Abstract

By magnifying gender- and socioeconomic status-based inequalities, the COVID-19 pandemic caused stress and disrupted career progress for professional students. The present work investigated the impact of pandemic-related stress and prevailing barriers on structurally disadvantaged women preparing for a high-stakes professional exam. In Study 1, we found that among U.S. law students preparing for the October 2020 California Bar Exam—the professional exam that enables one to become a practicing attorney in California—first-generation women reported the greatest stress from pandemic-related burdens and underperformed on the exam relative to others overall, and particularly compared to continuing-generation women. This underperformance was explained by pandemic-related stress they contended with most, as well as by structural demands shouldered most by first-generation test-takers regardless of gender. Even when controlling for the structural features of caregiving and working while studying, the psychological burdens experienced most by first-generation women predicted lower exam success. Study 2 investigated the February 2021 California Bar Exam. Consistent with Study 1, first-generation women test-takers reported the most pandemic-related stress, which predicted lower exam performance above and beyond structural barriers to exam success. We offer policy prescriptions to bolster the success of at-risk groups in the legal profession pipeline, a challenge magnified by the pandemic.

Keywords: intersectionality, professional development, policy issues

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The Impact of the COVID-19 Pandemic on First-Generation Women Test-Takers: Magnifying Adversities, Stress, and Consequences for Bar Exam Performance

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The COVID-19 pandemic has magnified inequities borne by women around the globe, particularly inequities borne by women who belong to lower socioeconomic status (SES) groups and women of color (Dinella et al., this issue; Dinella & Fulcher, this issue introduction). Troublingly, the COVID-19 pandemic has intersectionally burdened the mental health and professional success of women who confront the cumulative effect of gender-based, identity-based, and structural disadvantage (Bruhn & Oliveira, this issue; Coleman-King et al., this issue; Dinella et al., this issue). Indeed, recent research (Obioma et al., this issue) reveals that women who were already disadvantaged by gender-based social roles in the family and workplace disproportionately faced burdens and pandemic-related stress relating to caregiving and familial demands in the home. These emerging findings (Del Boca et al., 2020; Dinella et al., this issue; Hayes, this issue; Raile et al., 2020) suggest that structurally disadvantaged women experienced the pandemic differently in terms of mental health, well-being, and professional outcomes than did structurally advantaged women or men. Crucially, the disparate experiences and affordances engendered by the pandemic have implications for the professional outcomes of structurally disadvantaged women in the short and long run, underscoring the need for policy recommendations and reforms (Dinella et al., this issue; Hayes, this issue; Ledgerwood et al., 2021). Therefore, in the current work we investigate the impact of stressors produced by the pandemic and prevailing structural barriers on structurally disadvantaged women preparing for a high-stakes exam and consequences for professional advancement, and conclude with specific recommendations to bolster the success of at-risk groups.

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In the United States (U.S.), aspiring lawyers must pass a high-stakes, professional licensing exam after graduating from law school, known as the bar exam. Even before the COVID-19 pandemic, the bar exam acted as a gatekeeper, precluding U.S. law graduates who fail from professional advancement, despite investing in their legal education and earning a law degree (Frisby et al., in press; Howarth, 2017; Howarth & Wegner, 2019; Winick & Quintanilla et al., 2020; Yakowitz, 2010). Prior to the pandemic, this high-stakes, standardized exam disproportionately prevented many members of structurally disadvantaged groups, including first-generation college students and racial/ethnic minorities, from reaping the social and economic benefits of their professional law degrees (Winick & Quintanilla et al., 2020). Might the COVID-19 pandemic have magnified inequalities in the legal profession pipeline by challenging women with intersectionally disadvantaged identities?

To address this question, we first turn to existing research on the intersecting effects of gender roles and SES, describing the ways in which these compounding social categories and associated stigma impair well-being and the professional trajectories of women who belong to structurally disadvantaged groups amidst the pandemic. We next review emerging research revealing the pandemic-related adversities that have confronted bar exam test-takers, especially female test-takers whose parents lack four-year college degrees. We then present two studies that investigated 1) whether the COVID-19 pandemic has imposed greater stress on women who belong to structurally disadvantaged groups (first-gen women) than (a) women who belong to structurally advantaged groups (continuing-gen women) and (b) men regardless of college-going status, and 2) the extent to which this stress negatively predicted bar exam performance, above and beyond prevailing structural burdens tied to interlocking gender and SES-based roles (i.e., primary caregiving and working while studying).

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Gender, First-Generation Status, and their Intersection Amidst the COVID-19 Pandemic

The COVID-19 crisis magnified gender gaps associated with breadwinner-caregiver gender roles (Adelman et al., 2014; Feinberg et al., 2011; Fulcher et al., 2015; Lachance-Grzela & Bouchard, 2010; Van Houtven et al., 2013; Williams & Kurina, 2002) by burdening women with additional household and familial responsibilities along with the demands and stress of navigating these challenges in work and in school (Matthews, 2020; Smith, 2019; Thibaut & van Wijngaarden-Cremers, 2020). For example, Dinella and Fulcher (this issue introduction) argue that women were expected to shift more energy toward caregiving at home and toward emotional support in the workplace during the pandemic. In addition, the COVID-19 crisis challenged the mental health of women, especially structurally disadvantaged women (Connor et al., 2020; Dinella et al., this issue; Hayes, this issue). Taken together, emerging research reveals that women—particularly those already at the margins—have shouldered significant additional burdens during the pandemic.

Research also reveals that SES and first-generation status influence outcomes in educational and career attainment (Jury et al., 2017; OECD, 2014). First-generation students comprise 15-20% of students in American universities (Bowen et al., 2005). Most first-generation students are racial and ethnic minorities (Jury et al., 2017; Stephens et al., 2012). Troublingly, first-generation students tend to perform more poorly in college and have higher dropout rates than do continuing-generation students (Harackiewicz et al., 2014; Pascarella et al., 2004; Stephens et al., 2014). This difference is referred to as the social-class achievement gap because parental education is often closely aligned with SES (Pascarella & Terenzini, 1991; Wilbur & Roscigno, 2016). Often hailing from working-class backgrounds, first-generation

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students face significant economic, social, and psychological barriers to upward educational and career mobility (Covarrubias et al., 2021; Harackiewicz et al., 2014; Jury et al., 2017; Sennett & Cobb, 1993; Stephens et al., 2014).

These class-based achievement gaps and the challenges experienced by first-generation students may be exacerbated during the pandemic (Reeves & Rothwell, 2020). For example, socioeconomic and educational attainment can buffer the negative effect of stressors during disasters (Allen et al., 2014; Bonanno et al., 2007; Erickson et al., 2016; McLaughlin et al., 2012; Pfefferbaum et al., 2015), suggesting that members of structurally disadvantaged groups with lower SES and educational resources may be at greater risk of experiencing stress and trauma (Herrmann et al., 2017; Ibrahim et al., 2013). These challenges may be compounded by the structural dimensions of poverty: first-generation students are more likely to experience financial uncertainty, less likely to receive familial resources, and may be more likely to be burdened with caregiving demands (Jury et al., 2017; Stephens et al., 2012).

Critically, the effects of gender and SES intersect to create unique burdens faced by low SES women. Indeed, the theory of intersectionality suggests that describing these burdens as merely the product of gender-based role disparities or merely the product of socioeconomic disparities is too simplistic: inequities differ when gender intersects with other social identities, including class, race/ethnicity, and educational attainment (Cole, 2009; Crenshaw, 1989; Purdie-Vaughns & Eibach, 2008). That is, the impact of stigmatized identities and social determinants of health—including economic, sociopolitical, cultural factors—interact (Hankivsky, 2012). Prior to the pandemic, gender differences in mental health stemmed in part from gendered risk factors, including caregiving demands, lower income and poverty, violence, and barriers to accessing care, which disproportionately affect women structurally

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disadvantaged at the intersections of gender, race, and social class (APA, 2017; Greenwood et al., 2017). Relatedly, emerging research suggests that racial and ethnic minorities are disproportionately impacted by COVID-19 and that these outcomes may be due, in part, to socioeconomic disadvantages that place low-income individuals at a higher risk of infection (Bruhn & Oliveira, this issue; CDC, 2021; Coleman-King et al., this issue; Dinella et al., this issue; Little et al., 2021; Oppel et al., 2020).

Accordingly, it is vital to cast light on the experiences of structural disadvantaged women during the pandemic. Indeed, emerging research featured in this symposium suggests that these women experienced more hardships attributable to the COVID-19 pandemic and that these women experienced more pandemic-related stress as a result.

COVID-19 Stress Amongst Law Students and Intersections of Disadvantage

A recent national survey of U.S. law students highlights that the pandemic has magnified students' experienced stress (Deo et al., 2021) and suggests that they encountered considerable challenges after graduation when preparing for the bar exam. For example, almost every law student in this national survey (95%) reported that the pandemic interfered with their ability to succeed in law school. Relatedly, financial concerns weighed heavily on law students' minds with many reporting greater concerns about their ability to pay for law school and living expenses. Law students also reported decreases in their physical health and increases in mental and emotional exhaustion. Importantly, these trends for law students overall were marked with group-based disparities, such that U.S. law students who are women or members of other structurally disadvantaged groups were even more likely to experience this pandemic-related stress.

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For these and all law students, passing the bar exam is the final gateway to enter the legal profession. That is, law students who have accomplished all other accolades and achievements in their educational and career pathway—receiving admission into, successfully matriculating through, and graduating from an undergraduate institution and law school—must still pass the bar exam to join the legal profession. This final hurdle is formidable. While the State Bar of California has among the largest number of law students who apply to take the exam each year, the California Bar Exam has one of the lowest passage rates in the country, especially for applicants from structurally disadvantaged backgrounds (Winick & Quintanilla et al., 2020). Unfortunately, these low and disparate passage rates are widely known among applicants, which contributes to concerns about the high-stakes nature of the exam and worries about the intrapersonal and interpersonal costs of failure (Quintanilla & Erman, 2020). Moreover, preparing for the bar exam entails an intensive period of study (customarily from May to mid-July, following law school graduation) demanding 40-50 hours of focused study each week. This intensive study takes the form of reading materials across many subject areas of law, participating in over 20 class lectures, committing a large volume of material to memory, practicing multiple-choice problems, and writing essay problems. The demands are considerable; even before the pandemic, many law students worried that they would be unable to meet them. Prior to the pandemic, many law students worried about the amount of time needed to thoroughly prepare and how to reconcile these exam-related demands with conflicting demands of working while studying and caregiving. Indeed, stress has long been a major concern: many applicants report sleeping poorly, having anxiety attacks, and reduced well-being due to the stress and anxiety of this high-stakes, professional exam (Quintanilla & Williams et al., in prep).

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However, no research to date has illuminated the extent to which the pandemic magnified inequities on this professional exam by impacting women who belong to structurally disadvantaged groups, especially first-gen women. Yet quantitative and qualitative data gathered by our research team offer reason for concern, as do urgent calls for research on these questions (Angelos et al., 2020; Griggs, 2020). An examination of performance across thousands of test-takers on the July 2018, July 2019, and October 2020 State of California Bar Exam reveals widening group-based disparities between women who are first in their families to attend college (first-gen women) and their continuing-generation and male peers, suggesting that performance disparities were exacerbated during the first wave of the pandemic; see Figure 11 (Freiburger & Quintanilla, 2021).

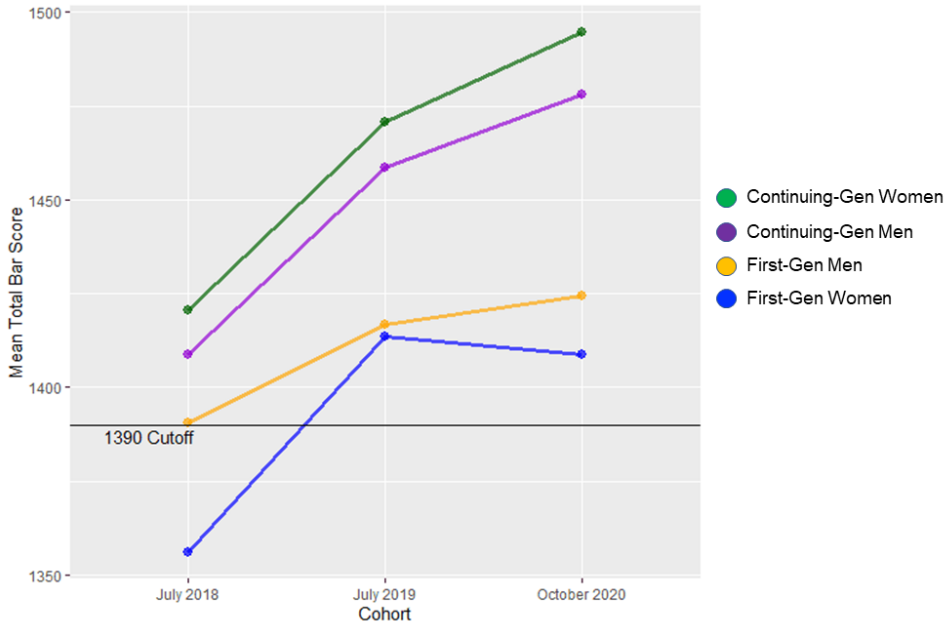
Figure 1

Total Bar Exam Performance Across Cohorts by Gender and First-gen Status

[1] Freiburger & Quintanilla (2021) plot average bar exam performance for the July State of California Bar Exam administrations; due to pandemic-related accommodations, the October 2020 administration stood in for the July exam. Figure 1 reports the average bar exam performance for all U.S. law students and graduates who consented to an analysis of their bar exam performance, for comparisons across timepoints. Whereas the average bar exam scores reported in Study 1 (October 2020) included those who consented and participated in our program.

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Source: Reprinted with permission from Freiburger & Quintanilla (2021)

Indeed, in qualitative work, first-gen women described the unique inequities, burdens, and stress they experienced when preparing for California's October 2020 Bar Exam during the pandemic (Freiburger & Quintanilla, 2021):

> Covid has severely disrupted my bar prep. I am currently working full-time and homeschooling 4 kids (2 while at work). I do not have a quiet place to study as I would normally go to the school to study, this is not possible. I am attempting to homeschool all by 2:00 to complete work by 5 to at least give me 4 hours of study time. Sometimes it is possible, sometimes impossible. But as I like to say and think I have to make do with the cards I have been dealt, and I can only do what is in my power and ability...
>
> I unfortunately have not been able to take a large amount of time off to study for the exam meaning I have had to come up with a schedule where I study before and after work and on the weekends. This has also affected my sleep and well as how my brain performs throughout the day... Additionally, due to a loss of income, the stress of having to pay/manage bills and our rent being increased during this time, this has caused a severe amount of stress. Thankfully my fiancé is working now, but we are nowhere near okay financially which is making it hard to focus solely on studying when I also need to ensure our bills are being paid.

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These women recount the challenges and stress that structurally disadvantaged women encountered when attempting to reconcile the conflicting demands of career advancement and gendered familial roles. Their voices underscore how already vulnerable populations of U.S. women law students shouldered much of the stress and inequities produced by the global pandemic. The current research extends this work by directly investigating psychological stress and structural burdens faced by U.S. law students and graduates preparing for the bar exam during the pandemic and their consequences for exam success, centering on the stress experienced by, and performance outcomes of, first-generation women in the legal profession pipeline.

Current Research

The current work investigated the disparate group-based impact of the COVID-19 pandemic on U.S. law students and graduates preparing for the State of California Bar Exam and the consequences for bar exam performance. We examined whether the pandemic imposed greater COVID-19 stress on women who belong to structurally disadvantaged groups (first-gen women) than women who belong to structurally advantaged groups (continuing-gen women) and men (of any college-going generation). Moreover, we assessed whether this COVID-19 stress may have led first-gen women to underperform relative to continuing-gen women and men regardless of college-going status, above and beyond prevailing demands tied to gender and SES-based roles, thereby further preventing them from reaping the social and economic benefits of their professional degrees. In partnership with the State Bar of California, we collected demographic information, self-report measures on COVID-19 stress (i.e., stressors and

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associated stress levels), and bar exam scores from test-takers who sat for the State of California's October 2020 and February 2021 Bar Exams in Study 1 and Study 2, respectively.

Study 1: October 2020

Given the uneven impact of the COVID-19 pandemic across gender and SES, and related stress and professional consequences (Ledgerwood et al., 2021; Thomas et al., 2021), the current work investigated the experiences and performance of bar exam test-takers at the intersection of gender and generation-in-college status2. In 2020, the October bar exam stood in for the July exam, rescheduled by the State Bar of California due to the challenges of holding a professional licensing exam during the first peak of the pandemic. Those who studied for the October 2020 exam did so during the first peak of the pandemic unfolding in the U.S. from June to August 2020. The October 2020 exam ultimately had one of the largest test-taker cohorts, which included a large pool of initial test takers, and yielded unusually high passage rates likely due to several factors: the cohort had several additional months to study for the exam (July to October), the number of multiple-choice questions on the exam was reduced, and the minimum passage threshold on the exam was substantially lowered from 1440 to 1390 to address challenges imposed by the pandemic.

In Study 1, we asked consenting test-takers about their pandemic-related stress and examined their bar exam scores in partnership with the State Bar of California. We hypothesized that the stress produced by the pandemic would be disparately experienced by first-gen women compared to their continuing-generation and male counterparts. Further, we predicted that

[2] Given the compounding intergenerational impact of educational and economic opportunities, a student's first-generation-in-college status is widely used as a proxy for their socioeconomic status (Wilbur & Roscigno, 2016).

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group-based performance disparities would emerge on the bar exam such that first-gen women would underperform on the exam relative to others, and relatedly, that performance disparities across college-going status would be magnified among women test-takers (first-gen vs. continuing-gen women) compared to male test-takers (first-gen vs. continuing-gen men). Lastly, we hypothesized that pandemic-related stress would predict lower bar exam performance, above and beyond prevailing structural demands of primary caregiving and working while studying for the high-stakes exam, and relatedly, that this pandemic-related stress would in part explain first-gen women's lower exam performance.

Method

Participants

Bar exam scores and self-report measures were collected from 976 U.S. law students and graduates who applied to sit for the State Bar of California exam (194 first-gen women; 424 continuing-gen women; 126 first-gen men; 222 continuing-gen men; 10 participants did not report their gender identity or reported another term, and/or did not report college-going status. Table S1 provides complete sample demographics3. Among first-gen and continuing-gen women test-takers, 73.20% and 45.52% were people of color, respectively. Among first-gen and continuing-gen men test-takers, 60.32% and 36.94% were people of color, respectively.

Procedure

In partnership with the State Bar of California, we collected demographic information, self-report measures on COVID-19 stressors, and bar exam scores from test-takers who sat for

[3] Tables for participant demographics and all descriptive statistics in Study 1 and Study 2 are provided in the Supplemental Materials.

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California's October 2020 bar exam. Survey measures examining COVID-19 stressors were collected in a specialized module within a larger project that evaluates how experiences preparing for the bar exam relate to bar performance and offers a situated-stress mindset program to all individuals taking the bar exam with no random assignment (see Quintanilla & Williams et al., in prep). Demographic and occupational information (i.e., gender, generation-in-college status, amount of working while studying, and primary caregiver status) were collected when test-takers registered to participate in the program in March 2020, during which time they consented to allow researchers access to their bar exam scores. The situated-stress mindset program was made available in late August 2020 and COVID-19 stressors were assessed simultaneously with the delivery of the program. Bar exam scores were provided by the State Bar of California when they were available after the October 2020 exam.

Measures

Gender. Test-takers self-reported their gender identity. For purposes of the current analysis, we treated gender as binary (Woman = 1; Man = 0).

Generation in College Status. Test-takers indicated whether or not they were the first in their family (including siblings) to graduate from college (First-Gen = 1; Continuing-Gen = 0).

COVID-19 Stress. Ten common COVID-19 pandemic-related stressors were assessed (e.g., illness, financial burdens, household demands; see Table 1) and participants reported whether or not they experienced these sources of stress over the course of the year (2020; "Yes", "No", and "Unsure"). Participants then rated the 10 stressors again, this time reporting the perceived stress associated with each. Specifically, participants responded to the prompt: "To what extent have the following situations been a source of stress for you (regardless of whether

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they have happened or not)?" Participants responded using a 4-point scale with the following scale labels: "Not at all stressful", "A mild source of stress", "A moderate source of stress", or "A severe source of stress". We aimed to assess perceived stress regardless of the occurrence of the stressor because the COVID-19 pandemic presented much ambiguity with regard to several sources of stress, including whether or not one had been exposed or gotten sick from COVID (especially when testing was unavailable). Next, we computed a numeric value ranging from 0 to 4 for each of the stressors, integrating whether the stressor occurred (i.e., a participant reported "Yes" or "Unsure" to experiencing the source of stress4) and, if it did occur, how stressful it was. If the stressor did not occur (i.e., a participant reported "No" to experiencing the source of stress), it was scored as "0", regardless of perceived stress. If the stressor occurred and was experienced as "Not at all stressful", it was scored as "1". If the stressor occurred and was experienced as "A mild source of stress", it was scored as "2". If the stressor occurred and was experienced as "A moderate source of stress", it was scored as "3". Finally, if the stressor occurred and was experienced as "A severe source of stress", it was scored as "4". To reduce the impact of rare-occurring COVID-19 stressors on analyses, we removed a stressor if approximately 90% or more of test-takers reported not experiencing it.

Table 1

10 COVID-19 Stressors

[4] We counted "Yes" and "Unsure" responses as a stressor occurrence, given that ambiguous events are often perceived as stressful and have similar consequences for people's outcomes as unambiguous events (Okazaki, 2009).

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COVID-19 Stressors
S1: I thought I had COVID-19
S2: I was diagnosed with COVID-19
S3: I became severely ill with COVID-19
S4: A family member was diagnosed with COVID-19
S5: A family member became severely ill with COVID-19
S6: My household experienced a severe cut in income
S7: My household was unable to pay bills
S8: My household was unable to access sufficient food or medicine
S9: My household was evicted or foreclosed upon
S10: I experienced additional caregiving demands

Note. Due to rare occurrence (i.e., approximately 90% or more of test-takers reported not experiencing it), items 2, 3, 8, and 9 were removed from the October 2020 data set (Study 1), and items 3 and 9 were removed from the February 2021 data set (Study 2).

Primary Caregiver Status. Participants indicated whether they would serve as a primary caregiver of dependents (e.g., children or parents), while preparing for the bar exam (Yes = 1; No = 0).

Working While Studying. Participants indicated whether they anticipated working while studying for the bar exam. Responses ranged from "No" (coded as 0), "Yes, part-time (less than 30 hours a week)" (coded as 1), to "Yes, full-time (30 hours a week or more)" (coded as 2).

Total Bar Exam Score. We collected test-takers' raw total scores on the State Bar of California's October 2020 Bar Exam.

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Bar Passage. Bar exam passage is a numeric value indicating whether a test-taker's score exceeded the State of California's 1390 "cut score" threshold—the score at which test-takers passed or failed the October 2020 bar exam (Pass = 1; Fail = 0).

Results

COVID-19 Stress by Gender and First-gen Status

First, we examined COVID-19 stress (i.e., stressors and associated stress levels) that correlated with lower total bar exam performance to identify risk factors for exam success. We then investigated how the experiences of this COVID-19 stress differed between groups (e.g., first-gen women vs. continuing-gen women) and the degree to which COVID stress negatively predicted bar exam performance above and beyond prevailing structural demands of primary caregiving and working while studying. We hypothesized that COVID-19 stress was more likely to be negatively experienced during the pandemic by first-gen women relative to continuing-gen women and men (of any college-going generation) and would independently predict lower bar exam performance.

After removing low frequency stressors (e.g., "I became severely ill with COVID-19"), we conducted bivariate correlational analyses to understand which sources of COVID-19 stress were negatively associated with total bar exam scores across all participants, regardless of social group membership (see Figure 2). These correlations illuminate the risk-factors for underperformance on this high-stakes exam as test-takers studied during the pandemic.

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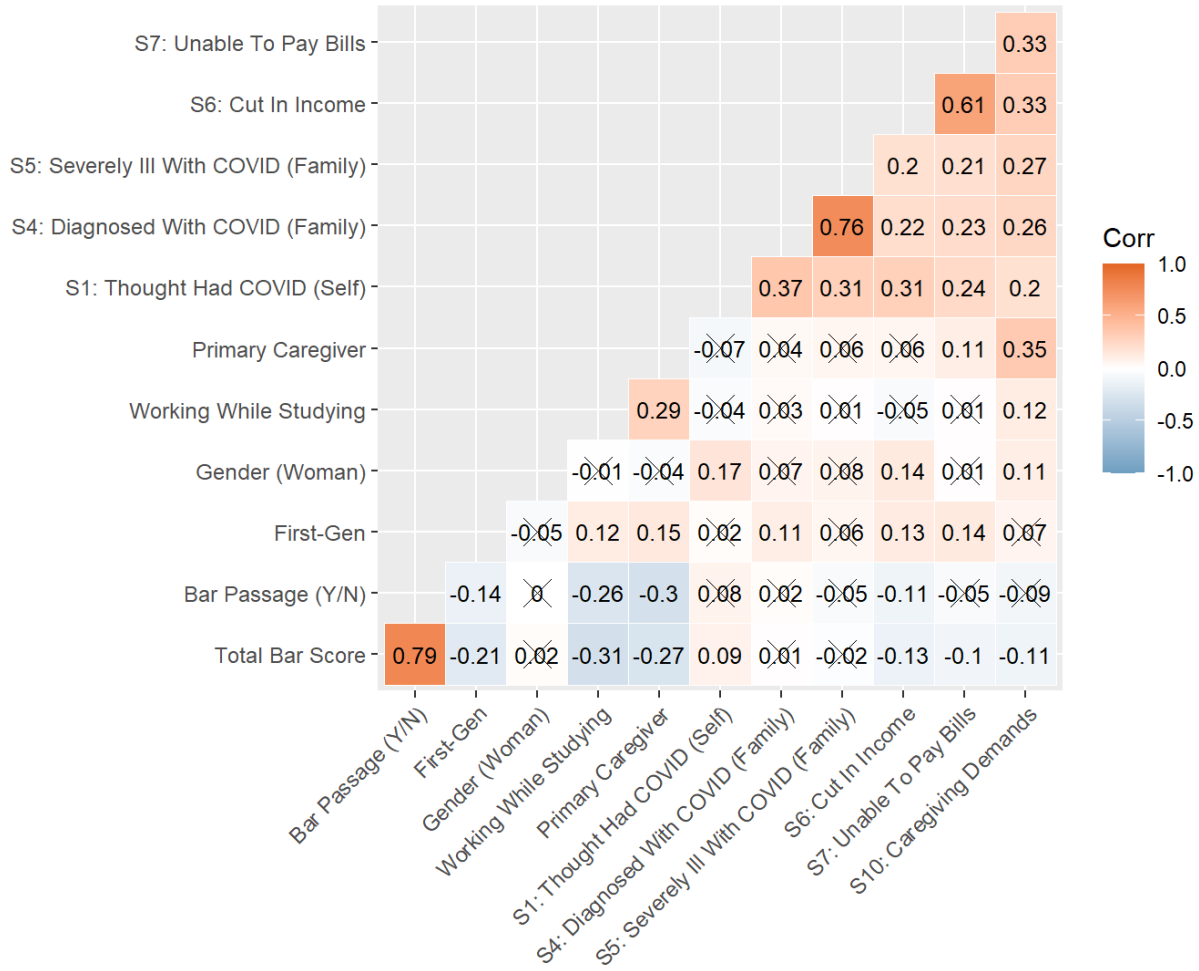
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Figure 2

Bivariate Correlations across Demographics, COVID-19 Stress, and Bar Exam Performance

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Note. "X" denotes non-significant relationship at α = .05.

Results revealed that the stress relating to additional caregiving demands, r(509) = -.105, p = .017, severe cuts in household income, r(510) = -.134, p = .002, and inability to pay household bills, r(509) = -.098, p = .027, emerged as risk factors that negatively correlated with total bar exam scores across the entire sample. We created a composite (Cronbach's α = .69), averaging across these three sources of COVID stress. We then specified a multiple linear regression model predicting the COVID-19 stress composite as a function of test-takers' gender, first-gen status, and their interaction. The overall model was statistically significant, R2 = .048,

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$F(3, 533) = 9.01$, $p < .001$. Examining potential group disparities, we found, as hypothesized, that the effect of gender was moderated by first-gen status, $b = 0.57$, $SE = 0.26$, $p = .028$; see Table S2. First-gen women reported significantly more COVID-19 stress ($M = 2.06$, $SD = 1.35$) than any other group, including compared to continuing-gen women ($M = 1.35$, $SD = 1.34$), Mdiff = 0.71, CI95% [0.29, 1.13], $p < .001$, compared to first-gen men ($M = 1.31$, $SD = 1.40$), Mdiff = 0.76, CI95% [0.21, 1.30], $p = .002$, and compared to continuing-gen men ($M = 1.16$, $SD = 1.35$), Mdiff = 0.90, CI95% [0.43, 1.38], $p < .0015$; see Figure 3.

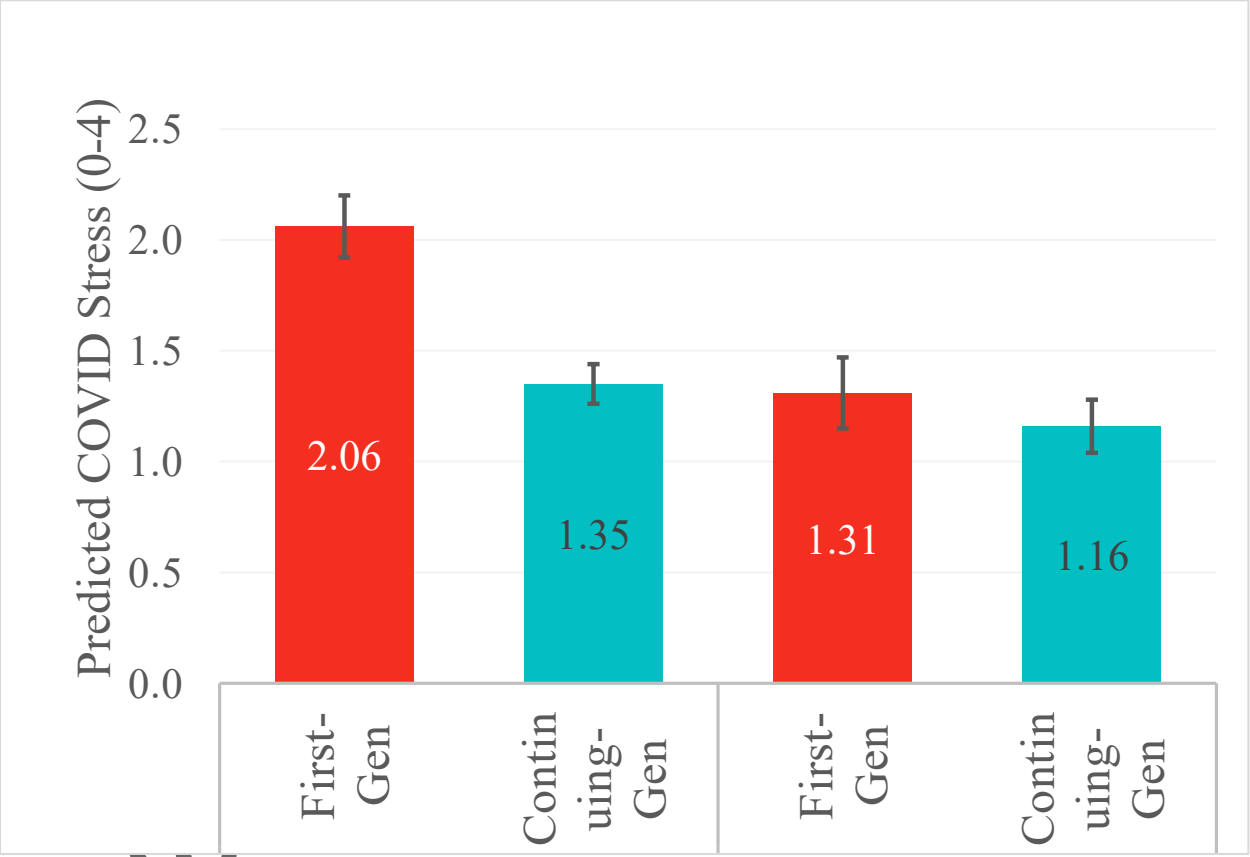
Figure 3

Model-predicted COVID Stress Composite by First-gen Status and Gender

[5] We tested for all possible pairwise comparisons and applied Tukey's correction for multiple comparisons for all post-hoc comparisons reported in Study 1 and Study 2. All comparisons are provided in the Supplemental Materials.

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Note. Error bars represent standard errors. COVID Stress ranged from 0 to 4, with higher numbers indicating greater perceived stress.

Bar Exam Performance by Gender and First-gen Status

We next investigated how test-takers' gender and generation-in-college status predicted our continuous measure of bar exam performance (total bar exam scores). A multiple linear regression investigated whether test-takers' gender, first-gen status, and their interaction significantly predicted total bar exam scores6. The specified model significantly predicted bar

[6] Those who scored above or below 3 standard deviations from the mean bar exam performance were deemed outliers and removed from the analyses including total bar exam scores in Study 1 (n = 4) as recommended by the State Bar of California. Every year, there are a few test takers who begin the bar exam, but do not complete

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exam scores, R2 = .052, F(3, 881) = 16.15, p < .001. Consistent with our intersectional hypotheses, the effect of gender on bar exam performance was moderated by first-gen status, b = -62.51, SE = 23.05, p = .007; see Table S4. That is, first-gen women (M = 1388.67, SD = 148.91) significantly underperformed relative to continuing-gen women (M = 1484.55, SD = 164.84), Mdiff = -95.88, CI95% [-132.79, -58.97], p < .001, and compared to continuing-gen men (M = 1461.39, SD = 157.05), Mdiff = -72.72, CI95% [-114.31, -31.14], p < .001, and while underperforming in the same direction, first-gen women did not significantly underperform relative to first-gen men (M = 1428.02, SD = 132.50), Mdiff = -39.35, CI95% [-87.61, 8.91], p = .154. Critically, while we observed significant performance disparities across college-going status among women test-takers, first-gen and continuing-gen men did not significantly differ in their bar exam scores, Mdiff = -33.37, CI95% [-79.84, 13.10], p = .251.

Turning to bar passage rates (our dichotomous bar exam performance metric), we conducted a comparable logistic regression analysis predicting the likelihood of passing the bar exam at the State of California's passage threshold score of 1390. Consistent with the previous analysis, the interaction of gender and first-gen status significantly predicted bar passage rates, b = -0.70, SE = 0.31, p = .022, suggesting that first-gen women status related to lower exam success overall. Troublingly, and consistent with our intersectional hypotheses, the discrepancy in passage rates between first-gen and continuing-gen test-takers was magnified most among women. That is, post-hoc pairwise comparisons revealed that continuing-gen women (71.17% passage rate; CI95% [66.49%, 75.44%]) were approximately 42% more likely to pass the bar

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it, and these unusually low scores impact the means if not removed. We included these test-takers, however, for purposes of bar exam pass/fail analyses. There were no outliers in total bar scores in Study 2.

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exam than first-gen women (50.00% passage rate; CI95% [42.54%, 57.46%]), OR = 2.47, SE = 0.47, z = 4.77, p < .001. In contrast, continuing-gen men (66.51% passage rate; CI95% [59.84%, 72.58%]) and first-gen men test-takers (61.86% passage rate; CI95% [52.81%, 70.17%]) did not differ in their odds of passing the exam, OR = 1.22, SE = 0.29, z = 0.84, p =.834. Lastly, consistent with the findings on total bar scores, continuing-gen men had a significantly greater odds of passing the bar exam than first-gen women, OR = 1.99, SE = 0.42, z = 3.23, p = .007. However, while first-gen men yielded a descriptively higher passage rate than first-gen women, there was not a significant difference in the odds of passing the bar exam across gender among first-gen test-takers, OR = 1.62, SE = 0.40, z = 1.98, p = .194.

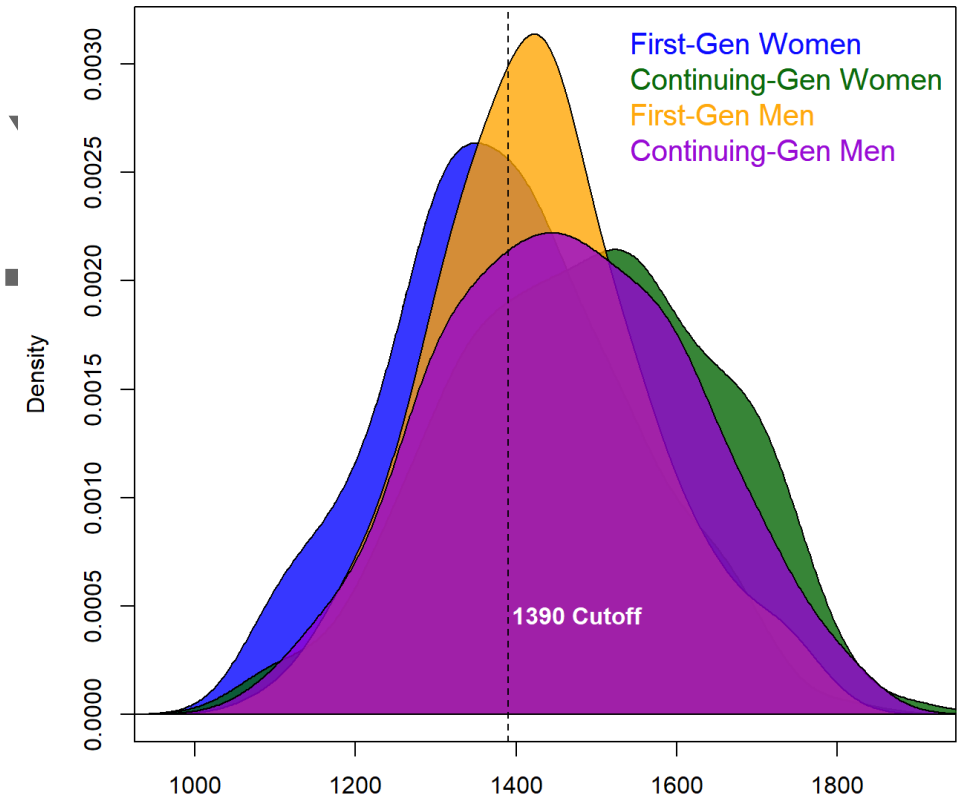
Crucially, these findings, visually represented in Figure 4 and Figure 5, reveal that first-gen women were at risk of failing the October 2020 bar exam relative to their peers overall, directly impacting the diversity of California's legal profession and the economic and career opportunities available to women who contend with multiple intersections of disadvantage.

Figure 4

Oct 2020 Total Bar Exam Score Distribution by Gender and First-gen Status

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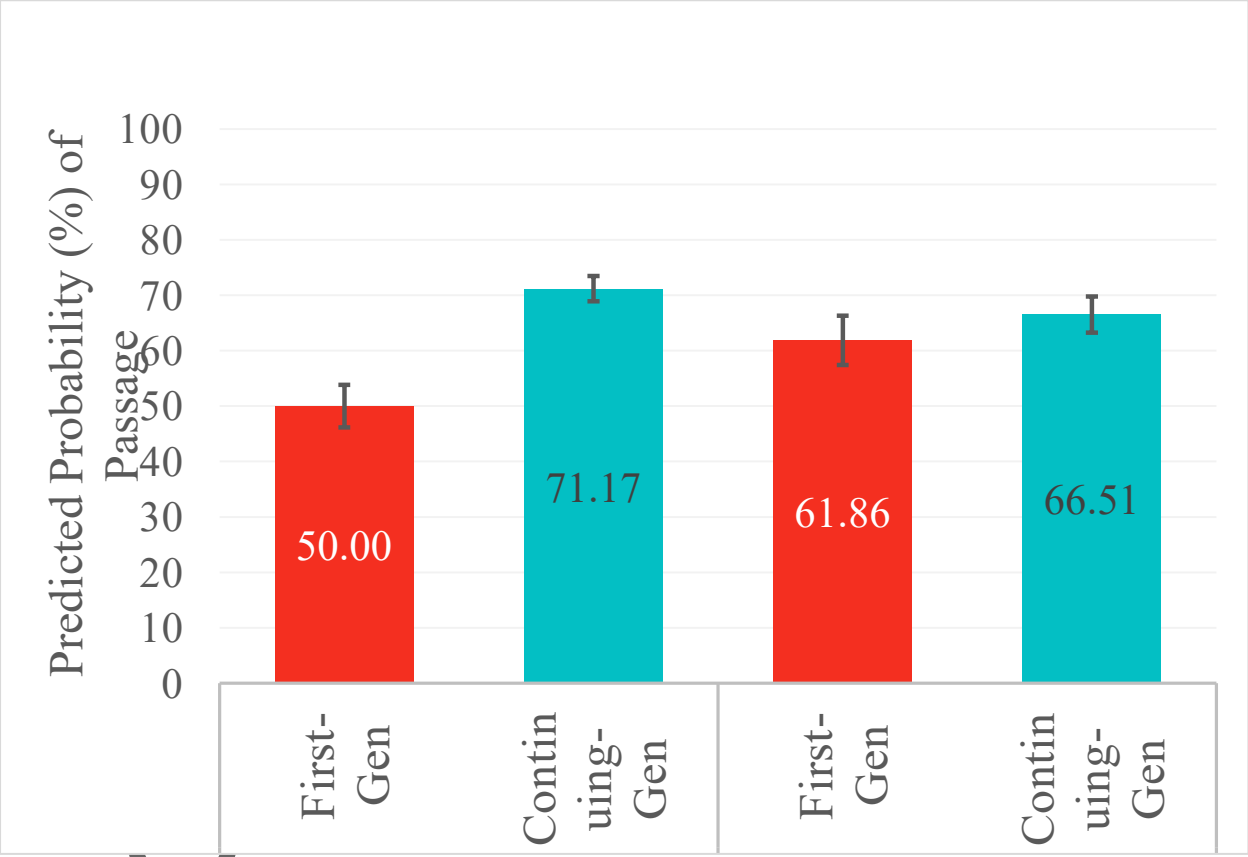
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Figure 5

Oct 2020 Bar Exam Passage Rate by Gender and First-gen Status



Note. Error bars represent standard errors.

Mediation through Psychological and Structural Burdens

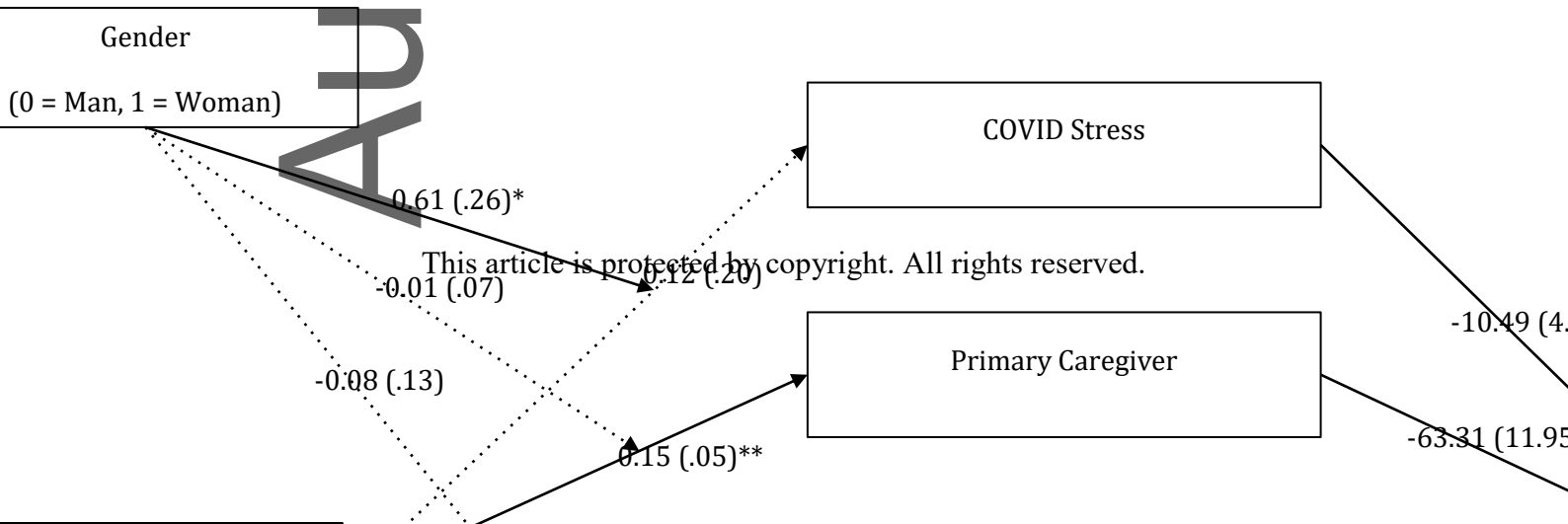
We last conducted an exploratory moderated parallel mediation analysis to determine whether the psychological burden of pandemic-related stress, and the structural features of

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primary caregiving and working while studying explained the intersectional disparities observed on total bar exam score performance. Consistent with the previous analyses, gender significantly moderated the relationship between first-gen status and the composite of COVID-19 stress, b = 0.61, SE = 0.26, p = .019, with first-gen women reporting the most stress. Pandemic-related stress in turn predicted lower bar exam performance, b = -10.49, SE = 4.37, p = .016. Moreover, for first-gen women, the conditional indirect effect of first-gen status on bar scores through COVID-19 stress was significant, b = -7.64, SE = 3.79, p = .044. In fact, for first-gen women, all three risk factors yielded negative conditional indirect effects on total bar performance (ps < .05), demonstrating that pandemic-related stress they experienced most, as well as caregiving and work demands experienced most by first-gen students overall, mediated first-gen women's performance on the October 2020 bar exam. Overall, findings reveal that first-gen test-takers were burdened with more structural barriers to exam success as they were likely to serve as a primary caregiver of a dependent and work more while studying (regardless of their gender), while at the same time, first-gen women in particular experienced more psychological barriers to exam success as they experienced the most pandemic-related stress; each risk factor in turn predicted lower bar exam performance while controlling for the others (see Figure 6).

Figure 6

First Gen Status, Moderated by Gender, Relates to Lower Bar Exam Performance through COVID Stress Composite, Primary Caregiving Status, and Working While Studying



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Note. For first-gen women, the conditional total indirect effect was b = -25.03 (6.25)***. For first-gen women, the conditional indirect effect through COVID stress was b = -7.64 (3.79)*, the conditional indirect effect through primary caregiving status was b = -8.49 (2.99)**, and the conditional indirect effect through working while studying was b = -8.90 (3.72)*. We report unstandardized betas with standard errors in parentheses, b (SE). ***p < .001, **p < .01, *p < .05.

Note. For COVID stress R2 = .055. For primary caregiving status R2 = .024. For working while studying R2 = .015. For total bar scores R2 = .144.

Discussion

Study 1 found that first-gen women were particularly at risk of failing the October 2020 bar exam. This underperformance was in part explained by magnified burdens and stress produced by the COVID-19 pandemic that these women contended with most—including severe cuts in household income, an inability to pay household bills, and additional caregiving

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demands—and the structural disadvantages shouldered most by first-gen test-takers regardless of their gender (i.e., being a primary caregiver and working while attempting to study for a high-stakes exam). Further, we found that even when controlling for the structural features of caregiving and work, the psychological burdens experienced most by first-gen women during the pandemic related to lower exam success.

Moreover, the current analysis reveals that performance disparities across generation status were particularly exacerbated among women test-takers, contributing to the disparate professional impediments shouldered by structurally disadvantaged women vs. structurally advantaged women during the pandemic (Atkinson & Richter, 2020; Ledgerwood et al., 2021; Warren & Lyonette, 2021). Crucially, these findings shed light on how the COVID-19 pandemic magnified structural inequalities borne most by intersectionality disadvantaged groups (Bowleg, 2020), which in the current work reveals pernicious consequences for the well-being and professional success of low-SES women in the legal profession. The current study is the first, to our knowledge, to examine first-generation women's experiences preparing for a high-stakes professional exam and associated consequences for performance outcomes, let alone during the COVID-19 pandemic.

Study 2: February 2021

Given the progression of the COVID-19 pandemic, in Study 2, we investigated the unique experiences and performance of test-takers of the State Bar of California's February 2021 Bar Exam, employing the same analytic procedure outlined in Study 1. Each year, the February bar exam tends to have a smaller test-taker cohort and yields overall lower total score performance and passage rates than other bar exam administrations in part because it tends to include a

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large pool of repeat test-takers from the July administrations and test-takers who work while studying. Specific to the current analysis, the February 2021 bar exam entailed about two and a half less months to study and prepare than the October 2020 bar exam. Moreover, the February 2021 exam was situated during the second peak of the pandemic in the U.S., such that the bulk of test-takers' studying took place from November-January, over the winter holidays after many stay-at-home orders had been lifted.

Method

Participants, Procedure, and Measures

Applying the same procedures as in Study 1, we collected February 2021 bar exam scores and self-report measures from 478 U.S. law students and graduates in partnership with the State Bar of California (107 first-gen women; 185 continuing-gen women; 60 first-gen men; 121 continuing-gen men; 5 participants did not report their gender identity or reported another term, and/or did not report college-going status. Table S8 provides complete sample demographics. Among first-gen and continuing-gen women test-takers, 61.68% and 48.64% were people of color, respectively. Among first-gen and continuing-gen men test-takers, 66.67% and 42.15% were people of color, respectively.

We once again collected measures as part of a specialized module for test-takers of the February 2021 California Bar Exam. Registration for the module began in late November 2020 via a short registration survey, at which time we collected test-takers' demographic information (i.e., gender, generation-in-college status, amount of working while studying, and primary caregiver status) and their experiences with the 10 COVID-19 stressors, and they permitted researchers access to their bar exam scores, which were later furnished by the State Bar of

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California. Moreover, an advantage of Study 2 is that we collected experiences of COVID-19 stressors before the situated-stress mindset program was offered to test-takers (instead of simultaneously with the program in Study 1), which addresses the potential confound that a stress intervention impacted the ways in which test-takers experienced and assessed their burdens and stress produced by the pandemic.

Results

COVID-19 Stress by Gender and First-gen Status

We pre-registered our analyses prior to analyzing the results of the February 2021 bar exam on the Open Science Framework (https://osf.io/3am7j).

We first examined the experiences of COVID-19 stress among those who sat for the February 2021 bar exam. We conducted a direct replication of Study 17, creating a composite measure of COVID-19 stress by averaging across the three sources of stress previously identified as risk-factors for underperformance on the October 2020 bar exam (i.e., cut in income, unable to pay bills, and caregiving demands; Cronbach's α = .64). We again specified a multiple linear regression model predicting the COVID-19 stress composite as a function of test-takers' gender, first-gen status, and their interaction. The overall model was statistically significant, R2 = .025, F(3, 411) = 3.53, p = .015. Replicating findings among test-takers of the

[7] Per our pre-registered analysis plan, we computed bivariate correlations to identify the sources of stress negatively correlated with total bar scores on the February 2021 exam. Given the progression of the pandemic and government responses in the intervening months, the sources of COVID-19 stress that negatively predicted bar performance may have differed across timepoints. Among test-takers of the February 2021 bar exam, family members becoming severely ill with COVID-19, severe cuts in household income, and being unable to access sufficient food or medicine negatively correlated with bar performance ($ps < .05$; see Figure S1). A mean composite of these items yielded poor internal reliability (Cronbach's $\alpha = .47$); therefore, we do not report analyses based on this composite.

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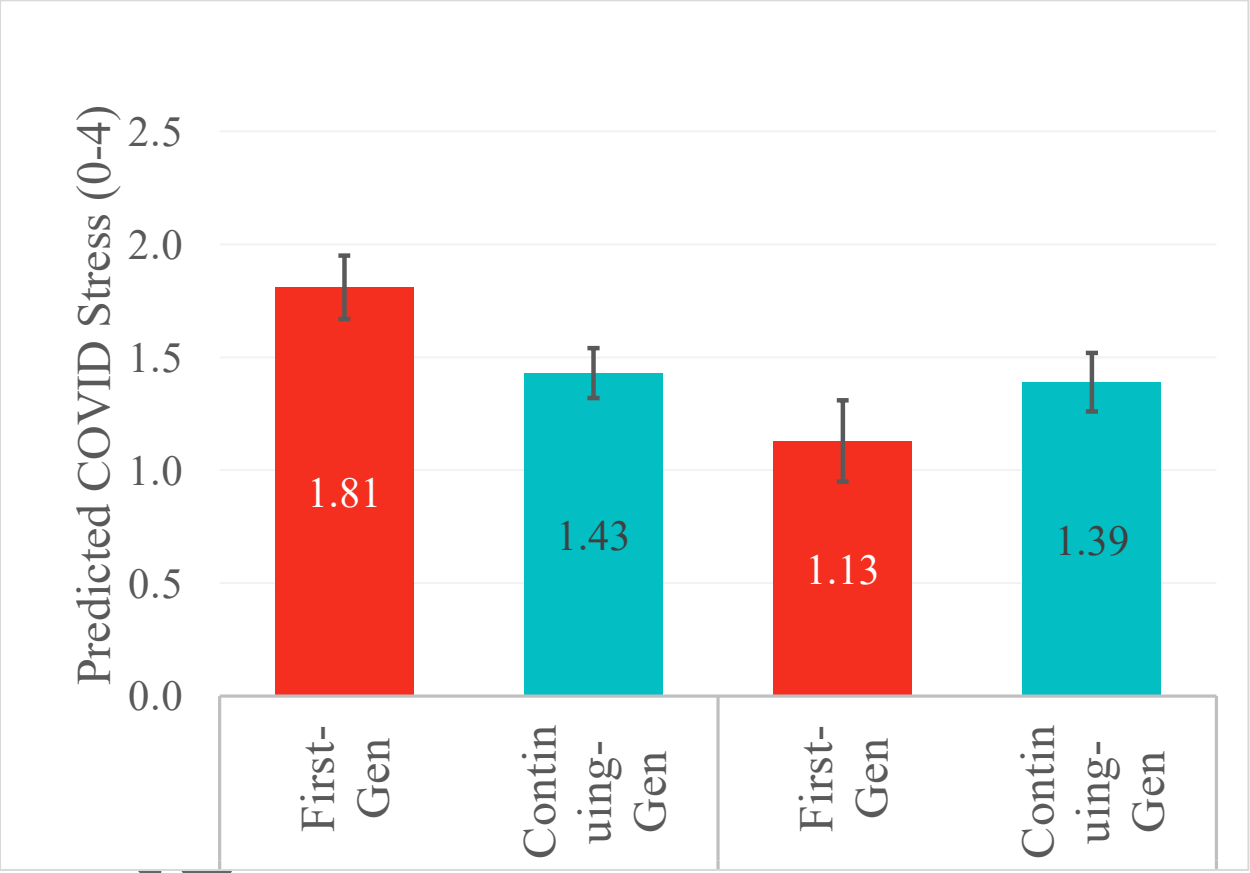
October 2020 exam in Study 1, the effect of gender was moderated by first-gen status, b = 0.65, SE = 0.28, p = .020, signaling that first-gen women status significantly related to greater experienced COVID-19 stress overall; see Table S9. Examining specific group-based comparisons, we observed that first-gen women reported significantly more COVID-19 stress (M = 1.81, SD = 1.31) than first-gen men (M = 1.13, SD = 1.24), Mdiff = 0.68, CI95% [0.11, 1.26], p = .012, whereas continuing-gen women (M = 1.43, SD = 1.35) and continuing-gen men (M = 1.39, SD = 1.31) did not significantly differ in their experienced COVID-19 stress, Mdiff = 0.04, CI95% [-0.39, 0.46], p = .996. Interestingly, the discrepancy in reported COVID-19 stress between first-gen women and continuing-gen women, Mdiff = 0.39, CI95% [-0.06, 0.83], p = .113, and first-gen women and continuing-gen men, Mdiff = 0.42, CI95% [-0.06, 0.90], p = .107, while in the predicted direction, did not reach significance when correcting for all pairwise comparisons; see Figure 7.

Figure 7

Model-predicted COVID Stress Composite by First-gen Status and Gender

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Note. Error bars represent standard errors. COVID Stress ranged from 0 to 4, with higher numbers indicating greater perceived stress.

Bar Exam Performance by Gender and First-gen Status

Second, we employed multiple linear regression to investigate whether test-takers' gender, first-gen status, and their interaction significantly predicted total bar exam scores on the February 2021 exam. The specified model significantly predicted bar exam scores, $R^2 = .024$, $F(3, 469) = 3.78$, $p = .011$; however, though in the same direction as performance on the October 2020 exam (Study 1), the effect of gender, moderated by first-gen status, on exam performance in February 2021 did not reach significance, $b = -33.76$, $SE = 31.14$, $p = .279$; see

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Table S11. We next computed pairwise comparisons to assess how specific group-based disparities compared across timepoints, though results should be interpreted with caution given that the interaction term was not significant. Consistent with Study 1, first-gen women (M = 1348.15, SD = 125.46) significantly underperformed on the February 2021 bar exam relative to continuing-gen women (M = 1401.79, SD = 162.57), Mdiff = -53.64, CI95% [-102.58, -4.69], p = .025. However, first-gen women yielded comparable performance to continuing-gen men (M = 1364.32, SD = 155.93), Mdiff = -16.17, CI95% [-69.65, 37.31], p = .864, and to first-gen men (M = 1344.45, SD = 184.57), Mdiff = 3.70, CI95% [-61.30, 68.70], p = .999 on the February 2021 exam. Crucially, and consist with findings from Study 1, we observed significant performance disparities across college-going status among women test-takers, but first-gen and continuing-gen men did not significantly differ in their bar exam scores, Mdiff = -19.87, CI95% [-83.51, 43.76], p = .852.

Turning to bar passage rates, we next conducted a comparable logistic regression analysis predicting the likelihood of passing the bar exam at the State of California's Bar Exam passage threshold score of 1390. Similarly, the interaction of gender and first-gen status on predicted bar passage rates did not reach significance, though was in the same direction as findings in Study 1, b = -0.64, SE = 0.40, p = .111. Importantly, the discrepancy in passage rates between advantaged and disadvantaged test-takers (i.e., continuing-gen vs. first-gen) was again magnified most among women. That is, post-hoc pairwise comparisons revealed that continuing-gen women (57.30% passage rate; CI95% [50.07%, 64.23%]) had a significantly greater odds of passing the bar exam at the 1390 cut-off than did first-gen women (39.25% passage rate; CI95% [30.48%, 48.78%]), OR = 2.08, SE = 0.51, z = 2.95, p = .017, such that continuing-gen women were approximately 46% more likely to pass than first-gen women. In

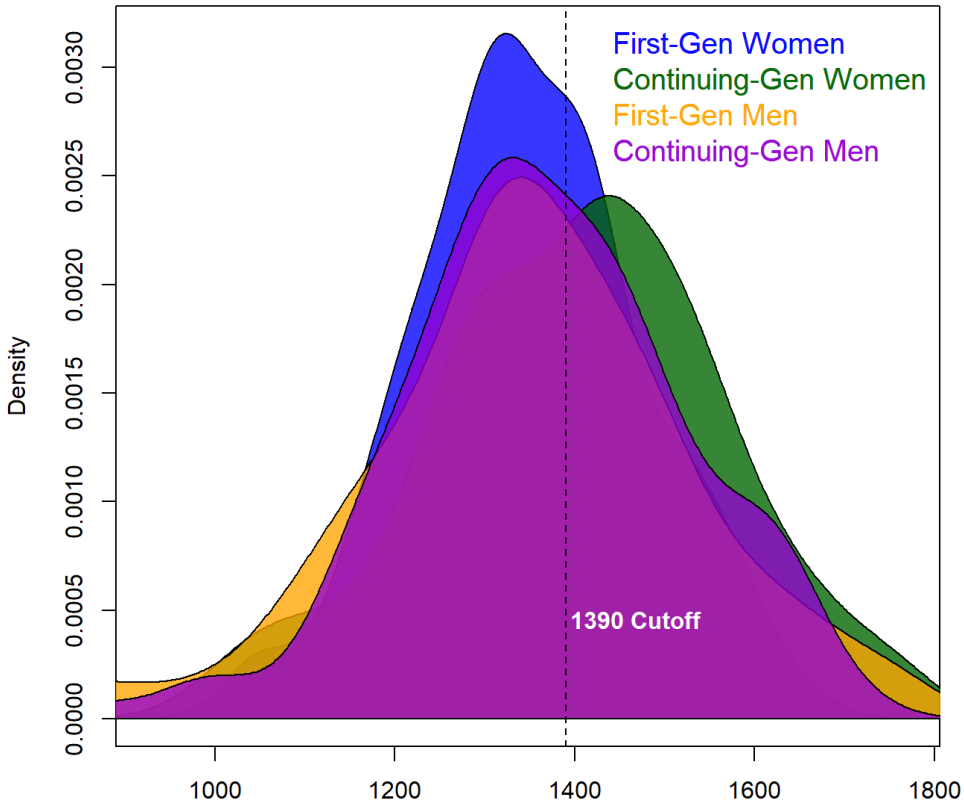
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contrast, no significant difference in the odds of passing the bar exam emerged between continuing-gen men (43.80% passage rate; CI95% [35.24%, 52.75%]) and first-gen men test-takers (41.67% passage rate; CI95% [29.95%, 54.41%]), OR = 1.09, SE = 0.35, z = 0.27, p = .993. Lastly, consistent with the findings on total bar scores, the odds of passing the bar between first-gen women and men of either college-going status did not significantly differ. That is, there were no significant differences in the odds of passing the bar exam between continuing-gen men and first-gen women, OR = 1.21, SE = 0.33, z = 0.70, p = .899, or between first-gen men and first-gen women, OR = 1.11, SE = 0.36, z = 0.31, p = .990; see Figure 8 and Figure 9.

Figure 8

Feb 2021 Total Bar Exam Score Distribution by Gender and First-gen Status



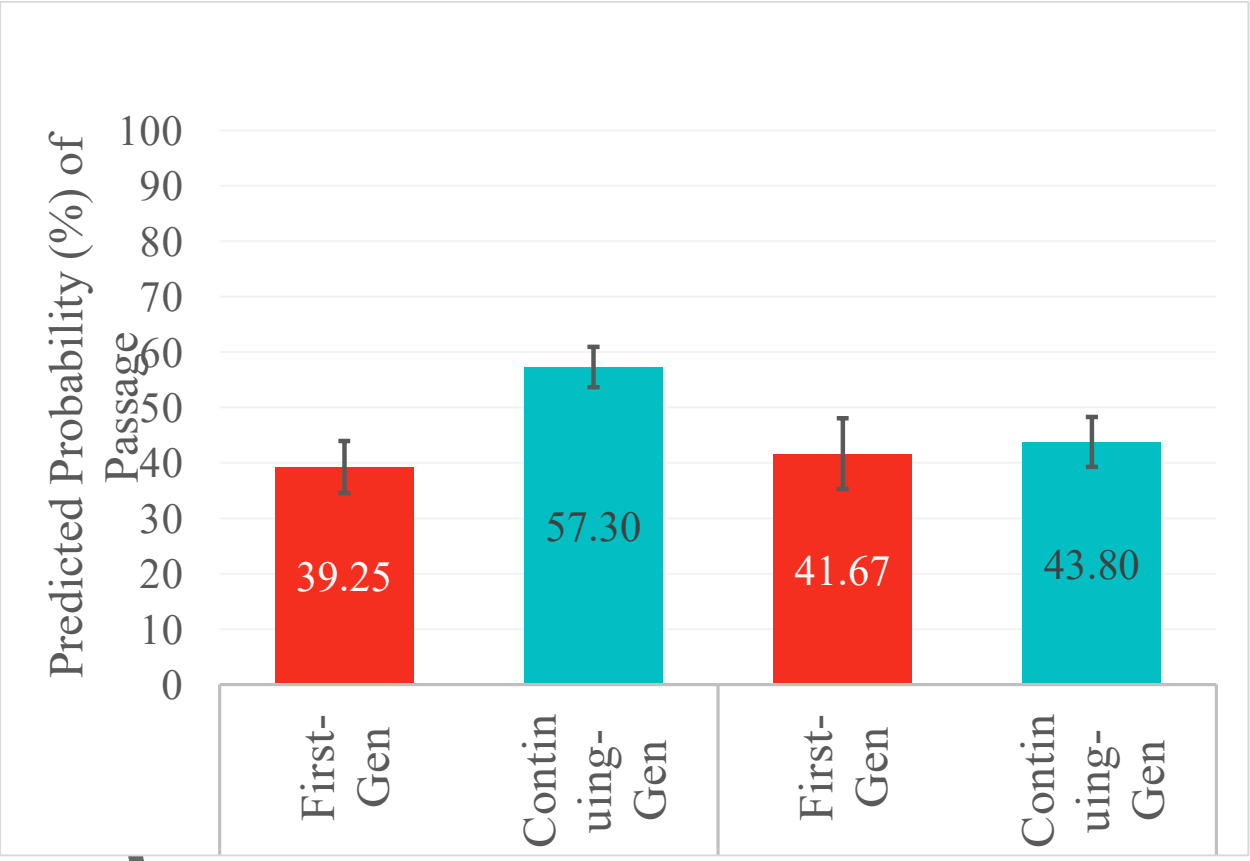
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Figure 9

Feb 2021 Bar Exam Passage Rate by Gender and First-gen Status



Note. Error bars represent standard errors.

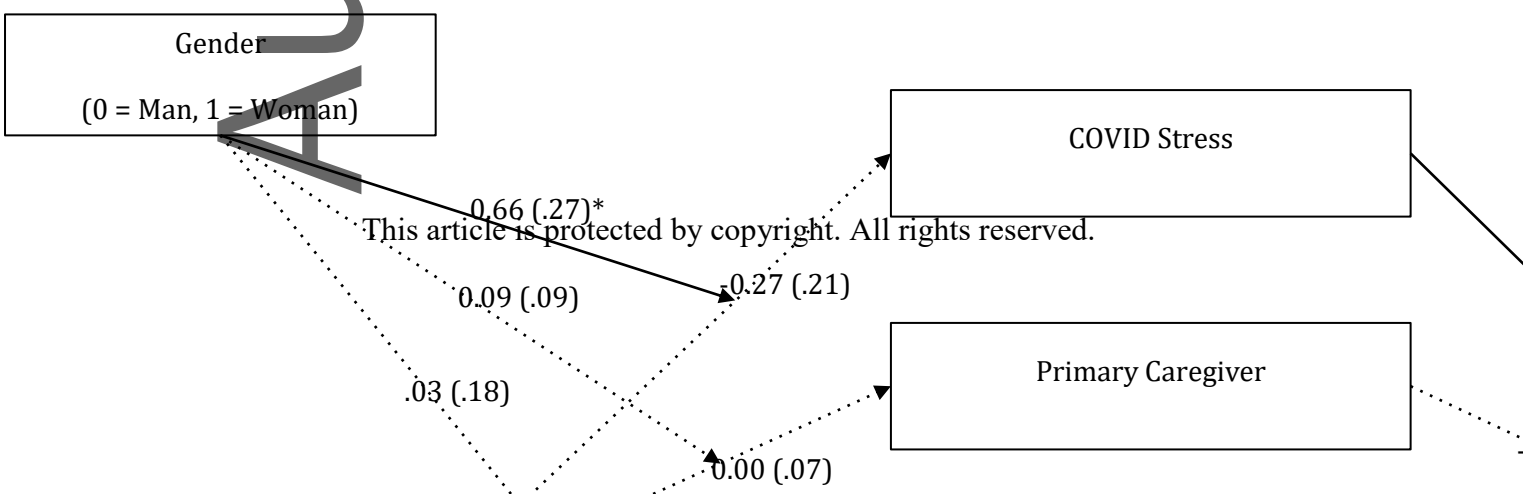
Mediation through Psychological and Structural Burdens

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Lastly, we conducted an identical moderated parallel mediation analysis as in Study 1 to determine whether the three risk-factors to exam success (i.e., composite of pandemic-related stress, primary caregiving status, and working more while studying) explained intersectional disparities observed on bar performance among test-takers of the February 2021 exam. Consistent with Study 1 and the analyses above, gender significantly moderated the relationship between first-gen status and COVID-19 stress, b = 0.66, SE = 0.27, p = .014, with first-gen women reporting the most stress. Pandemic-related stress in turn predicted lower bar exam performance, b = -14.82, SE = 5.65, p = .009, above and beyond the structural disadvantages of primary caregiving and working while studying. Although in the same direction, for first-gen women the conditional indirect effect of first-gen status on bar scores through COVID-19 stress did not reach statistical significance, b = -5.86, SE = 3.38, p = .083. However, for first-gen women, the conditional total indirect effect was significant, b = -14.28, SE = 4.94, p = .004, suggesting that the cumulative burden of COVID-19 stress as well as prevailing structural demands of primary caregiving and working while studying in part explained their bar exam performance. However, the individual paths suggest that pandemic-related stress and working while studying were the factors that predicted lower bar performance in February 2021 (see Figure 10).

Figure 10

First Gen Status, Moderated by Gender, Relates to Lower Bar Exam Performance through COVID Stress Composite, Primary Caregiving Status, and Working While Studying



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Note. For first-gen women, the conditional total indirect effect was b = -14.28 (4.94)**. Though in the same direction, for first-gen women the conditional indirect effects through each mediator alone did not reach significance. For first-gen women, the conditional indirect effect through COVID stress was b = -5.86 (3.38), p = .083, the conditional indirect effect through primary caregiving status was b = -2.45 (2.21), p = .268, and the conditional indirect effect through working while studying was b = -5.98 (3.35), p = .075. We report unstandardized betas with standard errors in parentheses, b (SE). ***p < .001, **p < .01, *p < .05, †p = .058.

Note. For COVID stress R2 = .026. For primary caregiving status R2 = .006. For working while studying R2 = .042. For total bar scores R2 = .049.

Discussion

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Findings from Study 2 revealed the unique disparate group impacts of the COVID-19 pandemic on U.S. law students and graduates who took the February 2021 bar exam. Replicating a central finding among test-takers of the October 2020 bar exam (Study 1), we found that first-gen women test-takers of the February 2021 bar exam reported more pandemic-related stress overall in Study 2, and this stress predicted lower bar exam success, even when controlling for the structural burdens of caretaking and working while studying. Interestingly, first-gen women's performance was not sufficiently explained through COVID-19 stress alone, but rather through the cumulative burden of pandemic-related stress and structural demands of primary caregiving and working while studying for the high-stakes exam.

At the same time, we also observed unanticipated outcomes among the February 2021 cohort. For example, the bar exam performance of first-gen women was comparable to their male peers, which may be, in part, a reflection of the overall lower performance on the February 2021 exam due to differences in the types of test-takers making up each cohort and the longitudinal progression of the pandemic elaborated in more detail in the general discussion. Another reason why the results across the October 2020 and February 2021 cohorts may differ is that in Study 1, the COVID-19 stressors were assessed more proximate to the bar exam itself (while receiving the situated-stress mindset intervention), while in Study 2, the COVID-19 stressors were assessed when test-takers first registered for the bar exam (before receiving the situated-stress mindset intervention). As such, the measures collected in Study 1 may have provided a clearer depiction of how stress appraisals influenced experiences studying for the bar exam and ultimately performance outcomes.

However, consistent across Study 1 and Study 2, women with fewer advantages (i.e., first-gen women) continued to severely underperform relative to women with greater

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advantages (i.e., continuing-gen women), whereas performance disparities across generation-in-college status on the bar exam among men were minimal. Moreover, first-gen women's performance on the February 2021 exam was well explained through the cumulative effects of the COVID-19 stress they experienced most, as well as prevailing structural burdens of caregiving and working while studying.

General Discussion

Taken together, we found that the COVID-19 pandemic magnified inequities experienced by U.S. law students and graduates preparing for the bar exam, particularly challenging women whose parents did not graduate from college (first-gen women) and undermining their ability to reap the benefits of their professional degrees. That is, across the October 2020 and February 2021 cohorts, first-gen women consistently reported the most stress produced by the pandemic overall and underperformed on the bar exam relative to women with more social advantages (i.e., continuing-gen women). Crucially, this pandemic-related stress—most experienced by first-gen women—predicted lower bar exam scores even when controlling for prevailing structural burdens shouldered more by economically disadvantaged test-takers regardless of gender (i.e., primary caregiving, working while studying). These findings exemplify how the pandemic has exacerbated inequalities and undermined the professional advancement of women who contend with multiple intersections of disadvantage. Concerningly, the disparities experienced by first-gen women preparing for this high-stakes professional licensing exam are consistent with similar patterns across the world, underscoring the impediments to professional success encountered by structurally disadvantaged women amidst the pandemic (e.g., Atkinson & Richter, 2020; Ayittey et al., 2020; Del Boca et al., 2020; Ledgerwood et al.,

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2021; Matthews, 2020; Raile et al., 2020; Ranji et al., 2021; Thomas et al., 2021; Warren & Lyonette, 2020, 2021).

Several implications stem from this investigation. Firstly, the global pandemic has had widespread harmful effects, including impairing the health, educational, and professional outcomes of structurally disadvantaged women (Ranji et al., 2021; Rudenstine et al., 2021). Consistent with these patterns emerging across the world, the current investigation demonstrates how the pandemic magnified inequities by placing structurally disadvantaged women at greater risk of pandemic-related burdens, associated stress, and negative career outcomes.

Prior to the pandemic, the socioeconomic circumstances of these women were marked by precariousness, and the COVID-19 pandemic further contributed to this precarity. For example, first-gen women experienced greater stress relating to caregiving burdens during the pandemic and lockdowns—caring for children, aging parents, and other family members forced to stay home while attempting to prepare for the bar exam. At the same time, first-gen women also experienced greater stress relating to financial hardship. Consistent with emerging findings (Jayaram & Maconi, this issue; Owens et al., this issue), these conflicting demands between family life, household finances, and career aspirations placed significant pandemic-related stress and strain on structurally disadvantaged women, which impeded their professional growth. This is of concern for multiple reasons, including that epidemiological studies consistently reveal that higher levels of stress are associated with health risks, including cardiovascular disease (e.g., Sumner et al., 2015) and because failing the bar exam will have short- and long-term consequences on the economic and career trajectories of these vulnerable women who already contend with socioeconomic precariousness.

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At the same time, the current analysis casts light on the unequal pathways to professional advancement for first-generation students in general, and among law students who are first-generation students in particular. Past research revealed that students with low SES have fewer opportunities and resources to succeed in university contexts and contend with psychological friction, including emotional distress, belonging uncertainty, self-efficacy concerns, identity threat, and limiting beliefs about their potential to excel (Jury et al., 2017; Stephens et al., 2014). The current research reveals similar disadvantages for first-gen students in the legal profession pipeline: we found that first-gen students tended to shoulder more structural impediments to exam success, including taking care of dependents and working while studying, and first-gen women in particular experienced more pandemic-related stress. Structural and psychological burdens such as these are likely stressful and disruptive to test-takers' bar preparation and ultimately exam success under normal conditions, and were likely especially so during this time of global upheaval.

Coupled with these structural and psychological burdens, the underperformance of first-generation students on this high-stakes professional licensure exam are of concern: first-generation students—who are also often people of color—lack the "social capital" or insider knowledge of professional norms and networking connections that promote the success of their continuing-generation and White counterparts (Stetz, 2021). As such, these performance disparities on the bar may lead to worse short-term and long-term career outcomes in a legal profession that exalts an ideology of rugged independence (Stephens et al., 2012). Relatedly, the National Association for Law Placement (NALP) found that among the class of 2020, the median salaries of graduates who have at least one parent with a JD degree or who have a bachelor's degree or higher (but no JD degree) were approximately $13,000 and $8,000 higher,

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respectively, than graduates who do not have a parent with a bachelor's degree or higher (i.e., first-gen students; NALP, 2021). While the struggles of first-generation students have been magnified since the pandemic, we find that this is especially so for first-gen women who contend with intersectional disadvantages and associated stress, depriving them of the professional and economic benefits associated with continuing-gen status.

The current study also exemplifies the uneven and inconsistent gains that women, especially working-class women, have made in professional settings (England, 2010). The current findings suggest that, while structurally disadvantaged women underperformed compared to other groups overall on the October 2020 bar exam, structurally advantaged women appeared to outperform others—at least descriptively—on the February 2021 bar exam. This is a complex reality in which stigmatized identities and economic, socio-political, cultural factors interact (Hankivsky, 2012), which is consistent with the theory of intersectionality. The inequities that women encounter differ when gender intersects with other social identities, including class, race/ethnicity, and educational attainment (Crenshaw, 1989), and the current findings underscore the importance of studying the experience of women along multiple axes of social privilege and oppression.

A second implication of the current work is that, absent an intervention, the COVID-19 pandemic will challenge the legal profession's core values of diversity, equity, access, and inclusion, and may elevate mental health challenges among law students and lawyers. Firstly, having a diverse and inclusive legal professional enhances the administration of justice, ensures fairness, and promotes the rule of law, core values of the legal profession (Almarante et al., 2020). For example, enhancing access to the legal profession for members of structurally disadvantaged groups, including first-gen women, is essential in order to enhance the real and

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perceived fairness and legitimacy of the legal system, to secure legal services for diverse members of the public, and to increase access to justice for all members of society, especially in our multicultural and interconnected world. Of concern, the current findings reveal the precarity that structurally disadvantaged women experience when seeking to join the legal profession and that additional interventions and support are necessary to address these inequities. Secondly, prior to the pandemic, U.S. law students and lawyers suffered from anxiety, stress, depression, mental illness, and alcohol/substance abuse (Krill et al., 2016; Organ et al., 2016; Quintanilla & Erman, 2020). Before COVID-19, law students and lawyers were distressingly likely to suffer from mental health problems, with lawyers suffering depression at twice the rate of the general population and at higher rates than other professions (DeBlasis & Usman, 2018; Organ et al., 2016). The current findings reveal that the global pandemic has exacerbated stressors for U.S. law students and graduates and done more so for first-gen women, underscoring the need for programs and interventions which address mental health challenges in the legal profession that have metastasized.

Thirdly, the current work calls into question the validity of employing high-stakes standardized exams as a gatekeeping feature of professional licensing. Akin to other high-stakes tests such as the SAT, GRE, and LSAT (Dalessandro et al., 2012; Miller et al., 2019; Reeves & Halikias, 2017) this high-stakes, standardized exam reproduces and compounds discrimination by disproportionately excluding members of structurally disadvantaged groups (Walton et al., 2013). Like similar exams, the social biases on the bar exam are the product of many complex structural and psychological causes, including structural and racialized education debt (deprivation) placed on lower-SES groups in U.S. society (Ladson-Billings, 2006) and stereotype threat (Beilock et al., 2007; Schmader et al., 2008; Steele & Aronson, 1995; Walton & Spencer,

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2009). For instance, research reveals that high-stakes, standardized exams are typically offered in contexts that raise concerns among many test-takers of negatively stereotyped groups that their underperformance will confirm negative stereotypes about the intellectual capacity of the groups to which they belong (Steele & Aronson, 1995). Moreover, the exacerbated stress and structural inequalities produced by the pandemic may contribute to social identity threat, disparate psychological concerns that lead people to experience threat based on their social identities (Steele et al., 2002). Exacerbated structural and psychological burdens such as these undermine the ability of those already at the margins to adequately prepare for high-stakes exams, contributing to performance disparities and, thus determining who join the legal profession and gain positions of power in the U.S..

In this regard, the present findings suggest that first-gen women contend with multiple axes of disadvantage, including prevailing structural burdens experienced most by lower SES groups coupled with stress produced by the pandemic. None of these social biases magnified by the COVID-19 pandemic on the bar exam relate to a valid purpose of this professional licensing exam: screening out prospective lawyers who would in fact harm their clients and the public. As such, current findings highlight that gatekeeping on this licensing exam during the pandemic has strayed wide from the mark of its intended purpose.

While the pattern of results that emerged among women was consistent across the October 2020 and February 2021 exams, we note the unanticipated result that performance among first-gen and continuing-gen men fell considerably on the February 2021 exam. This unexpected finding relates to an ecological limitation of our research and replication strategy. While we sought to replicate the results on both pandemic-related stress and bar performance across these two time points, the global pandemic was fast-moving and ever-changing during

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the timeframe of these studies. That is, the time course of the pandemic changed considerably across these two time points, and the two cohorts sitting for the exam varied considerably across administrations of the exam. As previously explained, the October 2020 exam served as the proxy for the July 2020 exam. In result, the time period for study was extended by several months for the October 2020 cohort, and at the same time, the number of multiple-choice questions on the October 2020 exam was cut. In prior years, the July bar exam is the largest administration of the exam each year, and the July exam has the largest number of first-time takers who tend to outperform repeat test-takers. In contrast, the February 2021 exam entailed a far shorter period for study and each year has a larger number of repeat test-takers sitting for the exam. In short, the real-world performance differences between administrations of the bar exam are complex and likely multiply determined by selection effects, cohort effects, time course effects of the pandemic, including societal changes to cope with the virus, and changes to the exam instrument itself between exam administrations.

Yet a consistent pattern emerged across these two studies—first-generation women consistently experienced more pandemic-related stress overall, and severely underperformed on the bar exam compared to their continuing-generation women peers. Crucially, the stress produced by the pandemic shouldered most by first-gen women, predicted lower bar exam performance above and beyond prevailing structural impediments to exam success. This suggests the importance of studying women at intersections of social disadvantage—indeed, the adversities and stress first-gen women experienced preparing for the bar exam in mid-2020 and early 2021 perhaps serve as a cautionary tale for the likely outcomes of other marginalized groups at later time points of the pandemic and at future times of global crisis.

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In closing, we note that this research can, and has in California already, informed structural and psychological interventions to bolster the success of at-risk groups in the legal profession (see Quintanilla & Erman et al., 2020). Moreover, this research highlights the need for policy prescriptions addressing adversities that these at-risk groups, including low-SES women and women of color, contend with when seeking professional advancement (also see Hayes, this issue). First, there are marked disparities on high-stakes exams attributable to the unique challenges that at-risk groups encounter, and minimum passage thresholds can systematically preclude vulnerable groups from advancing in their careers (i.e., low-SES women). As such, these findings reveal the importance of lowering minimum passage thresholds or changing professional exams to more appropriately assess professional competence and skill. Secondly, these group-based disparities are shaped by adversities extraneous to the criterion ostensibly measured by these high-stakes entrance exams (e.g., intelligence), calling into question the use of these entrance exams more generally. Accordingly, this research underscores the need for policy prescriptions that deemphasize the use of these entrance exams as sorting devices, especially in periods like the present, which are marked by societal stress, change, disruption, and upheaval. We are confident that policy prescriptions such as these will support diversity, equity, and inclusion in professional pipelines—addressing systemic challenges magnified by the global pandemic.

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Author Biographies

Erin Freiburger is a doctoral student in social psychology at Indiana University Bloomington. She completed her Bachelor of Arts degree in psychology with a minor in Spanish at Hope College in 2018. Erin went on to work as a laboratory manager at the University of Michigan for two years where she explored the neural correlates of aging with neuroimaging techniques. In the Fall of 2020, Erin joined the Indiana University community to begin her graduate school career and contribute to research she finds particularly meaningful. Her research interests largely center on intersectional biases in person perception as well as intersectional inequalities. Erin's achievements have been recognized in many outlets; she is a member of the Phi Beta Kappa Honor Society and Psi Chi National Honor Society, and recently received the William

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Victor D. Quintanilla, JD, is a Professor of Law & Van Nolan Faculty Fellow at the IU Maurer School of Law and an Affiliated Professor of the IU Department of Psychological and Brain Sciences. His research investigates access to justice and legal education by drawing on theory and methods within the field of social psychology, including experiments conducted with judges, lawyers, law students, and members of the public. He is currently serving as the principal investigator for a research line that seeks to design interventions that address social identity threat in environments and promote growth mindsets, social belonging, and adaptive stress mindsets to enhance well-being in law schools and performance on the LSAT and bar exams, with an emphasis on the experiences of racial/ethnic minorities, first-generation college students, and members of disadvantaged groups. Prof. Quintanilla has written several articles about this approach, Mindsets in Legal Education. He served as a Fellow of the Center for Advanced Study in the Behavioral Sciences at Stanford University (2015-2016). He presents his research at a variety of conferences, including the Society for Personality and Social Psychology (SPSP), the Society for the Psychological Study of Social Issues (SPSSI), the Association for Psychological Science (APS), and the Law & Society Association (LSA).

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