Protecting Judges, Protecting the Law: How Gender, Social Support, and Identity relate to Judicial Stress

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Abstract: Judges' wellbeing can affect society as a whole. The Model of Judicial Stress (MJS) proposed relationships between multiple personal and social factors, workplace stress, and a variety of negative personal and professional outcomes that can result from high stress. Prior studies have found gender differences in stress among judges, as well as stress buffering effects from personal social support networks. In this study, we examined 76 judges' self-reported levels of three types of stress and considered the potential benefits of social support from workplace networks – in addition to personal networks – as a separate buffer for stress. In addition, we tested relationships between stress and social identity, and stress and stress-intervention preferences. Consistent with previous research, this study found gender differences for the different stress measures: burnout, secondary traumatic stress, and general stress. Further, workplace social support was negatively related to burnout when controlling for the effects of gender, time on the bench, and nonworkplace social support. Judges who placed higher importance on their "judge" identity reported higher levels of stress when they had lower social support from personal networks. Finally, stress mediated the relationship between social support and job satisfaction. Addressing judicial stress can promote wellness in judges and society in general.

Keywords: Judicial stress, health, society, social support, social identity, Model of Judicial Stress.

Judges play an integral role in the promotion of justice in most societies (Miller & Hill, 2026). The cases they oversee determine whether someone goes to prison (and for how long), whether a wrong-doer must pay damages to the person they hurt, which parent gets custody of a child after divorce, whether a parent loses custody of their child, whether a business loses its license, or whether a defendant is competent to stand trial—among many other decisions with serious consequences. As such, it is imperative that judges are healthy enough to carry out the law in the courtroom in order to protect the integrity of the legal system and the public's trust in the law.

An emerging topic in legal studies is the wellness of judges who handle legal trials (e.g., Fine *et al*., 2024; Miller, Edwards *et al*., 2018). Miller and Hill (2026) recently proposed an Updated Model of Judicial Stress to consolidate the existing research and make predictions about yet untested hypotheses related to stress judges experience. Judges' stress and wellbeing can affect many people: their family, their colleagues, the people who appear in their courtrooms, and society as a whole (Chamberlain & Miller, 2009). Although stress affects people in a wide variety of occupations, certain professionals might be at a higher risk for experiencing workplace stress or might experience higher levels of stress due to the nature of their position (Chamberlain & Miller, 2009). One example of a high stress occupation is that of judges. Judges must make daily decisions that directly affect the lives of the people they serve; the weight of these decisions, combined with duties associated with being a judge, can cause judges to experience elevated levels of stress (e.g., Lebovits, 2017). Work as a judge also carries higher safety risks than other jobs, which can add to stress (Harris *et al*., 2001; Miller, Reichert, *et al*., 2018). Many judges have reported experiences leading to vicarious trauma (O'Sullivan *et al*., 2022), and judges provide a wide range of responses when asked about whether they have ever experienced stress from hearing the traumatic experiences of people in the courtroom (e.g., Edwards & Miller, 2019).

JUDGES, STRESS, AND SOCIETY

There is much evidence that judges likely experience stress. They make decisions that have major impact; for instance, an administrative law judge must decide whether to revoke a day care provider's license in response to complaints. Revoking the license would destroy the provider's career, but not doing so would put children at risk. Judges might have to decide issues related to education, health, crime, politics, religion, and family.

Not only can the wellbeing of judges can affect the people who appear in courtrooms, it can affect society

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more broadly. For instance, judges (like all humans) could make decisions in a way that is affected by implicit bias, a topic explored in depth by authors in the book "*Enhancing Justice, Reducing Bias"* (Redfield, 2017). If judges make decisions that lead to bias against Black defendants, it would communicate to society that Black people are dangerous or less important than White people—continuing racial bias in the society. This in turn could make Black people less likely to seek help from legal authorities or the courts and give the perception that the court system is not impartial.

When people are stressed, they are more likely to rely on stereotypes and biases (Fine *et al*., 2024). Thus, it is important to study judicial stress and the potential outcomes such as legal outcomes, judicial impartiality, quality of decision-making, access to justice, and public trust in courts. Research has indicated that stress does, indeed, relate to decision-making quality. Fine and colleagues (2024) found that, among court employees, "stress negatively affected employee outcomes including cognitive performance, job performance, job satisfaction, and health outcomes" (p. 381). Judges who are under high stress scored poorer on logic problems, suggesting they were relying more on emotions or instincts. This could lead to decisions that are harmful for the judge, the parties in any particular legal case, and society in general.

THE MODEL OF JUDICIAL STRESS

To better understand stress among judges, Miller and Richardson (2006) proposed the Model of Judicial Stress (MJS) which includes numerous predictive factors for and consequences of judge stress. This model was expanded in 2025 by Miller and Hill (2026). The consequences of judicial stress include negative impacts on job performance, decision-making, attention to detail, patience, health, emotions, and cognitive abilities. Such threats can ultimately affect legal outcomes, such as judicial impartiality, access to justice, and public trust in courts.

One potential predictor of judge stress proposed by the MJS is judges' level of social support. Although previous research supports the notion that increased social support relates to lower perceived stress in judges, prior research has found that this relationship was not consistent across all judges (Miller, Reichert, *et al*., 2018). Miller, Reichert, and colleagues (2018) found that, controlling for age, social support was related to certain stress measures—specifically, general stress and burnout—but only for male judges. However, that study only measured social support from friends, family, and a significant other (see Dahlem *et al*., 1991). It is possible that different types (e.g., informational, emotional)and sources (e.g., workplace, family) of social support, which have not been widely measured among judges, might differentially relate to various types of occupation-related stress –and might do so differentially for male and female judges (Miller, Reichert, *et al*. 2018).In addition, how strongly one identifies with their role as judge could affect how they experience and respond to the stressors of the position.

The main purpose of this study is to examine the relationships between the source of support and four specific types of workplace social support (instrumental, informational, approval, emotional) on workplace stress in judges. Additionally, this research explores judicial social identity and gender as moderators for these relationships. This study also explores the relationship between stress levels and job satisfaction and performance among judges as described in the MJS. Finally, we measured judges' attitudes toward and recommendations for different stress intervention options.

JUDICIAL STRESS

Judges' experiences of stress could have severe, negative consequences for both the judge, for those they are meant to serve, and society in general (Miller, Edwards, *et al*., 2018). Social scientists have developed various frameworks and measurements used to better understand and combat judicial stress (Miller & Richardson, 2006). To understand and address judicial stress, it is important to understand the factors that contribute to workplace stress for judges and the potential outcomes of work place stress. To do this, it is necessary to measure judicial social support and stress in a more comprehensive way.

WORKPLACE STRESS

Stress is experienced when a person experiences a demand that is beyond their perceived ability to successfully deal with and cope with the demand (Cartwright & Cooper, 1997; Colligan & Higgins, 2005). Workplace stress is, therefore, the lack of perceived ability to deal with work-related demands (Colligan & Higgins, 2005). This can result in negative physical and mental outcomes for both the worker and their others in the organization (Bremer, 2004). Examples of

workplace stress include difficult interpersonal relationships with coworkers and supervisors, lack of clarity in an employee's organizational role, and occupation-specific factors, such as expected pace, workload, autonomy, and levels of isolation (Colligan & Higgins, 2005).

Compassion fatigue (comprised of burnout and secondary traumatic stress) specifically applies to those who are affected by another person's trauma in a work-related setting (Salston & Figley, 2003). In judges, compassion fatigue could be experienced during the course of a trial and caused by the empathy or compassion felt for certain parties in legal proceedings, such as victims recounting traumatic events or even compassion toward defendants who receive excessive or unjust sentences (Chamberlain & Miller, 2009). The two subcomponents of compassion fatigue – secondary traumatic stress and burnout – relate to the stress experienced by a person who is helping another work through a traumatic event and the physical or emotional stress caused by an overload of responsibilities, workplace inequality, or lack of control over job-related factors, respectively (Adams *et al*., 2006; Chamberlain & Miller, 2009; Miller, Reichert, *et al*., 2018).

To measure stress, the current study implements multiple stress scales – the first examines a general level of stress and the other, the compassion fatigue scale, examines types of stress more specific to care work occupations. General stress is a more comprehensive assessment, and this type of stress can result from many different factors, including work overload, work-life balance issues, problems with relationships, or financial strain (Clay, 2011). The Secondary Traumatic Stress scale and Burnout scale are separate subscales of an overall Compassion Fatigue Scale (Adams *et al*., 2006).

SOCIAL SUPPORT

Social support buffers stress, including stress among judges (Miller, Reichert, *et al*., 2018; Miller & Richardson, 2006) and therefore plays an important role in the stress response. Historically, there has been a lack of consensus concerning the definition of social support and how best to measure it (Sarason & Sarason, 2009). Social support broadly refers to a variety of types of emotional and practical support that are available from different sources in a person's social network. The concept is recognized as multifaceted and complex, and researchers have developed several different scales to measure different aspects of social support. Previous research on judicial stress measured social support using the Multidimensional Scale of Perceived Social Support (MSPSS), which focuses on family, friends, and a significant other as sources of support (Dahlem *et al*., 1991). Prior research found evidence for the buffering effect of these sources of social support on workplace stress for judges (Miller, Reichert, *et al*., 2018), but only for male judges. The sole reliance on the MSPSS in that study allowed researchers to consider the *amount* of social support judges received from sources in their personal lives, while the *types* of social support were undifferentiated, and thus were not investigated. Although the MSPSS is widely used, it does not reflect all types of support, and none of the items measure support specific to the occupational setting.

Himle and colleagues (1991) explored the relationship between four specific *types* of social support and workplace stress among social workers. The four types of support they measured separately were instrumental (tangible help or assistance), informational (providing important information), emotional (expressions of empathy and care), and approval (positive feedback), and they measured each of these types of support from two sources – co-workers and supervisors. Each of these types of support reflects an important component of overall workplace support. Both instrumental and informational support buffered burnout for the social workers in that study, including emotional exhaustion and personal accomplishment (Himle *et al*., 1991). However, neither approval nor emotional support buffered workplace stress (Himle *et al*., 1991). Perhaps work culture or social norms discouraged employees from seeking emotional support from coworkers, especially if the environment was competitive, or if this was perceived as a weakness or incompetence (Himle *et al*., 1991). The work culture might not provide sufficient time to engage in emotional support with coworkers, and emotional support might not offer sufficient buffering because it does not address the root causes of the stress. Social support that relieves the causes of work stressors is likely to be more effective in buffering workplace stress (Halbesleben, 2006).

Judges routinely work with victims, defendants, and others who have experienced trauma or extreme life stress, which partially explains judges' own levels of secondary traumatic stress (Chamberlain & Miller, 2008). Judges must also make important decisions that have consequences for the people in their courtroom,

and which could impact future cases. It follows that workplace sources of social support, especially instrumental and informational support, could have stronger stress-buffering effects for judges. Halbesleben (2006) found that the source of social support was more or less effective depending on the type of stress being buffered. Work sources of social support, which are specifically relevant to job tasks, are more strongly related to exhaustion (Halbesleben, 2006). In particular, instrumental support (when a coworker or supervisor helps complete tasks) has been shown to buffer the negative effects of workplace stress (Himle *et al*., 1991). It follows that support from people outside of the workplace would be less effective because those sources of support are unable to relieve specific job-related burdens.

To bridge the gap between previous research on judges and workplace social support, it is important to compare the effects of the different networks, sources, and types of social support on general and work-related stress. In this study, two measures of social support were used to differentially capture social support received from different networks; the MSPSS was used to capture personal network support, and the scale developed by Himle *et al*. (1991) was used to capture professional network support, including different types (instrumental, informational, approval, emotional) and sources (colleagues and supervisors) of social support. Using a workplace specific, multidimensional measure of social support could potentially demonstrate stronger effects and better identify differences by gender. However, the role of the different networks as sources of social support (i.e. workplace and non-workplace support) in buffering stress could vary depending on both the type of stress, and the strength of judicial social identity.

SOCIAL IDENTITY

People construct their identities, in part, based on their group memberships (Hogg *et al*., 1995). For example, being a lawyer, or a Christian, or an American might be a very important part of someone's self-concept. These social identities can exert influence over that person's behaviour, but to do so, the person must regard that group memberships as important (Hogg *et al*., 1995). One major focus of social identity theory is explaining how group members respond to group norms, stereotypes, and prototypes, and try to fit in with their group or behave as a model group member (Hogg *et al*., 1995). Group norms (as well as stereotypes and prototypes) provide guidance regarding how group members should behave, and how group members identify who is "in" or "out" of the group.

When group identities are salient, the norms of a group can be very powerful determinants of behaviour (Hogg *et al*., 1995). The ways that judges cope with stress could be, in part, determined by group norms within their courthouse. These norms might encourage or inhibit behaviours such as self-care and provision or acceptance of social support. They might even discourage the expression of emotions at all or require judges to closely monitor their own and others' emotional expressions (Snider *et al*., 2022). If aspects of the judicial social identity include resiliency, self-efficacy, and independence, then group norms might inhibit the provision and receipt of social support. Conversely, if norms in the court encourage judges to care for their mental health, then judges with a strong attachment to the judicial identity would be more likely to exchange social support with their colleagues. It is also possible that, if it conflicts with additional identities or roles, or results in social isolation, a strong social identity as a judge could introduce additional stress. Examining whether the strength of judges' social identity moderates the relationship between social support and stress would provide additional insight and topics to explore in future research. If there is a moderating effect, it is also important to know the direction of the effect because there is a possibility social identity strength would increase or decrease levels of sought out social support.

GENDER

There are long-identified gender differences in both stress (Kessler *et al*., 1985) and social support (Shye *et al*., 1995), with women typically reporting higher amounts of both (Antonucci & Akiyama, 1987; Matud, 2004; McDonough & Walters, 2001), though men may receive more benefits from social support (Stronge *et al*., 2019). As discussed, gender differences in judges' social support and stress relationships have been observed when measured with a more generic measure of support. It is not clear though if those findings are a measurement artifact and whether gender is indeed a moderator, and perhaps males and females respond differently to various types of support when measured more specifically. To help clarify whether these relationships are moderated by gender, we use more differentiated measures of social support as evidence shows outcomes differ when more specific types of support are examined (Uchino, 2009).

We also examine whether gender and other demographic differences (e.g., time on the bench) relate to levels of reported stress to help provide insight for court officials to reduce stress on judges; that is, knowing certain demographic variables relate to stress levels might suggest a more imminent need for stress reduction assistance for some populations. Therefore, in this study, we aim to identify whether we can replicate or expand the previous findings on gender effects in both support and stress.

MODEL OF JUDICIAL STRESS

The current study tests part of the Model of Judicial Stress (MJS; Miller & Hill, 2026), which includes possible causes and outcomes associated with judges' experienced stress (see Figure **1**) including the influences of social support and gender. The MJS posits that three primary characteristics – personal, job, and environmental – contribute to stress and safety concerns (with safety concerns also affecting stress levels). *Personal characteristics* include social support, demographic variables (e.g., age, gender, or family size) as well as personality traits (e.g., empathy, compassion, or idealistic views of justice). *Job characteristics* include aspects such as caseload size or frequency of stressful trials. Finally, e*nvironmental characteristics* that can lead to increased stress and safety concerns include judges' increased awareness of crime due to their occupational environment or a potential lack of faith in law enforcement (Miller & Hill, 2026). The MJS predicts that this stress, in turn, affects judges' personal and professional lives. *Personal effects* could include worsened health, increased concern for personal safety, or reduced quality of relationships with others. Potential *job effects* include reduced job performance, job satisfaction, and an increase in days of work missed due to stress (Miller, Reichert, *et al*., 2018; Miller & Hill, 2026).

The proposed stress mediated characteristic-outcome relationship in judges predicted by the MJS has generally been supported in previous research (Harris *et al*., 2001; Miller, Reichert, *et al*., 2018). Flores *et al*. (2009) found gender differences in reports of experienced stress as well as a significant relationship between stress and reported safety concerns. A study by Miller, Reichert, and colleagues (2018) found that social support significantly related to less perceived stress and burnout as well as increased job satisfaction, but this effect was only found in male judges. However, judges might draw upon either personal or professional networks for the social support they receive, which might relate to differences in reported stress levels. This study examined the relationship between different network sources of social support and perceived stress, following the MJS. The inclusion of workplace social support in the study extends the MJS and offers a more nuanced perspective on the relationship between social support and judicial stress. We also tested whether stress mediates the link between social support and job satisfaction as predicted by the MJS.

CURRENT INTERVENTIONS FOR JUDGES

To combat judicial stress and to promote social support, researchers and court officials have proposed a variety of interventions. Some commonly recommended interventions include allowing judges to go on sabbatical, offering professional counselling after particularly difficult or stressful trials, providing peer support groups, and educational or training seminars on stress reduction (Chamberlain & Richardson, 2012; Flores *et al*., 2009; Miller, Reichert, *et al*., 2018). However, judges might have various reasons for rejecting or ignoring available interventions, and not all interventions are likely to work equally well for all judges. Judges might experience greater benefits from tailored intervention approaches that ensure accessibility and address the type of stress experienced, rather than generalized attempts to apply a select few interventions to address the needs of all judges. For example, an upcoming sabbatical could add stress to a judge who is behind on filing decisions in pending cases and must finish all of their decisions before they leave. Assessing intervention preferences and how these preferences relate to judges' gender, personal circumstances, and professional background might help in improving the effectiveness of these interventions. Understanding if certain judge characteristics relate to preferences in stress-reduction interventions would allow court officials and judges to address the needs and wants of each individual judge more adequately, rather than using catch-all types of interventions.

A potential issue with these recommendations is that they come from academics who might not fully understand the wants and needs of judges. To better understand potential gaps in the literature regarding support and stress intervention recommendations, it is necessary to speak with judges to gather insight as to

what might best help them reduce their stress levels. The present study aims to fill these gaps by assessing preferences for commonly recommended stress interventions and support as well as directly asking judges what other kinds of stress interventions would personally benefit them. Directly asking judges what kinds of interventions might be beneficial will allow researchers to uncover whether there are ideas for interventions that have not previously been suggested or recommended in the literature.

METHODS

The fourth author conducted a training and collected data from attendees during the presentation. Participants viewed multiple choice survey questions on an overhead projector and responded to questions using a "clicker"—a television-remote-like device with buttons corresponding to answer options. The clicker software recorded participants' responses electronically, including consent, and saved them for analyses. Using clickers allowed all participants to take the survey simultaneously, and the judges were able to view the aggregate responses of all the other judges attending the training in "real time."

At the end of the presentation, judges had the opportunity to complete and submit a paper response sheet with four open-ended questions. The first author transcribed all legible responses, with assistance from the third author, and coded the responses.

PARTICIPANTS

Judges (n = 76) attending a training delivered by the fourth author completed a survey concerning their self-reported stress levels, perceived social support, and stress interventions. Of those who reported gender, 20 (26.3%) were female and 41 (53.9%) were male. Most judges had served fewer than five years on the bench (n = 28), though some reported more than 20 years of judicial experience (n = 9).

MATERIALS

The clicker technology used to record data allowed for up to five response options, and all the following measures were captured on scales ranging from one to five, with the lower end of the scale representing lower incidence of the phenomenon being measured. For example, a low score on any stress measure indicated lower perceived levels of stress, and a higher score indicates higher levels of stress.

STRESS

We measured stress in multiple ways used in this study. The Compassion Fatigue Scale (Adams *et al*., 2006) includes two different subscales, the Burnout and Secondary Traumatic Stress subscales, which we measured on a scale from 1 = "Never" to 5 = "Very Often." Each of these captures a different type of stress that contributes to overall compassion fatigue, and these subscales were treated independently for this study. The Burnout subscale includes items such as, "I have felt trapped by my work" and, "I feel like a "failure" in my work." The Secondary Traumatic Stress subscale includes questions such as, "How often do you experience flashbacks connected to work?" and, "How often do you experience troubling dreams similar to the experiences of people you work with (e.g., victims)?"

We measured general stress using the stress subscale of the 21-item Depression, Anxiety, and Stress measure (DASS-21; Lovibond & Lovibond, 1995). The stress subscale of the DASS-21 includes 7 items, which participants rated on a scale from 1 = "Did not apply to me at all" to 5 = "Applied to me very much, or most of the time." Items from this scale include, "Over the past week, I found it hard to wind down," and, "Over the past week, I tended to overreact to situations."

SOCIAL SUPPORT

As discussed above, we included two different measures for social support. We measured social support from personal sources using the Multidimensional Scale of Perceived Social Support (MSPSS; Dahlem *et al*., 1991)). The MSPSS includes 12 items which participants rated on a scale from 1 = "Disagree" to 5 = "Agree." This measure asks about support from family, friends, and a significant other with items such as, "There is a special person in my life who cares about my feelings" and, "My family really tries to help me."

We measured workplace social support using a scale borrowed from Himle and colleagues (1991). The Four Factor Workplace Social Support Scale (WSS) includes 8 items which participants rated on a scale from 1 = "Not at all true" to 5 = "Very true." This measure asks about four types of support received from colleagues and supervisors with items such as, "How true is it that your co-workers help you complete a difficult task?" and, "How true is it that your supervisor shows approval when you have done well?"

SOCIAL IDENTITY

The Importance to Identity subscale of the Collective Self-Esteem Scale (Luhtanen & Crocker, 1992), and the Single Item Social Identity measure (SISI; Postmes *et al*., 2013) captured the importance to participants of the social identity as a judge.

JOB SATISFACTION, HEALTH, AND OTHER OUTCOMES

Other measures captured job satisfaction (Job Satisfaction Scale; Oshagbemi, 1999), job performance, health and well-being, and stress-reduction and management preferences (e.g., preferences for going on sabbatical, attending counselling sessions, attending peer support groups, etc.), as well as demographic information.

INTERVENTION PREFERENCES

We compiled a list of common stress intervention strategies, and asked participants to rate their interest in each strategy on a scale from 1 = "Not at all interested" to 5 = "Extremely interested." These interventions included going on sabbatical, attending counselling sessions, attending peer support groups, receiving education/seminars about stress, attending stress reduction training, attending online trainings, having a mentor at work, attending social gatherings outside of work, attending work functions that provide time to interact with professional colleagues, and rotating their caseload for different types of cases (e.g., every six months).

DEMOGRAPHIC MEASURES

Participants indicated demographic information using the same clicker system. We asked participants to identify their gender as 1 = "Male," 2 = "Female," and 3 = "Prefer not to answer." Wealso asked participants to indicate their age as follows:

1. Under 30
2. 30-39 years old
3. 40-49 years old
4. 50-59 years old
5. 60 and older

OPEN ENDED QUESTIONS

Judges completed the following open-ended questions on paper. Judges did not include an identifier on the paper survey, and these responses are not connected to their survey responses which were collected electronically.

1. How can employers address Secondary Traumatic Stress and Burnout?
2. How can you use Social Support (family and friends) to reduce stress?
3. Which of these "solutions" or interventions would YOU recommend?
4. Do you have any other recommendations about what measures could be taken to address stress among judges?

RESEARCH QUESTIONS

To assess the relationships between social support, judge stress, and intervention preferences, ten primary research questions (RQ) were proposed.

- RQ1: Which networks of social support, if any, buffer workplace stress?
- RQ2: Do demographic differences relate to judge stress?
- RQ3: Are there gender differences in the effectiveness of each type of social support?
- RQ4: Does the relationship between stress and each type of social support change based on who is providing the support (supervisor or coworker)?
- RQ5: Does workplace stress mediate the relationship between social support and job satisfaction?
- RQ6: Does the strength of the "judge" identity moderate the relationship between social support and stress?
- RQ7: Do judges' intervention preferences relate to levels of stress?
- RQ8: Do judges' intervention preferences relate to levels of social support?

- RQ9: Do demographic differences relate to intervention preferences?
- RQ10: What interventions do judges mention or discuss in the open-ended question response?

RESULTS

Patterns of missing ness suggested that data were not missing at random (NMAR) and therefore data were not imputed. Scale scores and models include only the available data points. Some of the scales required transformations and, as a result, all coefficients are standardized (ß). The final statistical models presented here did not violate statistical assumptions.

Overall, judges reported moderate levels of stress (*M* = 2.80, median = 3.00) and high levels of physical (*M* = 4.10, median = 4.00) and mental (*M* = 4.48, median = 5.00) health. Judges' median response for workdays missed due to stress was "None" (*M* = 1.12) and had very high perceived job performance (*M* = 4.45, median = 4.50).

MANCOVA – RQ1 AND RQ2

We conducted a Multivariate Analysis of Covariance (MANCOVA) to test the relationship between workplace stress, social support, gender, and time on the bench. Workplace stress, the dependent variable in this model, included the DASS-21 Stress subscale as well as the Burnout and Secondary Traumatic Stress subscales of Compassion Fatigue. The independent variables in the model were both the MSPSS and WSS measures for social support, gender, and time on the bench (independent variables; see Table **1**). The results indicated differences in the stress outcomes by gender (*F* = 6.0, *p* = 0.001) and by workplace social support (*F* = 2.8, *p* = 0.048).

RQ-1: Which Networks of Social Support, If Any, Buffer Workplace Stress?

When controlling for gender and time on the bench, neither network of social support (MSPSS or WSS) was a significant predictor for secondary traumatic stress nor general stress (as measured on the Stress subscale of the DASS-21). However, workplace social support (WSS) was negatively related to burnout (ß = -0.28, *p* = 0.047). That is, increases in WSS statistically predicted less burnout. However, social support from a personal network (MSPSS) was not a significant predictor for burnout (ß = -0.009, *p* = 0.449).

RQ-2: Do Demographic Differences Relate to Judge Stress?

Overall, female participants reported higher levels of stress. Univariate results indicated that gender was related to secondary traumatic stress (ß = 0.31, *p* = 0.019), the DASS-21 stress subscale (ß = -0.51, *p* < 0.001), and the Burnout subscale (ß = 0.35, *p* < 0.006). Time as a judge was not significantly related to stress.

ADDITIONAL ANALYSES

RQ-3: Are There Gender Differences in the Effectiveness of Social Support?

We conducted a regression to determine if there was an interaction between gender and social support. No interactions between gender and types of social support were significant.

RQ-4: Do Different Sources and Types of Workplace Social Support Relate Differently to the Measures of Workplace Stress?

When WSS was broken out into coworkers and supervisors (controlling for MSPSS, gender, and time on the bench), support from coworkers had a marginally significant relationship with burnout (ß = -0.29, *p* = 0.069), with higher support from coworkers

Table 1: Gender and Workplace Social Support Related to Stress

	DF	Wilks	Approx F	Num DF	Den DF	*p*-value	Sig.
Intercept (Stress Matrix)	1	0.00135	12050.6	3	49	<2.2e-16	***
Gender	1	0.72974	6.0	3	49	0.001	**
Workplace Social Support	1	0.85199	2.8	3	49	0.048	*
Personal Social Support	1	0.95255	0.8	3	49	0.493	
Time on the Bench	1	0.97114	0.5	3	49	0.694	

Model = Stress matrix ~ Gender + WPSS + MSPSS Stress Matrix = cBind ((-1/(STSS+1))+2; Stress^-1; Burnout).

related to lower scores on the Burnout subscale. Similarly, support from supervisors had a marginally significant relationship to secondary traumatic stress (ß= 0.27, p = 0.084), with higher support from supervisors related to lower scores on the Secondary Traumatic Stress subscale. Social support from personal networks (MSPSS) was a significant predictor for general stress (ß = -0.27, p = 0.049), indicating that higher levels of support from a personal network led to lower general stress.

Individually, none of the subcomponents of workplace social support (WSS), when broken out into the type of support (instrumental, informational, approval, emotional) were significant predictors for any of the three stress measures tested.

RQ5: Does Workplace Stress Mediate the Relationship between Social Support and Job Satisfaction?

A regression analysis of the social support measures found that only WSS significantly related to job satisfaction (p = 0.01) with higher WSS predicting higher job satisfaction scores. Additionally, higher WSS significantly related to lower levels of Burnout (p < 0.01). Using both WSS and Burnout as predictors of Job Satisfaction, WSS became marginally significant (p = 0.07) whereas Burnout was a significant predictor (p < 0.05). A causal mediation analysis implementing a bootstrapping procedure (with 1000 bootstraps) suggested the Mediation and Direct effects were not significant (*p-values* > 0.05), but the Total Effect was significant (p = 0.01).

RQ6: Does the Strength of the "Judge" Identity Moderate the Relationship between Social Support and Stress?

A regression model testing the interaction between perceived social support (MSPSS) and social identity (SISI) as a predictor for was significant, $F(3, 53) = 5.83$, p < 0.002. Judges who placed higher importance on their identity as a judge had higher levels of stress when they had low levels of perceived social support (b = 0.41, p < 0.01). For judges higher in perceived social support, however, the effect of the social identity was not significant (b = -0.26, p = 0.06).

RQ-7: Do Judges' Intervention Preferences Relate to Levels of Stress?

Werana MANOVA using the single item General Stress assessment, DASS-21 stress subscale score, Burnout subscale score, and Secondary Traumatic Stress subscale score as outcome measures with all seven intervention preferences used as predictors (i.e., Sabbaticals, Counselling, Peer Support Groups, Seminars, Trainings, Online Trainings, and Mentors). Counselling (p = 0.003) and Mentor (p = 0.031) interventions were significant predictors.

Conducting univariate analysis, we found that no intervention strategy preferences were related to secondary traumatic stress. However, counselling preferences were positively[1] related to General Stress (ß = 0.38, p = 0.03), the DASS-21 stress subscale (ß = -0.37, p < 0.01), and the Burnout subscale (ß = 0.33, p = 0.03) scores. Mentor preferences were not related to general stress or the DASS-21 subscale, however mentor preferences were negatively related to Burnout scores (ß = -0.40, p = 0.01). Additionally, preference for training was also positively related to DASS-21 scores (ß = -0.33, p = 0.04) in the univariate analysis for that scale, and preference for mentoring was negatively related to Burnout scores (ß = -0.40, p = 0.01).

RQ-8: Do Judges' Intervention Preferences Relate to Levels of Social Support?

We also ran a MANOVA using the WSS and MSPSS scale scores as outcome measures with all seven intervention preferences used as predictors (i.e., Sabbaticals, Counselling, Peer Support Groups, Seminars, Trainings, Online Trainings, and Mentors). Sabbatical (p < 0.01) and Mentor (p < 0.01) interventions were significant predictors.

Conducting univariate analyses, we found that Sabbatical preferences were negatively related to MSPSS scores (ß = -0.58, p < 0.01) whereas Mentor preferences were positively related to predicted MSPSS scores (ß = 0.34, p = 0.04). Sabbatical preferences were also negatively related to WSS scores (ß = -0.41, p = 0.02). Mentor preferences were positively related to WSS scores (ß = 0.52, p< 0.01).

RQ-9: Do Demographic Differences Relate to Intervention Preferences?

A MANOVA using gender and time on the bench as outcome variables and the seven intervention preferences (i.e., Sabbaticals, Counselling, Peer Support Groups, Seminars, Trainings, Online

[1]These outcome variables were transformed, so negative ß scores do not necessarily indicate a negative relationship between the variables.

Trainings, and Mentors) as predictors was non-significant (*p-values* > 0.05).

RQ-10: Open-Ended Responses

Eight participants (10.5%) responded to at least one of the four open-ended questions. Participants' responses to each question were separated into codable "comments." A coding scheme was then developed separately for each question. Although limited qualitative data were collected, participants did provide valuable insight.

How can employers address Burnout and Secondary Traumatic Stress?

Seven participants responded to the first open-ended question, with a total of eight comments. The comments fit six general codes; working conditions (1 of 8 comments; 12.5%), additional resources (1 of 8 comments, 12.5%), time off (2 of 8 comments; 25%), performance feedback (1 of 8 comments; 12.5%), exercise (1 of 8 comments; 12.5%), and extra-curricular activities (4 of 8 comments; 50%). In addition to encouraging self-care, participants also suggested that employers should provide judges with the necessary resources (e.g. performance feedback and work environment) to do their jobs. Interestingly, two of the judges who submitted feedback mentioned issues of workplace cleanliness, which could be taken into consideration in future research.

How Can You Use Social Support (Family and Friends) to Reduce Stress?

Four respondents answered the second open-ended question. These fit three codes; seek help (1 of 4 comments; 25%), spend time with others (3 of 4 comments; 75%), and take breaks (1 of 4 comments; 25%). Three participants provided comments suggesting they could rely a bit more on their colleagues (e.g. "Taking a break from work to talk to colleagues," and "Encourage non-work gatherings," and "seek more help from friends and colleagues"), which suggests that there might be value in fostering social connections among judges as a means of social support in the workplace.

Which of these "Solutions" or Interventions Would You Recommend?

Two participants provided comments for the third open-ended question pertaining to exercise (1 of 2 comments; 50%) and choosing qualified people for judge position (1 of 2 comments; 50%). One participant mentioned that "it would be great if we could build more physical exercise time into the workday." Though not in response to this question specifically, another participant also mentioned encouraging physical activity to reduce stress and burnout.

Do you have any other recommendations about what measures could be taken to address stress among judges?

Four participants provided responses for the fourth, final open-ended question and these responses coded for nine unique comments. Four general suggestions applied to this question; update courthouses (2 of 9 comments; 22%), evaluate different types of judges (i.e., appointed vs. elected or "unpartnered" vs. married; 2 of 9 comments; 22%), provide assistance (2 of 9 comments; 22%), and belief that judges do not have as much stress as others (3 of 9 comments; 33%). As with the first question, participants who discussed stress focused on resources and environment.

DISCUSSION

Judges' wellbeing has effects at the personal and societal level. The purpose of this study was to examine the buffering effects of various networks, types, and sources of social support on stress in judges while also exploring stress-job satisfaction relationship, judges' gender and social identity, and judges' attitudes toward different intervention options. In general, judges in our sample only experienced moderate levels of stress and reported high levels of job performance, physical health, and mental health.

Social Support and Stress

Workplace social support predicted burnout, even when controlling for the effects of gender, time on the bench, and nonworkplace social support. Workplace social support from colleagues was marginally related to burnout, while support from supervisors was marginally related to secondary traumatic stress. However, none of the support type subcomponents of the WSS scale were significant predictors for burnout, and neither source nor type of support from the WSS were significant predictors for general stress. It is likely that disaggregating these scales, especially with such a small sample, made it difficult to detect any true effects, so these results should be interpreted with caution. While this could be an artefact of the small sample, it is also likely that workplace social support has a

cumulative effect. That is, perhaps the effects for workplace social support are stronger when judges have multiple sources and types of workplace support on which they can rely. This could be especially true for judges, for whom access to coworkers or supervisors might be limited throughout the day.

Demographic Relationships

Gender was a significant predictor for every type of stress we analysed. Time on the bench was not a significant predictor of stress and neither gender nor time on the bench were significantly related to any of the intervention preferences measured. The findings related to gender and stress suggest that female judges report higher levels of stress than their male colleagues. This is in line with previous research (e.g., Miller, Reichert, *et al*., 2018) and highlights the notion that women face different challenges and difficulties related to their occupation (Bremer, 2014).

Responses for time on the bench variable was measured categorically and were not particularly varied in this sample. We measured this variable categorically. This could account for the lack of significant findings related to this measure, and in future studies, it would be better to capture this as a continuous variable.

Stress Mediating Social Support and Job Satisfaction

Our mediation analysis provided support for the MJS in that we found a significant relationship between social support and job satisfaction that is mediated by (i.e., goes through) stress. The analysis suggested this is in fact the case when examining WSS, Burnout, and job satisfaction. The mediation analysis suggested that there is a partial mediation of Burnout on the relationship between WSS and job satisfaction—WSS was significantly related to both Burnout and job satisfaction, Burnout was itself significantly related to job satisfaction, and when both WSS and Burnout are used to predict job satisfaction, only Burnout is significant. This is additionally supported by the lack of significant direct effects in the causal mediation analysis but a significant total effect.

Social Identity Moderating Social Support and Stress

One of the most interesting findings from this line of research involved the interaction effects of judges' social identity on the relationship between social support (MSPSS) and stress. Specifically, judges who placed higher importance on their judge identity reported higher levels of stress when they had lower social support from personal networks. This interaction provides evidence for the importance of social support in judges' ability to manage and deal with stress.

Using a social identity measure could provide new insight into how judges experience stress and might be useful when investigating differences among judges. In our open-ended responses, participants suggested examining whether a judge is appointed or elected, and whether judges are married or "unpartnered." Investigating the effects of social identity and social support on stress, while controlling for these additional variables, could provide further insight into the role of nonworkplace social support in buffering judge stress. Of course, no causal links can be drawn from this cross-sectional analysis, but the finding is nonetheless encouraging regarding possible avenues for future research and possible stress reduction methods.

Intervention Preferences

In addition to demographic differences, analyses suggest support for the relationship between stress levels and social support regarding differential intervention preferences. Participants with higher preferences for counselling also scored higher on stress measures (as measured on three different scales—burnout, the stress subscale of the DASS21, and general stress). However, judges who indicated a higher preference for mentorship scored lower on burnout. Judges who indicated a higher preference for sabbaticals reported significantly lower perceived non work place social support, as measured on the MSPSS.

It is possible that participants view these different interventions as having different intensity levels, and intuitively prefer an intervention that they feel matches their experience of stress those experiencing higher levels of stress. These relationships—between counselling and stress and between sabbaticals and social support—follow a typical or expected pattern: judges who are more stressed would prefer counselling help whereas judges who have less social support would prefer time away from the job. Further investigation of these relationships is needed to build a deeper understanding of why intervention preferences relate to stress.

Though the qualitative responses were not tied at the individual level to the survey data, these results

emphasized the open-ended question about which solutions the judges would recommend. Participants suggested that judges should seek help (which could include counselling), spend more time with others (which could include mentorship), and take breaks from work (which could include sabbatical).

IMPLICATIONS

Given the importance of the work that judges perform, including the direct impacts to parties in individual cases and the implications of case law for the general population, and the possible effects of stress on their job satisfaction and performance, steps should be taken to reduce judicial stress whenever possible. Workplace social support has previously been shown to reduce burnout in high stress populations (Himle *et al*., 1991), and that finding was replicated in this study even when including covariates such as support from a personal network and gender.

Judges' preferences for different stress interventions were quite varied, and though more robust research is warranted, our results suggest that varying levels of stress might relate to judges' perceptions of their ability to benefit from different interventions. A sense of agency is an important component of resilience (e.g., Marsh, Summers, DeVault, & Villalobos, 2016; "The road to resilience," n.d.), and increased agency is also an important consideration for stress interventions (Howard & Johnson, 2004). Aside from perceived social support, we did not ask judges which interventions they actually have access to in their current role – only what interventions they prefer, and our research cannot answer whether any one single intervention is more likely reduce stress for a majority of judges. Our results, though limited, suggest that offering interventions of varying intensities to match the level of stress employees might be experiencing would allow judges agency in selecting an intervention, and could increase the likelihood of judges using at least some intervention option.

Social Support and Stress Reduction

Stress reduction is important for judges because high levels of workplace stress can have negative consequences for job performance, as well as job tenure (Gray, 2006; Lebovits, 2017). Previous work has also shown that judges are prone to workplace stress (Lebovits, 2017; Miller, Reichert, *et al*., 2018), and some of the judges in this study reported higher than average levels of workplace stress. Our results demonstrate that workplace social support can buffer the effects of workplace stress among judges. Our findings can guide institutions interested in the development of interventions and policies intended to increase workplace social support. For example, informational and instrumental support could easily be incorporated into interventions through increased access to informational resources and encouragement of collaboration between judges who work in the same court. Supervisors in institutions could focus on providing these types of support proactively. The results in this study provide preliminary evidence that this would be an effective strategy to reduce judicial stress, though more research is needed. Finally, institutions should adopt trainings about judge stress which emphasize the importance of social support generally, and workplace social support in particular. Such judicial reforms could help reduce judicial stress.

Other Interventions

Judges expressed other options for interventions aside from social support and rated their interest in several stress interventions. The most highly endorsed options were sabbaticals and mentorship programs. Mentorship programs are especially important because, in addition to providing informational and instrumental support, mentors could also potentially decrease any stigma that might exist around seeking or providing emotional or approval support. Mentors could also provide access to and encourage the use of additional stress reduction techniques (Bremer, 2004).

Aside from the interventions that were specifically included in the survey, judges mentioned opportunities for physical exercise throughout the day, receiving skilled help, and some judges even mentioned environmental factors such as workplace cleanliness. Courts evaluating stress reduction options should also consider access to physical activity and consideration for the work environment.

These findings have implications for legal institutions and policy. For instance, institutions should adopt sabbaticals, mentoring programs, exercise programs, and workplace environment improvement programs. If institutions adopt these suggestions, it would help reduce stress and avoid potential negative outcomes of stress (e.g., poor decision-making, loss of trust in the law).

LIMITATIONS

The current study has several limitations. As a technical limitation, the "clickers" used for the study only allowed five question response options, so the response options for scales that are designed with more than five response options were modified to work with the technology. This could have influenced participants and limited variability in their responses. There might be individual-level differences that were not detected because of this lack of variability.

As a cross-sectional study, it would be inappropriate to make causal inferences. Although the MJS predicts cause-and-effect relationships, this cannot formally be established without a study that includes a temporal component. However, social support is generally stable over time (Sarason & Sarason, 2009), and so it is logically more likely to predict stress than to be predicted by it. Additionally, many of our stress measures were temporally bound, as they asked participants to rate their symptoms/stress levels over a restricted time-period (e.g., "in the past week" or "over the last year"). Our social support measures did not specifically ask about a restricted time-period, and as such, could reflect either a shorter or longer period than the stress measures. As with all research, there exists the possibility that other factors not included in this study might influence these findings.

Future research should examine the relationships between workplace stress and the preference for (and potentially the effectiveness of) specific interventions. Future research should also consider differences in work culture and environment between different courthouses, to assess the relationship between these factors on perceived and received social support and stress.

CONCLUSION

Stress can result in unfair court outcomes, biased decision-making, loss in the public's trust in the law, and reduced access to the legal system. Because judicial decisions affect not only the parties to the dispute but society as a whole, it is important to study the causes and effects of judicial stress. In order to promote a fair and effective justice system, institutions should develop policies and interventions that address judicial stress.

This study demonstrates that different types of social support are effective to buffer different types of stress. Workplace social support buffered burnout, whereas non-workplace social support interacted with gender to predict general stress. Ultimately, judges experience a variety of stress types, none of which exist in isolation.

Although this research was psychological in nature, it has implications for the legal system. Legal institutions, policies, and court management can be altered to protect judges from experiencing undue stress—thus preventing the negative outcomes to judges' decision-making, fairness in court rulings, and public's perceptions and trust in the legal system.

Although it is beyond the purview of any employer to ensure that employees can count on their friends and family for support outside of work, this research shows that there are other types of support that an employer (e.g., court administrator) could provide or encourage, which can have a significant impact on *work places pecific stress.* The qualitative responses our participant-judges provided offer some insight into the technical issues that cause them stress in their work environment. Some of these issues (such as the HVAC systems and technology in courtrooms) require capital investment. However, managing judges could implement intervention options to encourage a supportive work environment and build support between colleagues, which could reduce burnout (and could possibly benefit other court employees besides judges). At this point, more research is needed to identify specific areas where targeted workplace social support can have the greatest impact in reducing judge stress. However, this research suggests as a starting point structuring judicial work environment to provide workplace social support, including informational and instrumental support. Ultimately, protecting judges achieve health and wellness also supports a healthy society. Thus, more research and interventions are warranted. If institutions adopt judicial reforms such as interventions, policies, and court management practices, it is possible to reduce judicial stress and promote fairness in the legal system.

DECLARATION OF CONFLICTS OF INTEREST

Katie M. Snider has declared no conflicts of interest.

Paul G. Devereux has declared no conflicts of interest.

Monica K. Miller has declared no conflicts of interest.

Charles P. Edwards has declared no conflicts of interest.

AI USE

The authors did not use AI for producing this article.

ETHICAL APPROVAL

All procedures performed in studies involving human participants were in accordance with the ethical standards of the University of Nevada, Reno Institutional Review Board (IRB; package 1320312-2), and ethical standards comparable to the 1964 Helsinki declaration and its later amendments, comprising the ethical principles described in the Belmont Report, and federal requirements under the U.S. Revised Common Rule (U.S. 45 CFR part 46).

INFORMED CONSENT

Informed consent was obtained from all individual participants included in the study.

AUTHORS' NOTE

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