program. Researchers often consider this type of analysis to be a conservative test, as it includes all who enroll in a program regardless of whether they actually begin or

complete it. Thus, our analysis compared test takers assigned to the treatment or control condition (i.e., those who received the link to begin the online program), regardless of whether they clicked the link to begin. It also included enrollees for whom the program was not specifically tailored: repeat test takers, graduates of foreign law schools, and out-of-state attorneys. As is recommended, we controlled for participants' prior standardized test performance on the LSAT. The resulting estimated probability of passing the bar exam was 7.4 percent higher in the treatment than the control condition.

The upper end of our efficacy range resulted from analyzing the average-treatment effect (ATE) of the productive mindset intervention by recent U.S. law graduates who completed the entire program. Only U.S. law graduates taking the bar exam for the first time were included in the analysis, and only if they completed all video and written modules of the program (watching introductory films, listening to audio clips, reading stories from prior test takers, and writing their own letters to future test takers). We again controlled for LSAT. The estimated probability of passing the bar exam was 18.2 percent higher in the treatment than in the control condition. Specifically, the estimated probability of passing the bar exam in the treatment condition was 68.0 percent, whereas in the control condition, it was 49.8 percent.

This beneficial effect of the program appears to hold across all demographic groups of U.S. law graduates; yet, as the sample size in the average-treatment effect (ATE) analysis was modest, replication is important. As such, we replicated the program with a larger sample on the July 2019 California bar exam and are analyzing second-year results.

Wise Psychological Interventions and Lawyer Well-Being

Consistent with other well-designed psychological interventions, our productive mindset intervention uses a brief, scalable program to enhance performance and well-being. Our initial analyses suggest that enrollees gained confidence handling stress and came to endorse more adaptive mindsets toward mistakes and stress while studying. These benefits suggest that productive mindset interventions can be beneficially combined with current efforts to improve bar exams and attorney licensure systems.

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Making the Program Widely Available

What's next? Given the benefits of this brief online productive mindset intervention, our next step is to continue our successful collaboration with the State Bar of California and to partner with additional state bar associations that wish to make this program available to their own bar exam takers.

**This research program is being conducted in collaboration with: Dr. Mary C. Murphy (co-PI, Indiana University–Bloomington), Dr. Greg Walton (co-PI, Stanford University), Elizabeth Bodamer (Indiana University–Bloomington, American Bar Foundation), Shannon Brady (Wake Forest University), Evelyn Carter (UCLA BruinX), Trisha Dehrone (University of Massachusetts Amherst), Dorainne Levy (Indiana University–Bloomington), Heidi Williams (Indiana University–Bloomington), and Nedim Yel (Indiana University–Bloomington), and supported by funding from AccessLex Institute.*

FEATURED PUBLICATION SUMMARY

Robert R. Kuehn, Professor of Law and Associate Dean for Clinical Education, Washington University in St. Louis–School of Law

The recent declines in bar exam passage rates triggered speculation that the declines are being driven by law students taking more experiential courses and fewer bar-subject matter courses. These concerns arose in the absence of any empirical study linking certain coursework to bar exam failure.

In research funded in part by AccessLex, we undertook a study to address this speculation about the relationship between law school coursework and bar exam outcomes. In an upcoming article in the *Journal of Legal Education*, we report the results of our large-scale study of the courses of over 3,800 graduates from two law schools and the relationship between their experiential and bar-subject coursework and bar exam outcomes over a ten-year period.⁷

At both schools, the number of experiential courses or credits taken by a student did not correlate with bar passage, positively or negatively. Enrollment in bar courses correlated positively with passage, but the correlation was modest and significant only for students whose class rank placed them at heightened risk of bar failure. Even for those students, the marginal benefit of additional bar-related courses was not statistically significant once the student had taken approximately the average number of bar courses at that school. The study results indicate that efforts to improve bar passage rates by capping experiential credits are not supported by empirical evidence and that requiring bar-subject courses for students at comparable law schools would appear justified, if at all, only when targeted at students whose class rank places them at enhanced risk of bar exam failure.

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⁷ Robert R. Kuehn and David R. Moss, [*A Study of the Relationship Between Law School Coursework and Bar Exam Outcomes*](#), 68 J. LEGAL EDUC. (2019, forthcoming).