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CAN MINDFULNESS HELP LAW STUDENTS WITH STRESS, FOCUS, AND WELL-BEING? AN EMPIRICAL STUDY OF 1LS AT A MIDWESTERN LAW SCHOOL

By Richard C. Reuben & Kennon M. Sheldon*

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I. INTRODUCTION

Recent calls for law students, lawyers, judges, and others in the legal profession to try mindfulness training to reduce stress and enhance well-being beg the question of whether mindfulness will “work” for those in the uniquely rigorous environment of law.¹ There is no empirical research on mindfulness effects for lawyers—unlike the medical field, where research has found beneficial effects of mindfulness training for doctors,² nurses,³ and other health care providers.⁴

To fill this gap in the literature, we conducted an empirical study of forty-seven first year, first semester law students at the University of Missouri School of Law during the 2013 and 2014 academic years to see what kind of impact, if any, mindfulness training might have on their stress, focus, well-being, and academic performance. We conducted the training during the eight weeks leading up to first semester exams.

The results were positive and significant: students who chose to take the training had reason to do so because they were psychologically less healthy

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1. See, e.g., Bree Buchanan & James C. Coyle, *The Path to Lawyer Well-Being: Practical Recommendations for Positive Change*, NATIONAL TASK FORCE ON LAWYER WELL BEING (Aug. 2017). The Task Force consisted of representatives of the ABA Commission on Lawyer Assistance Programs; ABA Standing Committee on Professionalism; ABA Center for Professional Responsibility; ABA Young Lawyers Division; ABA Law Practice Division Attorney Well-Being Committee; The National Organization of Bar Counsel; Association of Professional Responsibility Lawyers; National Conference of Chief Justices; and the National Conference of Bar Examiners. See *id.* at 1; see also Ian Ayres et al., *Anxiety Psychoeducation for Law Students: A Pilot Program*, 67 J. LEGAL EDUC. 118, 118 (2017) (suggesting more research on mindfulness effects for law students).

2. Shauna L. Shapiro et al., *Effects of Mindfulness-Based Stress Reduction on Medical and Premedical Students*, 21 J. BEHAV. MED. 581-99 (1998).

3. Sharon Praissman, *Mindfulness-Based Stress Reduction: A Literature Review and Clinician’s Guide*, 20 J. AM. ACAD. NURSE PRAC. 212-215 (2008).

4. Matthew J. Goodman & John B. Schorling, *A Mindfulness Course Decreases Burnout and Improves Well-Being Among Healthcare Providers*, 43 INT’L. J. PSYCHIATRY MED. 119, 120-25 (2012).

at the beginning of the training in September than those who did not choose to take the training. As a result, their scores improved radically since they were less stressed, more focused, and happier heading into exams than when they started the training in the middle of the first semester.⁵ Moreover, when compared to the control group, their scores improved during the training while the control group's did not. There were no empirical findings on academic performance because of the lack of statistical power.

While it is only one study of law students at one law school, and subject to meaningful limitations, the results provide significant preliminary support for recommendations by the National Task Force on Lawyer Well-Being (hereinafter "National Task Force") and others that mindfulness training may help improve the well-being of law students, lawyers, judges, and others in the legal profession.

This Article reports on the Missouri 1L mindfulness study. In Part II, we provide an overview of the empirical research on law student/lawyer misery and happiness, as well as the suggested benefits of mindfulness meditation. In Part III, we describe the study, its methodology, and its results on four major variables: stress, focus, well-being, and academic performance. In Part IV, we discuss those findings and their implications for mindfulness training as a vehicle for improving the well-being of law students, lawyers, and others in the profession. In Part V, we discuss the limitations of the research and identify questions for further research.

II. THE LAW SCHOOL EXPERIENCE: A TOUGH ROAD FOR MANY

A. *Dissatisfaction from the Start*

A recent national survey of more than four thousand law students recently underscored the traumatic nature of the law school experience for many students, especially when compared to the rest of the population. The 2016 study found that 17% of respondents screened positive for depression, and 37% screened positive for anxiety, as compared to 6.7% reporting at least one major depression, and a 3.1% General Anxiety rating in the U.S.⁶ The numbers were also disturbing for the practicing bar, where up to 20.6%

5. See *infra* Part IV.

6. Jerome M. Organ, David B. Jaffe & Katherine M. Bender, *Suffering in Silence: The Survey of Law Student Well-Being and the Reluctance of Law Students to Seek Help for Substance Use and Mental Health Concerns*, 66 J. LEGAL EDUC. 1, 116–56, 136, 137 (2016); *Facts and Statistics*, ANXIETY & DEPRESSION ASSOC. AM., <https://adaa.org/about-adaa/press-room/facts-statistics> (last visited May 23, 2019).

qualified as problem drinkers,⁷ and 45.7% reported struggling with depression.⁸

This research confirms similar findings dating back to the 1980s, where researchers have consistently found that law students experience considerable stress and distress during law school,⁹ more so than students in many other disciplines as well as the general population.¹⁰ It is also clear that stress and its debilitating effects, such as anxiety, depression, hostility, and paranoia¹¹ –begin with the start of law school in the first year, continue throughout law school, and carry into their professional careers.¹²

The research has also identified specific law school practices that contribute to this phenomenon, including excessive workloads, deadlines, and competition for academic superiority,¹³ institutional emphasis on comparative grading, status-seeking placement practices and other hierarchical markers of worth,¹⁴ excessive faculty emphasis on analysis and linear thinking, causing loss of connection with feelings, personal morals,

7. Patrick R. Krill, Ryan Johnson & Linda Albert, *The Prevalence of Substance Abuse and Other Mental Health Concerns Among American Attorneys*, 10 J. ADDICT. MED. 46, 48, 52 (2016) (hereinafter “the 2016 study”); *Major Depression*, NAT’L INST. MENTAL HEALTH (<https://www.nimh.nih.gov/health/statistics/major-depression.shtml>) (last visited Feb. 21, 2018).

8. Krill, Johnson, & Albert, *supra* note 7, at 50.

9. See, e.g., G. Andrew H. Benjamin et al., *The Role of Legal Education in Producing Psychological Distress Among Law Students and Lawyers*, 2 AM. B. FOUND. RES. J. 225, 226 (1986); Matthew Dammeyer & Narina Nunez, *Anxiety and Depression Among Law Students: Current Knowledge and Future Directions*, 23 LAW HUM. BEHAV. 55, 60-61 (1999); Gerald F. Hess, *Heads and Hearts: The Teaching and Learning Environment in Law School*, 52 J. LEGAL EDUC. 75, 75-76 (2002); see generally, Jerome M. Organ, *What Do We Know About the Satisfaction/Dissatisfaction of Lawyers? A Meta-Analysis of Research on Lawyer Satisfaction and Well-Being*, 8 U. ST. THOMAS L.J. 225, 245, 247 (2011).

10. Benjamin et al., *supra* note 9; Kennon M. Sheldon & Lawrence S. Krieger, *Does Legal Education Have Undermining Effects on Law Students? Evaluating Changes in Motivation, Values, and Well-Being*, 22 BEHAV. SCI. & L. 261, 262 (2004).

11. Benjamin et al., *supra* note 9; Dammeyer & Nunez, *supra* note 9; Stephen B. Shanfield & G. Andrew H. Benjamin, *Psychiatric Distress in Law Students*, 35 J. LEG. EDUC. 65, 67 (1985); Sheldon & Krieger, *supra* note 10.

12. Connie J.A. Beck, Benjamin et al., *supra* note 9; Bruce D. Sales & G. Andrew H. Benjamin, *Lawyer Distress: Alcohol-related Problems and Other Psychological Concerns Among a Sample of Practicing Lawyers*, 10 J. L. & HEALTH 1, 18, 44-45 (1995).

13. David R. Culp, *Law School: A Mortuary for Poets and Moral Reason*, 16 CAMPBELL L. REV. 61 (1994); Barbara G. Fines, *Competition and the Curve*, 65 UMKC L. REV. 879, 902 (1997); B. A. Glesner, *Fear and Loathing in the Law Schools*, 23 CONN. L. REV. 627, 629-30, 634-35 (1991); Hess, *supra* note 9, at 75-76, 78; Lawrence S. Krieger, *What We’re Not Telling Law Students – and Lawyers – That They Really Need to Know: Some Thoughts-in-Action Toward Revitalizing the Profession from Its Roots*, 13 J. L. & HEALTH 1, 3-4, 27 (1998).

14. ROBERT GRANFIELD, MAKING ELITE LAWYERS 40-41 (1992); Susan Daicoff, *Lawyer, Know Thyself: A Review of Empirical Research on Attorney Attributes Bearing on Professionalism*, 46 AM U. L. REV. 1337, 1375, 1380, 1389 (1997); Fines, *supra* note 13, at 896; Krieger, *supra* note 13, at 27.

values, and sense of self,¹⁵ teaching practices that are isolating or intimidating, and content that is excessively abstract or unrelated to the actual practice of law,¹⁶ and conceptions of law that suppress moral reasoning and creativity.¹⁷

The research further suggests that the first year of law school is as important to the student's ability to cope effectively with stress and psychological demands of the field as it is for the student's mastery of case analysis and learning how to think like a lawyer. In studying what they described as a "typical" American law school, Sheldon and Krieger, for example, found that a majority of the negative changes occurred in the first year, with much smaller (but still significant) negative changes occurring in the second and third years.¹⁸ In other words, for affected students, first-year stress begins a downward spiral that continues throughout law school and into the students' ensuing professional careers. This finding is significant because it suggests precisely where to focus an intervention: in the first year, and as soon as possible.

B. *Mindfulness as an Intervention*

The National Task Force's recommendation that law students and others in the legal profession try mindfulness seemed to be only a matter of time. Outside of law schools, mindfulness meditation has joined yoga and other contemplative practices in moving from the fringes to the mainstream.¹⁹ The

15. GRANFIELD, *supra* note 14, at 40-41; BENJAMIN SELLS, *THE SOUL OF THE LAW* 162-63 (1994); Daniel R. Coquillette, *Professionalism: The Deep Theory*, 72 N.C. L. REV. 1271, 1272-1273 (1994); Culp, *supra* note 13, at 63, 77-78; Hess, *supra* note 9, at 78-79; Krieger, *supra* note 13, at 9; Michael Meltsner, *Feeling Like a Lawyer*, 33 J. LEG. EDUC. 624, 628 (1983); John Mixon & Robert P. Schuwerk, *The Personal Dimension of Professional Responsibility*, 58 L. & CONTEMP. PROBS. 87, 95 (1995).

16. GRANFIELD, *supra* note 14, at 40-41; ANTHONY KRONMAN, *THE LOST LAWYER: FAILING IDEALS OF THE LEGAL PROFESSION* (1993); SELLS, *supra* note 15, at 21-23, 157-58; Glesner, *supra* note 13, at 649-50; Cathaleen A. Roach, *A River Runs Through It: Tapping into the Informational Stream to Move Students from Isolation to Autonomy*, 36 ARIZ. L. REV. 667, 671-72 (1994).

17. ROBERT V. STOVER & HOWARD S. ERLANGER, *MAKING IT AND BREAKING IT: THE FATE OF PUBLIC INTEREST COMMITMENT DURING LAW SCHOOL* 44-70 (1989); Culp, *supra* note 13, at 66-67, 90-91; Hess, *supra* note 9, at 78-79; Sandra Janoff, *The Influence of Legal Education on Moral Reasoning*, 76 MINN. L. REV. 193, 204-205 (1991).

18. Lawrence S. Krieger, *The Inseparability of Professionalism and Personal Satisfaction: Perspectives on Values, Integrity and Happiness*, 11 CLINICAL L. REV. 425, 433 (2005); Sheldon & Krieger, *supra* note 10, at 261-63, 280.

19. Once scant, the number of popular media stories and other accounts of mindfulness is by now far too vast to count. *See, e.g.*, Drake Baer, *How Mindfulness Went from Fringe to Mainstream*, THRIVE GLOBAL (Oct. 10, 2017), <https://www.thriveglobal.com/stories/14818-how-mindfulness-became-mainstream> (last visited Feb. 21, 2018); *Mindfulness Goes Mainstream*, PUBLIC BROADCASTING SYSTEM (Aug. 4, 2017), <http://www.pbs.org/video/mindfulness-goes-mainstream->

media is increasingly saturated with stories about the benefits of mindfulness meditation, and how it is being practiced in businesses from Ford²⁰ to Google,²¹ in medicine to help cancer patients²² as well as mental health care,²³ and even in government, from the military²⁴ to the halls of Congress.²⁵

Mindfulness is a form of meditation that is drawn from ancient Buddhist practices,²⁶ but has been modernized for contemporary times and western culture, in part by removing it from its historical religious and spiritual framework. In Buddhism, practitioners cultivate mindful awareness of what is going on in their minds at the present moment to help them understand and apply Buddhist wisdom, such as the teaching at the heart of the tradition called The Four Noble Truths,²⁷ to achieve enlightenment, defined in terms of freedom from suffering.²⁸ But contemporary secular usage strips away the

jjfwvu/ (last visited Feb. 21, 2018); Ashley Ross, *How Meditation Went Mainstream*, TIME (Mar. 9, 2016), <http://time.com/4246928/meditation-history-buddhism/>. But see Mary Sykes Wylie, *How the Mindfulness Movement Went Mainstream – And the Backlash That Came with It*, ALTERNET (Jan. 29, 2015), <https://www.alternet.org/personal-health/how-mindfulness-movement-went-mainstream-and-backlash-came-it> (last visited Feb. 21, 2018).

20. Tony Schwartz, *How to Be Mindful in an 'Unmanageable' World*, HARV. BUS. REV. (Feb. 27, 2013), <https://hbr.org/2013/02/how-to-be-mindful-in-an-unmana>.

21. CHADE MENG-TAN, *SEARCH INSIDE YOURSELF: THE UNEXPECTED PATH TO ACHIEVING SUCCESS, HAPPINESS (AND WORLD PEACE)* xi-xvi, 1-8 (2012).

22. See, e.g., ELANA ROSENBAUM, *BEING WELL (EVEN WHEN YOU ARE SICK): MINDFULNESS PRACTICES FOR PEOPLE WITH CANCER AND OTHER SERIOUS ILLNESSES* 1-2 (2012); Dianne Ledesma & Hiroaki Kumano, *Mindfulness Based Stress Reduction and Cancer: A Meta-Analysis*, 18 *PSYCHOONCOLOGY* 571, 576 (2009); Cecile A. Lengacher et al., *Examination of Broad Symptom Improvement Resulting From Mindfulness Based Stress Reduction in Breast Cancer Survivors: A Randomized Controlled Trial*, 34 *J. CLIN. ONC.* 2827, 2828, 2830 (Aug. 20, 2016).

23. See, e.g., ZINDEL V. SEGAL ET AL., *MINDFULNESS-BASED COGNITIVE THERAPY FOR DEPRESSION: A NEW APPROACH TO PREVENTING RELAPSE* 3-7 (2002); Stefan G. Hofmann et al., *The Effects of Mindfulness Based Therapy on Anxiety and Depression: A Meta-Analytic Review*, 78 *J. CONSULT. CLIN. PSYCHOL.* 169, 179 (2010).

24. See, e.g., Amishi Jha et al., *Examining the Protective Effects of Mindfulness Training on Working Memory Capacity and Affective Experience*, 10 *EMOTION* 54, 55 (2010); Douglas C. Johnson et al., *Modifying Resilience Mechanisms in At-risk Individuals: A Controlled Study of Mindfulness Training in Marines Preparing for Deployment*, 171 *AM. J. PSYCHIATRY* 844, 845 (2014); Elizabeth A. Stanley et al., *Mindfulness-Based Mind Fitness Training: A Case Study of a High-Stress Predeployment Military Cohort*, 18 *COGN. BEHAV. PRACT.* 566, 567 (2011).

25. See, e.g., Lauren Effron, *Rep. Tim Ryan Says Meditation Not Only Reduces His Stress, It May Help Him Work Better with Trump, Republicans*, ABC NEWS (July 5, 2017), <http://abcnews.go.com/Politics/rep-tim-ryan-meditation-reduces-stress-work-trump/story?id=48378736>.

26. For a comprehensive discussion, see HENEPOLA GUNARATANA, *MINDFULNESS IN PLAIN ENGLISH* (2011).

27. For a discussion, see JOSEPH GOLDSTEIN, *INSIGHT MEDITATION: THE PRACTICE OF FREEDOM* 11-16 (1993) (stating that the Four Noble Truths are that there is suffering, a reason for suffering, an end to suffering, and an eight-fold path to that end).

28. For an extensive treatment, see AJAHN PASANNO & AJAHN AMARO, *THE ISLAND: AN ANTHOLOGY OF THE BUDDHA'S TEACHINGS ON NIBBANA* 97-98 (2009).

Buddhist teachings and emphasis on enlightenment as a goal in favor of simple intentional, non-judgmental present-moment awareness.

Its primary progenitor was a University of Massachusetts medical professor, Jon Kabat-Zinn, who pioneered what he called Mindfulness Based Stress Reduction, or MBSR.²⁹ In this approach, mindfulness is defined as “moment-to-moment non-judgmental awareness.”³⁰ Rather than attempting to induce spiritual awakening, mindfulness meditation simply prompts practitioners to notice what is happening, without trying to interpret or do anything about it.³¹ Practitioners use the breath as an object of concentration, and are instructed to simply observe the breath, inbreath and outbreath, until the mind wanders away with some thought or emotion.³² When that happens, they are instructed to simply notice that they are distracted, to let go of whatever thought or emotion distracted them, and to bring their attention back to their observation of the breath. This process is repeated over and over again throughout a meditation practice period.³³

From a research perspective, MBSR has been studied extensively and has developed an overwhelming record of success in helping people of many different types to cope with stress and adversity.³⁴ Focusing just on the past decade, MBSR has shown calming effects on cancer patients and their partners,³⁵ healthcare providers,³⁶ working adults,³⁷ primary school

29. JEFF WILSON, *MINDFUL AMERICA: THE MUTUAL TRANSFORMATION OF BUDDHIST MEDITATION AND AMERICAN CULTURE* 35 (2014).

30. Jon Kabatt-Zinn, *Mindfulness-Based Interventions in Context: Past, Present, and Future*, 10 *CLIN. PSYCHOL. SCI & PRAC.* 144, 145-46 (2003) (“An operational working definition of mindfulness is: the awareness that emerges from paying attention, on purpose, in the present moment, and non-judgmentally to the unfolding of experience moment by moment.”).

31. *Id.*

32. DEBORAH SCHOEBERLEIN ET AL., *MINDFUL TEACHING AND TEACHING MINDFULNESS: A GUIDE FOR ANYONE WHO TEACHES ANYTHING* 13-16 (2009).

33. *Id.*

34. For a definitive account of the research up to 2005, see *Mindfulness Based Stress Reduction Research Summary*, PALOUSEMINDFULNESS (2005), https://palousemindfulness.com/docs/research_summary.pdf (last visited Nov. 8, 2017). For ongoing research, see *University of Massachusetts Medical School Center for Mindfulness in Medicine, Health Care, and Society’s “MBSR Research”*, CTR. FOR MINDFULNESS, <http://www.umassmed.edu/cfm/research/mbsr-research/> (last visited Nov. 8, 2017).

35. Kathryn Birnie et al., *Exploring Self-Compassion and Empathy in the Context of Mindfulness-Based Stress Reduction (MBSR)*, 26 *STRESS & HEALTH* 359 (2010).

36. Andres Martin-Asuero & Gloria Garcia-Banda, *The Mindfulness-Based Stress Reduction Program (MBSR) Reduces Stress-Related Psychological Distress in Healthcare Professionals*, 13 *SPAN. J. PSYCHOL.* 897, 899-900 (2010).

37. Maryanna D. Klatt et al., *Effects of Low-Dose Mindfulness-Based Stress Reduction (MBSR-Id) on Working Adults*, 36 *HEALTH EDUC. & BEHAV.* 601, 603, 607 (2009).

teachers,³⁸ breast cancer survivors,³⁹ aging adults,⁴⁰ parents of children with chronic conditions,⁴¹ sufferers of generalized anxiety disorder,⁴² and even child abuse survivors.⁴³

Most of these studies have been set in the medical context, which is not surprising because Kabat-Zinn designed it initially as a therapy for chronic pain management.⁴⁴ However there have been other studies, including of students indicating that mindfulness training could be helpful in terms of stress and satisfaction. The studies finding such benefits in mindfulness training for medical students are particularly significant for our purposes because medical students, like law students, evidence mental health decline during the first year.⁴⁵ But it is also noteworthy that MBSR training has been found to produce positive effects for students regardless of the level of

38. E. Gold et. al., *Mindfulness-Based Stress Reduction (MBSR) for Primary Schoolteachers*, 19 J. CHILD & FAM. STUD. 184, 185, 187 (2010).

39. Cecile A. Lengacher et. al., *Randomized Control for Mindfulness Based Stress Reduction (MBSR) for Survivors of Breast Cancer*, 18 PSYCHOONCOLOGY 1261, 1266-67 (2009).

40. Laura A. Young & Michael J. Baime, *Mindfulness-Based Stress Reduction: Effect on Emotional Distress in Older Adult*, 15 COMPLEMENTARY HEALTH. PRAC. REV. 59, 62 (2010).

41. Holly G. Minor et. al., *Evaluation of a Mindfulness-Based Stress Reduction (MBSR) Program for Caregivers of Children with Chronic Conditions*, 42 SOC. WORK HEALTH CARE 91, 95, 103-105 (2006).

42. Lobsang Rapgay et al., *New Strategies for Combining Mindfulness with Integrative Cognitive Behavioral Therapy for the Treatment of Generalized Anxiety Disorder*, 29 J. RAT. EMO. & COG. BEHAV. THER. 92, 101, 116 (2011).

43. Elizabeth Kimbrough et. al., *Mindfulness Intervention for Child Abuse Survivors*, 66 J. CLIN. PSYCHOL. 17 (2010).

44. Kabat-Zinn's early research bears this focus. See Jon Kabat-Zinn, *An Outpatient Program in Behavioral Medicine for Chronic Pain Patients Based on the Practice of Mindfulness Meditation: Theoretical Considerations and Preliminary Results*, 4 GEN. HOSP. PSYCHIATRY. 33, 35 (1982); see also CTR. FOR MINDFULNESS, *supra* note 34 ("Since its inception, more than 24,000 people have completed our Mindfulness-Based Stress Reduction (MBSR) Program and learned how to use their innate resources and abilities to respond more effectively to stress, pain, and illness.").

45. Craig Hassed et al., *Enhancing the Health of Medical Students: Outcomes of an Integrated Mindfulness and Lifestyle Program*, 14 ADV. HEALTH SCI. EDUC. THEORY & PRAC. 387, 388, 394-95 (2008); Steven Rosenzweig et al., *Mindfulness-Based Stress Reduction Lowers Psychological Distress in Medical Students*. 15 TEACH LEARN MED. 88 (2003).

education, including elementary,⁴⁶ middle school,⁴⁷ high school,⁴⁸ college,⁴⁹ graduate,⁵⁰ nursing,⁵¹ medical,⁵² and continuing education.⁵³

III. THE MISSOURI FIRST-YEAR MINDFULNESS STUDY

A. Methodology

In 2012, the co-authors received a grant from the Missouri Research Board to develop and implement what would be the first study to see if mindfulness training had any effects for law students. The study would last for two years and attempt to get a sample size of fifty, which we expected would provide enough statistical power to detect differences on the key variables we would analyze: stress, satisfaction, mindfulness, and academic performance.⁵⁴ The study was conducted at the University of Missouri School of Law during the 2013 and 2014 academic years. In 2013, the law school had 118 first-year students.⁵⁵ In 2014, it had 115.⁵⁶

46. Lisa Flook et al., *Effects of Mindful Awareness Practices on Executive Functions in Elementary School Children*, 26 J. APPL. PSYCHOL. 70, 79-80 (2010); Maria Napoli et al., *Mindfulness Training for Elementary School Students: The Attention Academy*, 21(1) J. APP. SCHOOL PSYCHOL. 99, 107, 111 (2005).

47. Kimberly A. Schonert-Reichl & Molly Stewart Lawlor, *The Effects of a Mindfulness-Based Program on Pre- and Early-Adolescents' Well-Being and Social and Emotional Competence*, 1 MINDFULNESS 137 (2010); Robert B. Wall, *Tai Chi and Mindfulness-Based Stress Reduction in a Boston Public Middle School*, 19(4) J. PEDIATR. HEALTH CARE 230, 231 (2005).

48. Herbert Benson et al., *Increases in Positive Psychological Characteristics with a New Relaxation Response Curriculum in High School Students*, 27(4) J. RES. & DEV. EDUC. 226, 227, 229 (1994).

49. Shamini Jain et al., *A Randomized Controlled Trial of Mindfulness Meditation Versus Relaxation Training: Effects on Distress, Positive States of Mind, Rumination, and Distraction*, 33 ANN. BEHAV. MED. 11, 12, 18 (2007).

50. Shauna L. Shapiro, Kirk Warren Brown & Gina M. Biegel, *Teaching Self-Care to Caregivers: Effects of Mindfulness Based Stress Reduction on the Mental Health of Therapists in Training*, 1 TRAIN. & EDUC. PROF. PSYCHOL. 105, 111 (2007).

51. S.K. Kang, S.Y. Choi, & E Ryu, *The Effectiveness of a Stress Coping Program Based on Mindfulness Meditation on the Stress, Anxiety, and Depression Experienced by Nursing Students in Korea*, 29 NURSE EDUC. TODAY 538 (2009).

52. Hassed et al., *supra* note 45, at 388, 394-95.

53. Vickie Y. Chang et al., *The Effects of a Mindfulness Based Stress Reduction Program on Stress, Mindfulness Self-Efficacy, and Positive States of Mind*, 20 STRESS HEALTH 141, 142, 144 (2004).

54. University of Missouri Research Board Grant (copy on file with author).

55. *University of Missouri – 2013 Standard 509 Information Report*, U. MO. (2013), <http://law.missouri.edu/prospective/files/2016/12/Std509InfoReport-2013.pdf>.

56. *University of Missouri – 2014 Standard 509 Information Report*, U. MO. (2014), <http://law.missouri.edu/prospective/files/2016/12/Std509InfoReport-2014.pdf>.

Because other studies consistently show that mindfulness training reduces stress, improves mindful awareness, and enhances well-being, we hypothesized that participating first-year law students would also see reductions in stress, improved well-being, and enhanced awareness.⁵⁷ We also theorized that these quality-of-life factors, when combined with the distraction management skills that mindfulness cultivates, would help students perform better on their academic tests. While stress and well-being are common variables in prior student mindfulness studies, academic performance was a new variable in this study.⁵⁸

The development of the study proceeded according to two stages: the design of the mindfulness training, and its implementation over two years.

1. Design of Mindfulness Training

The first challenge was to settle upon the design of the mindfulness training that would be used in the study. While the Principal Investigators wanted to fit the research into the well-studied MBSR tradition, they also knew that MBSR was designed for the medical context, and that there were several elements of the traditional MBSR program that would not be suitable for law students, such as the requirement of practicing mindfulness for forty-five minutes a day during a fourteen-week training. Accordingly, we assembled a team of experts from diverse backgrounds whose primary task was to develop an adaptation of MBSR that would be suitable for the legal context in general, and law students in particular. This team of national experts included experienced MBSR researchers, psychologists, anthropologists, law deans, law professors, and law students.⁵⁹

The team met for a day-long retreat and settled on a model of mindfulness training for first-year law students that would include instruction in basic mindfulness meditation as defined by Kabat-Zinn, an eight-week training period (for consistency with many other studies), a weekly one-hour class in which participants would receive instruction in other applications of mindfulness (concentration, choice less awareness, walking, exercise (yoga), eating, studying and exam-taking), as well as a relatively short daily sitting requirement (fifteen minutes/seven days a week during the study). Notably, the team rejected incorporating other forms of meditation sometimes associated with mindfulness, such as compassion and lovingkindness practices, in order to maintain the scientific integrity of the study's focus on basic mindfulness as an intervention.

57. See *supra* note 34-43.

58. See *supra* notes 45-53 and accompanying text.

59. See author remarks *supra*.

2. Design

The design was a pre/post assessment focusing on the first semester of the 2013 and 2014 academic years. The test group consisted of first year law students who took an eight-week training in the eight weeks leading up to final examinations and took a self-reported survey at the beginning and end of the training to assess their stress, well-being, and mindfulness. The control group consisted of students who took the same surveys along with the test group in the fall of those semesters, but did not take the training until spring semester.⁶⁰

a. Recruiting

We offered the opportunity to participate on a voluntary opt-in basis to all first-year students. We offered participants two incentives to participate, in addition to the potential benefit of the training. First, by an agreement with the law school administration, participation in the study would satisfy many units of “perspective” credit that all students are required to complete every year. Second, students who completed the training also received a \$500 discount on a Barbri bar preparation course when they graduated if they completed the eight-week training.

The three-week enrollment period was during Weeks four to six of the semester, and the study began in Week seven, so that the training would be during the eight weeks leading up to final exams, the most stressful part of the first year for most students. We previewed the study in a twenty-minute session during orientation and held six lunch presentations in the three weeks preceding the start of the study, offering free pizza to students who attended. Students enrolled by completing the informed consent document, and then taking the survey the first time.

b. Measurement Instruments

We used standard self-reporting surveys to study four primary variables: stress, well-being, mindful awareness, and academic performance.

We measured stress, well-being, and mindful awareness by using a ten to fifteen-minute self-administered survey conducted on Qualtrics that participants took before and after the eight-week training. For stress, we used the Perceived Stress Scale.⁶¹ For well-being, we used the Positive

60. The spring semester scores of the control group were not factored into our analysis.

61. David Watson, Lee Anna Clark & Auke Tellegen, *Development and Validation of Brief Measures of Positive and Negative Affect: The PANAS Scales*, 54 J. PERS. & SOC. PSYCHOL. 1063 (1988). Well-being was a combination of PA + Lifesat – NA. The PANAS was part of the WB assessment, but the SHS was not. To assess stress, we used the “Perceived stress scale.” Sheldon

Affect/Negative Affect Schedule and the Satisfaction with Life Scale.⁶² As in much well-being research, well-being was operationalized as positive affect plus life-satisfaction minus negative affect.⁶³ For mindfulness, we used the “Five Factor Mindfulness Scale,” which we aggregated across the five subscales.⁶⁴

We used two measures for academic performance. We looked at the participants’ semester and cumulative first-year grades to see how they performed relative to their colleagues who did not participate, using the first-year curve of eighty-seven as a proxy for the non-participating students. We also compared their actual grades to their Index Scores, which are their predicted grades based on how the law school chose to weight their grade point averages and LSAT scores when considering their admission. The Index Score is designed and administered by the Law School Admissions Council and has been repeatedly verified and validated.

Finally, we conducted a follow-up survey with participating students in their third year, shortly before graduation. The purpose of the follow-up survey was to assess whether the participants felt that the study had any long-term effects during law school. This short survey included questions about whether the students continued to practice mindfulness after the training ended, why they stopped if they no longer practiced, whether they felt their mindfulness training had any continuing benefits during their second year (and if so, what they were), and whether they believed law schools should offer mindfulness training to their students.

c. Compliance

Participating students attended most if not all training sessions, and reported sitting regularly between sessions, a finding discussed more fully below.⁶⁵ However, they were far less compliant when it came to taking the surveys. All participants took the survey the first time, as it was administered at the same time they consented to participate in the program. After that, however, compliance was scattered, with some not doing the post survey, T2, at all. We did not explore the reasons for non-compliance, but it is reasonable to assume that perceived time pressures at the end of the semesters, either before or during exams, may have been a meaningful contributing factor.

Cohen, Tom Kamarck & Robin Mermerstein, *A Global Measure of Perceived Stress*, 24 J. HEALTH & SOC. BEHAV. 385, 386 (1983).

62. Watson, Clark & Tellegen, *supra* note 61, at 1063.

63. *Id.*

64. Ruth A. Baer et al., *Using Self-Reporting Assessment Methods to Explore Facets of Mindfulness*, 13 ASSESSMENT 27, 30 (2006).

65. *See infra* Part IV.

B. Results

The study found that mindfulness training had statistically significant beneficial effects for participants in terms of stress, well-being, and mindful awareness. There were no statistically significant results as to academic performance.

More specifically, we conducted three mixed two (Class taken: No or Yes) by two (Time of Assessment: September or December) MANOVAs, with repeated measures on the second factor. One analysis focused on changes in stress, one on changes in well-being, and one on changes in measured (Baer) mindfulness. We hypothesized that we would find significant interactions between the two factors, such that the test group, which received the fall semester training, showed greater positive changes during the semester than control group, which took the training in the spring. That is indeed what was found (for stress, the interaction effect was $F(1,46) = 3.23, p = .079$; for well-being, the interaction effect was $F(1,46) = 6.96, p = .011$; for mindfulness, the interaction effect was $F(1,46) = 3.32, p = .075$. The three interactions are graphed below.

As can be seen in the following graphs, the test group appeared to be more stressed, less focused, and unhappier than the control group at Time 1. To test this, we conducted t-tests just on the three September variables. Only one difference was significant, that for well-being ($t(46) = 2.30, p = .025$). This suggests a self-selection effect in which initially unhappy students elected to take the training, and thereby managed to catch up with the students who did not take it. That is, the training for them was remedial. This suggests that an “opt-in” model, in which students can choose to take the class, but are not required to take it, may be an appropriate way to introduce mindfulness to law students. The graphs also illustrate that the test group also got greater benefits in terms of stress reduction and increased mindful awareness when compared to the control group. However, the latter two effects were not remedial in nature because there were no Time 1 differences between the two groups in these two variables.

We also conducted a simple t-test to determine whether the test group achieved a higher first semester GPA than the control group, although the N was smaller because of missing GPA data. This analysis revealed no difference in the earned fall GPA of the two groups ($M_s = 85.5$ for control group, and 83.6 for test group; $t(35) = 1.24, ns$). There also no significant group differences on Index scores, which take into account predicted performance based on past academic performance. Thus, the positive changes in well-being, stress, and mindfulness observed for test group did not necessarily help them perform better academically, but they also apparently did not start out “behind” in performance or achievement.

Figure 1

Changes in Stress as a Function of Participating in the Mindfulness Study Class

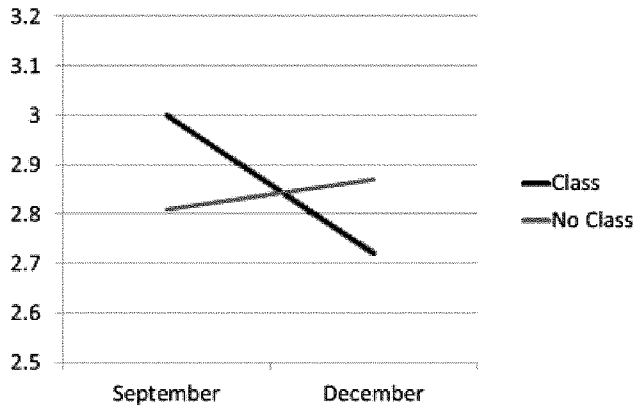


Figure 2

Changes in Well-Being as a Function of Taking a Mindfulness Class

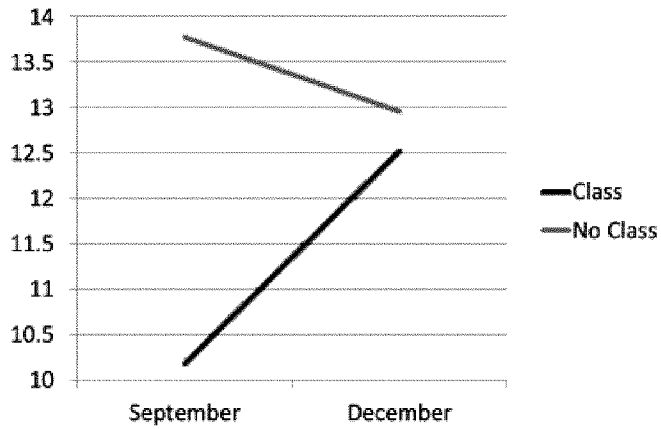
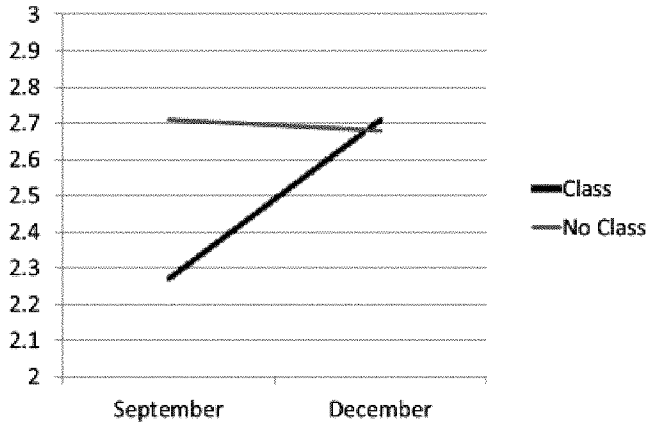
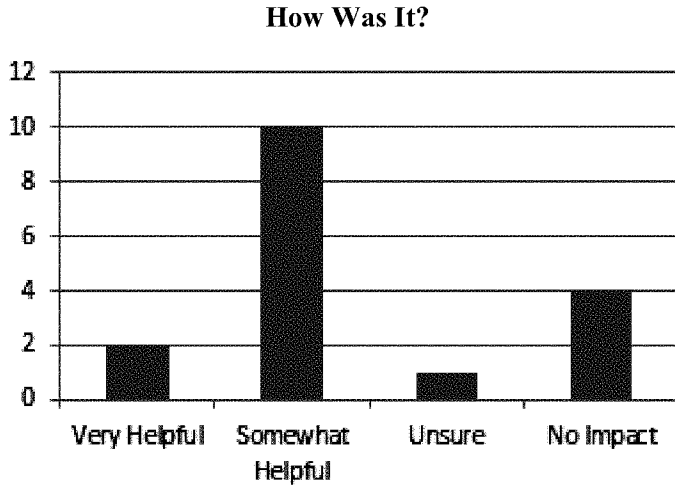


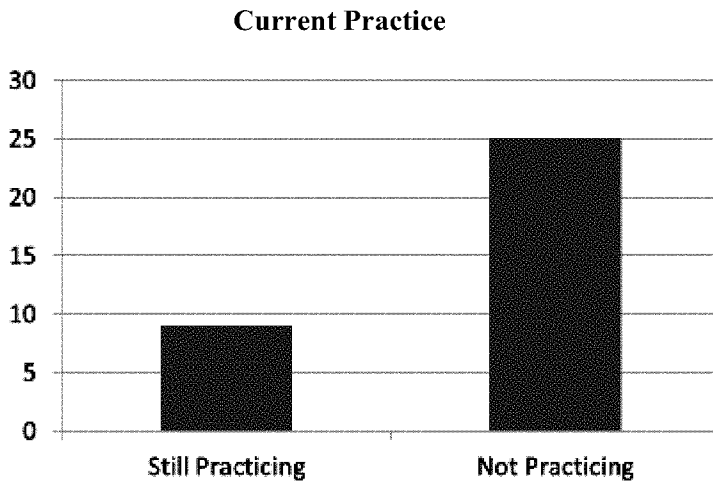
Figure 3**Changes in Measured Mindfulness as a Function of Taking a Mindfulness Class***C. The Follow-Up Survey*

Shortly before they graduated, we surveyed the students who participated in the study in their first year to find out what impact, if any, they felt their participation in the study had over time. This survey drew twenty-five responses, just over half of the original forty-eight participants.

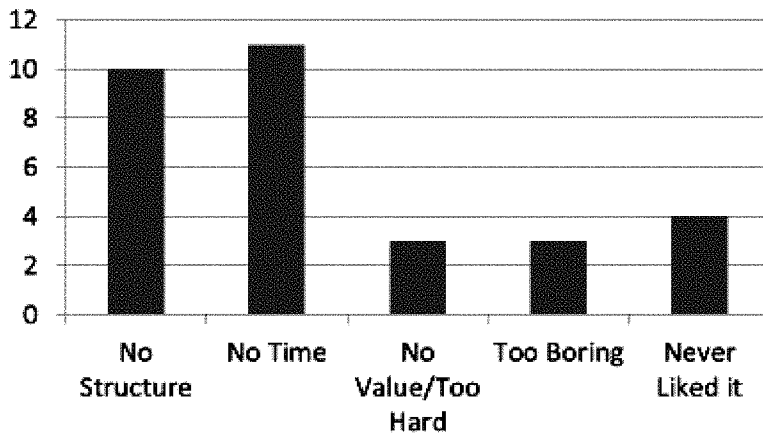
The first question we asked was: “Looking back, how would you rate the impact, if any, of your first-year mindfulness training on your law school experience?” Respondents said it was at least somewhat helpful by an overwhelming margin.

Figure 4

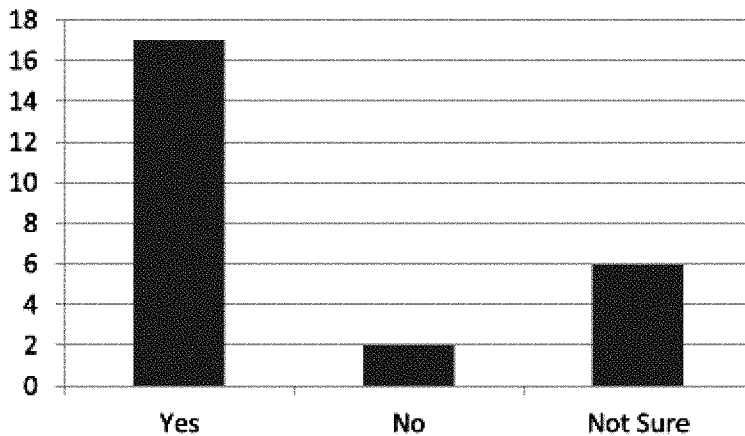
We also asked: “Do you still practice mindfulness meditation?” Some did, but most did not.

Figure 5

Third, we asked: “If you no longer meditate, why did you stop?” Students could select more than one reason. While some participants appear not to have an interest in continuing, many more indicated the loss of the structure provided by the study made it more difficult to keep meditating.

Figure 6**If You Stopped, Why Did You Stop?**

Finally, we asked: “Do you think law schools should offer voluntary meditation training to all first-year law students?” Overwhelmingly again, subjects agreed it was a worthwhile service for law schools to offer interested students.

Figure 7**Should Schools Offer Voluntary Training?**

IV. DISCUSSION

The results suggest four basic themes: 1) if you build it, they will come; 2) if they come, the mindfulness training can help prevent negative effects in the first semester; 3) if they come, they will probably like it, but 4) impact on academic performance remains uncertain. We discuss each of these in turn.

A. If You Build It, They Will Come

The data indicate that the students in the test group – who took the mindfulness training in the first semester of the first year – were worse off in terms of stress, distraction, and dissatisfaction than the control group when both took the first survey when they enrolled in the study midway through the fall semester of the first year. However, at the end of the study, their scores on these scales had largely caught up with the control group.

One way to interpret the data is to suggest that participating students knew they needed help with stress, took advantage of the opportunity presented, and were helped by the intervention. This view is consistent with self-determination theory in that these law students were able to draw upon their own preferences to address a problem they perceived to be having in law school.⁶⁶ That is to say, the students in the test group knew they were struggling and viewed the study as a constructive approach for dealing with it. The opportunity was available to them, they took advantage of it, and as a group benefited from it.

B. Mindfulness Training Can Help Prevent Negative Effects in the First Semester

Extending this finding further, the training also appears to have put the test group students on a positive trajectory. We wanted to test this intervention at what is the most stressful time of the first semester of the first year, the eight weeks leading up to final examinations. This is an extended period of time, in which the test group was meditating for upwards of fifteen minutes a day every day, while the control group was left to its own devices for managing the intensity of this period.

The scores of the test group improved on each measure. Not only did these students catch up to those in the control group, they were less stressed, better focused, and happier heading into fall semester, first year exams than they were midway through the first semester. This was consistent with our

66. Sheldon & Krieger, *supra* note 10, at 275-76 (finding law school undermined law students' felt capacity for self-determination of their law school goals).

hypothesis that mindfulness training could possibly have beneficial effects for first year, first semester law students.

In contrast, the scores of the control group showed no statistically significant change during this same period. This was surprising, considering the intensity of the stress first-year law students are under at that time, as well as historically observed and anecdotal evidence of student emotional decline during this period. Finding out the reason for this phenomenon is important, and the data provides no obvious explanation for this inconsistency, other than perhaps sample size. While Figure 1 indicates the control group reported greater stress and Figure 2 suggests the control group scored lower on well-being, neither were statistically significant. More data may have amplified these signals to the point of statistical significance. More research is necessary, with larger samples, to determine if the findings are robust and replicable.

The exit interview data seem to corroborate the possibility of a positive trajectory for students who received the training. Reflecting back on their experience, the overwhelming majority of respondents felt that the first-year mindfulness training was beneficial to them. Indeed, some continued and many indicated they would have continued if the support they had through the training had continued. Anecdotally, it is interesting to note that many student leaders in their cohorts were participants in the study, including the president of the Missouri Law Review and the Missouri Journal of Dispute Resolution, and several officers of the Board of Advocates.

C. If They Come, They Will Like It

Apart from this exit interview data, most of the findings here are observational and anecdotal, but compelling.

1. Bucking the Norm

It is fair to say that it took considerable courage to take the training. Only recently has the legal profession even begun to be hospitable to the idea of mindfulness as a possible intervention for stress and its deleterious effects. Stress is an emotion, and the field has typically operated under the premise of cold objectivity – we check our emotions at the door and those who can't shouldn't practice law. Only recently has this begun to change, with the rise in courses in Emotional Intelligence, Life Skills for Lawyers, and other such

courses by various names sprouting up in law schools over the last ten years.⁶⁷

Still, the basic norm persists, and students in the training were bucking it head-on in two ways – first by acknowledging their stress in a public way, and second, by using an oft-ridiculed technique, meditation, to address it. Students in the training reported some derision from their colleagues, such as eye-rolls and jokes at their expense when mentioning the training. But interestingly, most participants during the training session at least said it did not bother them, largely because they said they could see that their critical colleagues were much more stressed than they were.

The fact that students were willing to buck the trend is consistent with the first finding, that the students who participated in the study were worse off than their peers in terms of stress, well-being, and qualities of mindfulness when they decided to enroll. On this understanding, participating students knew they were distressed, and were willing to take an intervention, even if it was inconsistent with existing social norms, if it could provide relief. This is significant in that a major question for law schools is whether law students will actually take advantage of psychological support services, especially given student aversion in the first year to appearances of vulnerability. The data from this study on mindfulness meditation training strongly indicate they will.

2. No Attrition

Given this cultural context, it is especially remarkable to note that there was no attrition in either year of the study, although a sizeable number of students did not complete all of the surveys. That is to say, every student who began the eight-week training completed it, despite its requirements of daily meditation practice and an additional class for eight weeks in the first semester of law school. Zero attrition is highly unusual in social science research.

The reason for the lack of attrition is unclear. To be sure, the \$500 Barbri benefit for those who completed the training may have encouraged students to complete the program. Similarly, there may have been a sense of interpersonal obligation to complete the class once they started it, even if they were not invested enough in the study per se to complete the surveys.

However, none of the students indicated the Barbri benefit was a primary reason for participating in the study, and any student who left the program

67. See Richard C. Reuben, *Embracing the Oxymoron: Teaching Emotional Intelligence for Lawyers* 5-6, U. MO. SCH. L. CTR. FOR STUDY DISP. RESOL. (2013), https://law.missouri.edu/news/files/2014/10/CSDR_TeachingEssays.pdf.

early would have been entitled to a discount proportional to their participation. Moreover, first-year law students are notoriously protective of their time, and as a group seem unlikely to be willing to continue an eight-week program involving a twenty-hour time commitment in the weeks leading up to first-semester finals without a direct and immediate benefit. These considerations, as well as the cultural context and the exit-survey data indicating participants felt the training helped them, together suggest the students may have stayed because they believed they were deriving some benefit from the practice itself.

3. The Drop in Participation from Year One to Year Two

Since there was no attrition among participants in the first year, it was surprising to see student participation drop significantly from Year One to Year Two, from thirty-four to thirteen. With the benefit of experience in recruiting and word-of-mouth from Year One participants, our expectation was that enrollment would increase, not decrease.

Again, the reason is unclear. Law school cohorts vary significantly from year to year, and it may have been that the Year Two cohort simply wasn't interested, perhaps because of individual disinterest, the cultural context, competing opportunities or other reasons. However, one other possibility, learned anecdotally, was that at least some faculty and administrators told first-year students in Year Two that participation in the study was not worth their valuable first-year time. That became the buzz about the study in the second year, according to anecdotal reports by students who had participated in the study in Year One and in the recruiting of Year Two students.

We do not know why those faculty and administrators came to that conclusion. One possibility, however, is that such statements constituted an institutional resistance reflecting historic cultural norms regarding emotion, meditation, and other non-traditional activities in law schools.

D. Impact on Academic Performance Remains Uncertain

We looked at two factors to assess a possible correlation between mindfulness training and academic performance: the grades of students in the study relative to the first-year curve, and the individual student grades relative to the grades predicted for them by the law school's admissions office when evaluating their candidacy for admission (their "Index Score"). The results were too scattered to establish any statistical significance on either measure. We take this to be a function of the size of the study's data set and look to future research in a larger study for more definitive results.

V. LIMITATIONS AND FUTURE RESEARCH

There are several important limitations on our findings in this study, leaving much room for future research. Initially there is the problem of self-selection bias. We attempted to control for this through the use of a waitlist control design that would have provided a randomized test and control group. However, that proved impractical because of recruiting challenges that forced us to adopt a simple pre/post design instead. It would be helpful for future research to randomly assign to condition rather than self-assign to condition.

Second, the design is limited to self-reported surveys, raising the possibility of two separate but related problems. The first is demand effects – that is, participants giving us what they perceived to be the answers we wanted to hear on the surveys.⁶⁸ We attempted to control for this by making it clear that we did not want this during recruitment and during the study itself. Even assuming participants were being straightforward in their self-reporting, another limit of self-reporting is the potential disparity between what participants believe they feel and what they actually feel. We attempted to control for this by using a bench science measure, saliva cortisol draws, but that proved unacceptable to this population of subjects. Future research can and should continue to integrate other bench science measures to corroborate or disconfirm self-reported survey results. Other types of cortisol research might be more acceptable, for example, such as oral swabbing. Alternatively, other possible bench science methods future researchers might consider include vagal tone and blood pressure.

A third limitation concerns our finding that the training put the students on a positive trajectory. We make this finding based only on two data points – participant scores at the beginning of the training and at the end of the training eight weeks later. With only two data points, the phenomenon we identify may turn out to be a regression to the mean instead of a longer-term trajectory. We attempted to control for this by getting subjects to take the study when they enrolled (which could have been when recruiting began at the beginning of the semester), again when the training began eight weeks before exams, and again at the end of the training. However, student compliance with the survey requirement varied considerably, leaving us with only two data points we could consider reliable. Future research should incorporate more data points – ideally beginning before students arrive for orientation – and consider alternative methods of ensuring compliance, such

68. For an example of research on demand effects, see Jim McCambridge et al., *The Effects of Demand Characteristics on Participant Behaviours in Non-Laboratory Settings: A Systematic Review*, 7(6) PLoS ONE e39116 (2012).

as incentives for completing each survey or setting aside time to do the surveys collectively.

A fourth limitation concerns the drop-in enrollment from Year One to Year Two. We view this as a matter of institutional support, an issue upon which we were hampered by changes in deans and associate deans during the development of the study, and corresponding variations of decanal and faculty support as a result of those changes. Future researchers may want to consider taking steps we did not take to help foster and assure institutional support sufficient to withstand such changes and to overcome cultural resistance to the research. For example, while faculty approval was not necessary to do this research, future researchers may consider taking that step to coalesce firmer institutional commitment. Another step future researchers may consider is a separate short training for deans, faculty, and staff before implementing the study, to give them a personal sense of what was being asked of students and to overcome cultural barriers we experienced in this study.

A fifth limitation on our research was the size of the data set. More data is better, and while we were able to detect some signals, a larger data set would clarify some ambiguities in our study research. The most notable example is our lack of a finding on a possible correlation between mindfulness training and academic performance. With forty-seven participants and considerable variation in individual grades for many possible reasons, the data were extremely scattered such that we could draw no conclusions on a possible correlation.

However, the hypothesis we operated under – that students would perform better academically if they were less stressed, happier, better focused, and better able to manage distractions would perform better academically – still seems plausible, and there was compelling anecdotal evidence of its legitimacy in the study. For example, one student participant with a history of test anxiety told the principal investigator that she felt confident rather than anxious going into her first semester exams because she knew that fear was “just another thought that I can let go of.” She finished Number Three in her class after the first semester, a result which she attributes to the mindfulness training. As she told the principal investigator: “I know what my grades were like in undergraduate school, and they were nothing like this because of my test anxiety. The mindfulness training definitely helped me with that.” Similarly, another student in the study told her group halfway through the training that she had suffered from sleep disorder since she was a pre-teen but had been sleeping seven or eight hours a night since beginning the study.

Observational evidence also suggests the possibility of a correlation between mindfulness and academic performance. Grades are only one measure of success, and the performance of trained students in other academic enterprises was also striking. As noted, two students became editors in chiefs of law reviews. Several students became officers of the Board of Advocates, which at this law school administers student advocacy competitions. Mindfulness study students also tended to perform well in student advocacy competitions, in one competition comprising three of the four finalists as first-year students.

Finally, there are limitations on the generalizability of the findings. The findings do permit a conclusion that mindfulness training can reduce stress in first-year first-semester students who seek it out. However, it would take a further research in the form of a randomized study of all law students at a sample school to generalize this finding to all law students.

From a research design perspective, this is an unlikely proposition because even with the benefit of a coercive requirement that all students participate in the study, researchers cannot force subjects to meditate for practical, moral, and perhaps legal reasons in state schools. Future research might also test different populations, such as second- and third-year students, in order to ascertain affects for law students generally.

There are many more questions left for future research. One question, for example, is whether mindfulness training can be helpful for upper-level students in terms of arresting a downward slide, just as it might be in terms preventing it at the outset. Another is the level of dosage, meaning how much mindfulness training do law students need in order to achieve beneficial effects? Still others include: How does mindfulness compare with other interventions, such as exercise, yoga, talk therapy, anti-depressant medication, and wellness programs? What is the impact of mindfulness training on alcohol and substance abuse by law students? What are the longitudinal effects for students throughout law school, and after they get into practice?

From a research perspective, there is a wide range of possibilities ahead. Indeed, the results of this study suggest this area is ready for a new wave of research, and that such research can be done in a law school environment.

VI. CONCLUSION

We have long known that law school can be a difficult experience for some students. This research suggests mindfulness meditation training can be helpful by giving students a concrete tool to manage their stress and improve performance in the first semester of the first year, and perhaps put them on a constructive path for personal balance and well-being for the rest

of law school and on into practice. It also suggests that students who have taken mindfulness training in law school found a continuing benefit from that training, enough so that as a group they would believe overwhelmingly that law schools should offer voluntary mindfulness training as a part of their curricular or co-curricular programming.

These findings justify the National Task Force on Lawyer Well Being's recommendation that law students consider mindfulness training for enhanced well-being, at least for first-year first semester students.⁶⁹ They also compel further research to ascertain whether law students further along in the process may experience similar effects, as well as whether mindfulness may have beneficial effects for practicing lawyers, judges, and other legal professionals in the different areas of practice that the Task Force identified.

Research has established that law student and attorney well-being is a meaningful problem, and this first study of its kind suggests mindfulness meditation training for lawyers can be at least one solution.

69. Buchanan & Coyle, *supra* note 1, at 50.

