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Police Officer Wellness:

Associated Factors and the Development and Evaluation of a Training Program

DISSERTATION

Submitted in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

in Psychological Science

by

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DEDICATION

To my parents, whose love and support sustain me.

When you leave this world, I will keep your spirit alive.

"In the depth of winter, I finally learned

that within me there lay an invincible summer."

- Albert Camus, "Return to Tipasa", *Summer* (1954)

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Kosiak, K., **Contreras, I. M.**, Stoever, J., Toohey, J., & Novaco, R. W. (2022). Organization-based factors bearing on provider screening and referral practices for women exposed to intimate partner violence. *Journal of Interpersonal Violence*, *37*(13-14), NP11520-NP11540.

Zalta, A. K., Vanderboll, K., Dent, A. L., **Contreras, I. M.**, Malek, N., Lascano, X. N., ... & Burgess, H. J. (2023). Sleep timing, chronotype, and posttraumatic stress disorder: An individual participant data meta-analysis. *Psychiatry Research*, 115061.

Contreras, I. M., & Novaco, R. W. (2023). Anger Rumination Vs. Revenge Planning: Divergent Associations with Aggression and Life Satisfaction. *Journal of School Violence*, *22*(3), 383-394.

Novaco, R. W., & **Contreras, I. M.** (2024) Anger Control Counseling for Youth Violence Prevention. In P. Boxer & R. Travis (Eds.), *The Future of Youth Violence Prevention: A Mixtape for Practice, Policy, and Research*. Rutgers University Press.

ABSTRACT OF THE DISSERTATION

Police Officer Wellness:

Associated Factors and the Development and Evaluation of a Training Program

by

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Doctor of Philosophy in Psychological Science

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Professor Raymond W. Novaco, Chair

Law enforcement officers are routinely exposed to stressful events and work strains that can have detrimental effects on their personal health and job performance. Three mixed-methods studies were conducted to further understanding of stress and wellness issues among police officers and to augment their training in police-community relations. Study 1 utilized a cross-sectional survey to assess the prevalence and correlates of wellness issues among a large police department's uniformed officers and civilian employees. Focal attention was given to perceived organizational support and perceived community support as moderators of the relationship between work stress and wellbeing. Studies 2 and 3 involved the design, implementation, and evaluation of an innovative 40-hour procedural justice and officer wellness training program. Using a waitlist-control comparison group, 42 patrol officers were randomly assigned to either the training or a waitlist condition. The training program was developed by a team of police officers and university researchers, under the auspices of the police department's Chief of Police and command staff. Study 2 assessed the acceptability and uptake of the training by attending officers, with in-person assessments throughout training. Study 3 involved repeated measures

questionnaires to evaluate the immediate (post-training) and follow-up (4-month) efficacy of the training program, assessing multiple wellness and procedural justice criteria. Results from Study 1 highlight the importance of organizational support as a moderator of the work stress-wellness relation. While the training was deemed valuable by its participants in Study 2, evidence regarding its effectiveness in improving wellness is severely limited due to low participation in the Study 3 assessments. Information gleaned from the project can serve to inform conceptualizations of officer wellness, future officer wellness interventions, and future training evaluation research in the context of policing.

Police Officer Wellness:

Associated Factors and the Development and Evaluation of a Training Program

Background

Occupational Stress in Policing

Policing is globally recognized as a highly stressful profession (Queirós et al., 2020; Valmari et al., 2023). As first responders to the majority of crimes, accidents, and disasters, police officers are exposed to many dangerous and stressful situations. Sources of stress in police work have been studied for decades, generally being categorized as either operational or organizational in nature (Alves et al., 2023; Biggam et al., 1997; McCreary & Thompson, 2006). Operational stressors are associated with routine job activities (i.e., overtime demands, risk of injury, paperwork, fatigue, upholding a "higher image", exposure to traumatic events, stigma associated with the job), while organizational stressors are related to top-down administrative and coworker issues (i.e., staff shortages, bureaucratic red tape, favoritism, changes in policy or legislation, inadequate equipment, unequal sharing of responsibilities). The stressful demands of police work are known to produce health impairments (Magnavita et al., 2018) and detract from job performance (Nisar & Rasheed, 2019). Broad recognition of these job-related adversities has led to wellness enhancement initiatives to support law enforcement personnel (Drew & Martin, 2023).

When thinking about stressors that police officers face, operational stressors come to the forefront of most people's minds. Police officers do encounter stressors inherent to the job with some regularity. In a study of 699 Scottish police officers, Biggam et al. (1997) found that arresting a violent person was reported as a stressor by 49% of officers, appearing in court by 44%, situations requiring use of force by 40%, dealing with drug takers by 34%, and informing

relatives of a death by 33%. Surprisingly, though, officers tend to report a higher frequency of organizational stressors than operational ones. In the same study, officers reported even more stressors associated with organizational factors such as staff shortages (81%), inadequate resources (78%), time pressures (74%), lack of communication (70%), and lack of consultation (65%). In a qualitative content analysis of officer's reported job stressors and job rewards, Kop et al. (1999) found a similar pattern emerging. Poor management (e.g., incapable or uninterested supervisors, bad relationships with coworkers, lack of internal communication) was mentioned by 26% of the 368 Dutch police officers they sampled. Reorganizations (21%) and bureaucracy (11%) were also frequently mentioned as organizational stressors. This was offset, though, by aspects of the job that officers found rewarding. Examples of frequently reported rewards were contact with civilians (61%), variation of work (41%), and providing assistance and value to society (35%). Despite the various stressors associated with policing, many police officers simultaneously perceive their job as rewarding.

Adding to this, some research suggests that certain background and job characteristics are associated with differential levels of occupational stress. Acquadro Maran and colleagues (2015) investigated job role and gender differences in perceived stress for police officers. Operational service officers (patrol officers, detectives, etc.) were compared to interior department officers (supervisors, departmental heads, etc.) on their exposure to various stressors and perceived distress. Among operational service officers, patrol officers, in particular, were found to be most vulnerable to operational stressors. They also found that females reported significantly more organizational stress and perceived distress than their male colleagues. In contrast, Biggam et al. (1997) found that females reported significantly more operational stress, yet similar levels of organizational stress compared to males. Violanti and Aron (1993) were unable to find

significant differences in perceived occupational stress for rank, race, or gender. They did find, however, that officers with 6-10 years of experience reported significantly more organizational stress than officers with 1-5 years of experience. In a review of 41 studies by Alves and colleagues (2023) regarding risk factors for burnout in police officers, findings for age, sex, marital status, education, and ethnicity were also mixed. Ultimately, more research is needed in identifying demographic and background characteristics associated with higher levels of occupational stress and wellness issues among police personnel.

Occupational Stress and Health Problems

Extant research suggests that police officers are more likely than members of the public to experience a host of psychological and physical health problems (Carleton et al., 2018; Carlson-Johnson et al., 2020). In an international review and meta-analysis of 67 studies on mental health problems in police personnel, Syed et al. (2020) found that 14.6% of officers screened positive for depression, 14.2% for post-traumatic stress disorder, 9.6% for generalized anxiety disorder, and 8.5% for suicidal ideation. A study of 5813 Canadian public safety personnel by Carleton et al. (2018) found that over one-third of municipal/provincial police (36.7%) and one-half of Royal Canadian Mounted Police (RCMP; 50.2%) screened positive for at least one mental disorder. A possible explanation for these rates is that the prevalence of mental disorder is higher among those embarking on a law enforcement career. However, Carleton et al. (2023) found that among a sample of 736 RCMP cadets that underwent a clinical interview, participants were less likely to screen positive for any current mental health disorder than the general population.

Poor sleep quality, cardiovascular disease, and alcohol abuse are commonly reported physical health problems among police officers, too. Syed et al. (2020) found more than a quarter

(25.7%) of officers screened positive for hazardous drinking. Even more officers report trouble with sleeping, with a meta-analysis reporting a pooled prevalence of 51% for bad sleep quality in police officers (Garbarino et al., 2019). Cardiovascular risk factors such as hypertension, obesity, and impaired glucose metabolism, are also associated with work-stress among police officers (Magnavita et al., 2018). The physical health problems among police officers appear most stark when examining life expectancy. Compared to the general population of Americans, police officers are estimated to have an average life expectancy deficit of 21.9 years (Violanti et al., 2013).

Work stress is perhaps the primary factor that contributes to health problems among police officers. In their meta-analysis, Syed et al. (2020) found that occupational stress was the strongest risk factor for depression and suicidal ideation, while being the second strongest predictor of post-traumatic stress disorder. A wide variety of occupational factors contribute to psychological distress. In a review of 15 studies on occupational stress and police officer wellbeing, Purba and Demou (2019) identified job pressure, heavy workload and judgment from peers, organizational pressure, and long working hours and internal social stressors as correlates of anxiety, depression, burnout, and general psychological distress, respectively. Extant studies have linked both operational and organizational stress to psychological distress in officers (Biggam et al., 1997; Violanti & Aron, 1993). Work stress has also been linked with anger levels among first responders (police officers included), with the occupational factors of “unreasonable workload” and “conflicting supervisory demands” demonstrating the strongest relationships with anger, $r = .49$ and $r = .46$, respectively (Doyle et al., 2021).

In summary, stressors associated with police work impact the mental and physical health of officers, but there is still insufficient research concerning specific stressors and their

associations with specific indicators of distress and wellbeing. For example, paperwork/report-writing may be related to levels of burnout, but may have no association with post-traumatic stress or anxiety. Similarly, sleep quality may be inversely associated with overtime demands, but not associated with negative comments from the public. Moreover, research regarding potential moderators of the occupational stress - wellness relationship is lacking.

Barriers to Seeking Help

Many police officers suffering from wellness issues do not feel comfortable seeking assistance, fearing negative reactions from peers and supervisors. Stigma associated with mental illness is widespread in police departments (Bell et al., 2022; Fix et al., 2023; Drew & Martin; 2021). Thus, it is plausible that assessments of police officer wellness issues are underestimates of the true prevalence. In a national study of 7963 police officers, Drew and Martin (2021) found that an alarming 90.3% of officers reported “stigma” as a barrier to seeking help for mental health problems, and 51.8% of the officers in their sample reported concerns that service providers would not understand their job. Despite efforts to chip-away at this stigma by senior leadership, many officers still feel that this aspect of traditional police culture is largely unchanged (Bikos, 2021).

Lawrence and Dockstader (2024) found that officers with the most severe health concerns (15% of their sample) participated in wellness programming at similar rates as officers in good health. A review of 17 publications by Richards et al. (2021) identified many factors influencing an officers’ decision to seek help: individual officers’ education and awareness of mental health problems, perceptions of services, personality, perceived stigma from fellow officers, familial support, and society’s view of police officers were all argued to play a role. Given the prevalence of stigma among police officers and the barrier that it poses to seeking help, efforts should be

made to change police culture around this topic (Cohen et al., 2019) and increase awareness of common mental health concerns, as indicated by national studies of police officers (e.g., Thoen et al., 2020; Drew & Martin, 2021).

Police Officer Wellness

It is generally agreed that "wellness" is a multidimensional construct, with five to seven sub-dimensions being proposed in the majority of definitions (Corbin & Pangrazi, 2001). As opposed to illness, wellness is not merely defined as the absence or presence of disease (Manderscheid et al., 2010). Capturing factors beyond physical and mental health, wellness also includes positive aspects of one's life such as social support, emotional wellbeing, and satisfaction across a number of domains.

For too long, health services for police officers have been reactive in nature, focused primarily on illness, and not on wellness. Instead of providing preventative measures, many police departments simply treat mental and physical health problems after they develop (Thornton, 2020). Given the multitude of stressors that police officers encounter over the course of their careers, some argue that wellness training and education should be provided to officers early on, with participation being mandatory (Cohen at el., 2019). Senior leadership within police departments have a critical role to play in changing the perception of issues surrounding mental health and wellness. Examples of such efforts include creating or expanding peer-support programs within police departments, developing and implementing wellness training that focus on prevention as well as remediation, encouraging officers to speak freely about wellness concerns and to seek help when experiencing wellness issues (Cohen et al., 2019).

Elaborating on this issue, Thornton (2020) points out that the selection process for police officers is fairly effective at screening out candidates with poor mental and physical health, a

sentiment echoed by Carleton and colleagues (2023). Nevertheless, wellness is likely to suffer as officers encounter stressors inherent to the profession. In an effort to prevent the degradation of wellness, Thornton (2020) argues that employers should strive to improve capital across a number of domains among their employees. Human capital, which comprises the knowledge, skills, and abilities of an individual, should be strengthened through regular job-related training and feedback from supervisors. Economic capital, the financial stability of an individual's household, should be improved via financial education and referrals to financial advisors. Social capital, the quality and variety of interpersonal relationships that one can access, should be promoted by leaders within an organization via social events and non-confrontational community-officer interactions. Spiritual capital, defined as one's authenticity and commitment to ethical principles, is also integral to wellness and should be reflected in departmental policies and modeled by leadership. Psychological capital, or positive psychological characteristics, such as optimism and hope, ought also to be modeled and reinforced by supervisors and senior leadership, too. In summary, Thornton (2020) argues that individual wellness plans should be developed for each officer and that wellness should be treated as a "perishable skill", with regular training being offered to officers by their departments. These procedures would model what is currently done with other perishable skills in policing (i.e. firearms proficiency, arrest-and-control tactics).

Wellness Programs

Despite the prevalence of psychological distress and physical health problems among police officers, few interventions aimed at improving police officer wellbeing have been implemented and evaluated. A nationwide assessment by Thoen et al. (2020) found that roughly 25% of law enforcement officers in the US did not know if their agencies provided wellness

programming, and 35% felt as though their agencies did not support their mental wellbeing. Of the interventions that have been implemented, few have yielded promising results (Patterson et al., 2012; Thoen et al., 2020).

Wellness programs for police officers have taken a variety of forms (Thoen et al., 2020). The most common of which appears to be Employee Assistance Programs (52.7% of agencies), which offer counseling services to officers and are typically external to the agency or department. Second in frequency are Peer-Support Programs (32.7% of agencies), which are groups of officers that have been trained to assist other officers in crisis. Formal wellness training, which varies widely, was offered by 29.1% of police departments. Few of these programs, though, are ever evaluated for effectiveness.

In looking at programs that have been evaluated, a meta-analysis by Patterson et al. (2012) found that among 12 evaluations of stress management programs for police officers, mean effects for psychological (d = .04), behavioral (d = -.18), and physiological outcomes (d = .20) were small, with a significant amount of variation in effect sizes for psychological outcomes (ranging from d = -.49 to .98). The interventions included in this analysis varied greatly in terms of dosage, orientation, and outcomes measured. Writing interventions, psychotherapy, circuit weight training, individual wellness counseling, Eye Movement Desensitization and Reprocessing (EMDR), and stress management programs were some of the interventions included in their analysis.

More recently, Kuehl and colleagues (2016) evaluated a wellness intervention, dubbed “The Shield Study” (Safety & Health Improvement: Enhancing Law Enforcement Departments). This intervention was administered to 408 police officers, and involved 6 hours of peer-led wellness sessions that focused on fostering social support and increasing healthy lifestyle habits.

The authors managed to find significant effects concerning improved sleep quality and quantity (d = .32 and .23, respectively) and improved healthy eating (d = .20) at 6-months post-intervention. While not statistically significant, effect sizes of d = .16 for self-reported stress and a d = .13 for depression were also observed at 6-months post-intervention.

Acquadro Maran et al. (2018) evaluated the effectiveness of wellness courses and physical activity courses among 105 police officers. At 3-months post-intervention they found effect sizes of d = .67 and d = .79 for emotional problems and perceived distress, respectively, for officers enrolled in wellness courses. Physical problems also saw significant improvement (d = .35). Tanigoshi et al. (2008), which was featured in the Patterson et al. (2012) meta-analysis, found that individual wellness counseling with 60 law enforcement officers was able to improve aspects of "thinking, emotions, control, positive humor, and work" by a factor of d = .34. Drake (2021) evaluated a 2-day (16-hour) police training program named Blue Courage. Developed by former and active police officers, and delivered to 174 officers, this training focused on issues of officer wellness, the nobility of policing as a profession, police culture, cynicism, and police legitimacy. Techniques for managing stress, such as breathing techniques, were also taught to officers. The observed pre-post effect of the Blue Courage training on "emotional wellness" was d = .27.

Blumberg and colleagues (2020) evaluated "The HEROES Project" (Thornton et al., 2020), which is an 8-week online program tailored to first responders (police officers and firefighters) that provides participants with psychologically-based skills to manage threats to wellbeing. With a sample of 55 police officers and 65 firefighters, program completion was successful in reducing participant depression (d = .69), anxiety (d = .61), and PTSD symptoms (d = .86), these reductions were even larger when assessed at a 1-year follow-up (d = .92, .80, 1.07,

respectively; Blumberg et al., 2020). This program is perhaps the most successful wellness intervention among police officers evaluated to date.

While many trainings to improve police officer wellness have been implemented, only a few have produced meaningful effects. It is critical, then, for continued efforts to be made in this domain. Wellness programs for police officers require further development, implementation, and evaluation. Because police departments and cultures can vary broadly in terms of the issues they face, one way of proceeding is to tailor training to relevant issues that officers face at their respective agencies. The wellness needs of officers at Los Angeles Police Department may be very different from those at Irvine Police Department or New Orleans PD, and training should be adjusted accordingly.

Organizational and Community Support

Police officers' perceptions of community and organizational support likely have an influence on their wellbeing. In a study by Skaggs et al. (2022), interviews concerning police officer recruitment and retention were conducted with police officers at different stages of their career (new hires in training, new hires after training, and police officers who voluntarily departed from the profession). Organizational and community support, or the lack thereof, were prominent themes raised among all groups of officers. Perceptions of organizational support have been found to be associated with levels of motivation and engagement among police officers (Gillet et al., 2013). Perceptions of community support also appear to be related to motivation among police officers (Greene, 1989). Among the earliest policing textbooks, maintaining public respect and approval appear as prominent guiding principles (Lentz & Chaires, 2007). Since many police officers find it important to garner public trust and cooperation, it is proposed that perceived community support may also bear on police officer

wellness. It is plausible that community support operates parallel to organizational support, with both sources of support having an impact on officer wellness. In fact, a review by Purba and Demou (2019) found that perceived organizational support, or lack thereof, was one of the strongest predictors of psychiatric symptoms among police officers. Perceived community support, though, has been largely unexamined in relation to pathological outcomes in police officers.

In considering these variables as potential moderators of the stress-wellness relationship, the stress buffering hypothesis can be drawn upon for insight (Cohen & McKay, 1984; Cohen & Wills, 1985). In their seminal article on the topic, Cohen and Wills (1985) argue that social support has the potential to mitigate the experience of a stressful event at the outset, as well as intervene in-between the experience of stress and the development of pathological outcomes. Social support may provide opportunities for reappraisal of a stressful event, foster positive counter-measures to prevent pathology, or inhibit maladaptive coping responses that would otherwise lead to pathology. In the context of policing, certain forms of social support (belonging support, social support, and tangible support) have been found to moderate the association between stress and mental health outcomes (Singh et al., 2021). Adding to this literature, perceived support from an officer's organization and from the community members which the officer serves may also mitigate the effects of stress on wellbeing. Perceived organizational support (from departmental leaders, supervisors, or coworkers) and community support (from residents where officers work) both could serve to buffer the deleterious effects of work stress on wellness outcomes. If so, efforts to bolster support in both of these areas may serve to improve the wellbeing of police officers.

Procedural Justice

In recent years, cases of perceived police misconduct have taken center stage in public discourse, tarnishing the public's image of police. In 2020, only 48% of Americans indicated that they had confidence in the police - the first time in 27 years that confidence levels fell below 50% (Brenan, 2020). This metric dropped even further in 2023, to 43%, but has since inched back up to 51% in 2024 (Brenan, 2024). For any public institution to operate effectively, public trust and employee wellness are imperative. One framework that appears effective at improving public perceptions of the police is "procedural justice" (Weisburd et al., 2022). This framework guides police officers to treat everyone they encounter fairly and respectfully, with common conceptions of procedural justice emphasizing four main tenets: *Respect*, *Trustworthy Motives/Care*, *Voice/Listening*, and *Neutrality/Impartiality*.

Underlying the effectiveness of procedural justice is Tyler and Huo's (2002) process-based model of regulation. In this model, it is proposed that citizen's judgements about the fairness and quality of legal processes directly influence their support for legal authorities (judges, lawyers, police officers, etc.). Views of legitimacy are also argued to impact one's general cooperation and compliance with laws and authorities (Tyler, 2003). Ample research suggests that regardless of the legal outcome, if outcomes were thought to be arrived at through a fair and just process, people are more likely to accept the decision and to view the authority in a positive light (Sunshine & Tyler, 2003). Because of this, procedural justice is a promising framework through which to improve community support for the police and police-community relations in general.

Improvements in community support for the police may also go on to influence officer wellness, as articulated in the previous section. Wellness also provides a foundation that supports

an officer's ability to operate in a procedurally-just way, or in a way that reflects larger organizational goals (Hope, 2016). Officer wellness issues have plausibly contributed to instances of officer misconduct. Officers that are anxious or angry, for example, may be more likely to act in reactive or self-serving ways, rather than in ways that are ethically proper or procedurally appropriate (Blumberg et al., 2018). The phrase "lawful but awful" is relevant here, as it is sometimes used to describe police use-of-force situations that are legally protected but ethically not ideal (Wade, 2017). While procedural justice training for police officers appears promising (Antrobus et al., 2019; Skogan et al., 2015; Weisburd et al., 2022), it requires further implementation and evaluation for effectiveness, as well as meriting augmentation by incorporating aspects of officer wellness, as was done in the Blue Courage training program evaluated by Drake (2021).

The Current Project

The purpose of the current dissertation is to advance the research literature on police officer wellness by (1) identifying risk and protective factors associated with officer wellness and potential moderators of the work stress - wellness relationship; (2) developing and implementing a 5-day program to improve officer wellness and enhance procedural justice practices in police work; (3) evaluating the developed intervention for its acceptability and uptake of the training components, as rated each day by participants; (4) evaluating the training program for its immediate effects on wellness criteria, and (5) for its effects on officer wellness and procedural justice attitudes at a 4-month follow-up with multi-modal criterion measures. This dissertation project will be focused primarily on the officer wellness component of the intervention, with some attention being given to procedural justice outcomes.

Study 1: Wellness and Associated Factors Among Police Department Employees

Overview

This study utilized a cross-sectional, anonymous, department-wide employee wellness survey with $N = 221$ participants. All employees (405 sworn and 223 civilian) from a large police department in California were invited to participate in an online survey concerning their backgrounds, psychological distress, physical health, occupational stressors, perceived supports, life and domain satisfaction, strategies for stress relief, and beliefs in procedural justice principles. Operational and organizational stressors were investigated for their associations with wellness variables. Perceived organizational support and perceived community support were investigated as moderators of the relationship between work stress and multiple wellness variables. Information gathered in this study also informed the development of the procedural justice and officer wellness training that was implemented and evaluated in Studies 2 and 3.

The aims of this study were to (1) ascertain department-wide indicators of employee wellness, (2) identify self-reported strategies for relieving stress, (3) identify whether organizational and operational stress are associated with wellness issues, (4) investigate whether organizational and community support are associated with wellness issues, and (5) to investigate whether perceptions of organizational and community support moderate the association between work stress (operational and organizational stress combined) and wellness outcomes.

Method

Participants

628 employees (405 sworn and 223 civilian) from a police department in California were invited to participate in an anonymous, cross-sectional, department-wide wellness survey. The survey was piloted for a 20-minute completion time. Participants were free to take the survey on

the device of their choosing. The final sample consisted of 221 (167 sworn officers and 54 civilian staff; 35% response rate) employees. 31% of the sample identified as female. Regarding ethnicity, 55% identified as Caucasian, 32% as Hispanic, 8% as Asian, 2% as Black, 2% as Native American, 1% as Pacific Islander, and 7% reported more than one ethnicity. Regarding age, 8% of the sample was between 18-30, 41% was between 31-40, 36% was between 41-50, 16% was 51 or older. A majority of the sample (57%) had been employed at this department for more than 10 years, 27% had been an employee for 6-10 years, 13% had been an employee for 1-5 years, and only 3% had been an employee for less than a year.

Procedure

On April 21, 2023 an internal department-wide email was sent to all employees of a California police department by the Deputy Chief of Police, informing them of the study and encouraging them to participate. It was made clear that survey responses would be anonymous, and that the survey data would go on to inform the design of the wellness training. Once participants clicked on the attached Qualtrics link, they were sent to a page restating the purpose and voluntary nature of the survey. On the next page, participants were presented with a study information sheet which further outlined the study details, such as the inclusion criteria (18 years or older, fluent in English, current police department employee) and requested their consent by clicking continue to begin the survey. Participants were then presented with the various self-report questionnaires.

Measures

Demographic and Background Information. Participants were asked to report their age (in truncated ranges), gender, race/ethnicity, education level, relationship status, personnel type (sworn/civilian), their job role/rank, years of experience (in truncated ranges), whether they

transferred from another police department (lateral status), and what wellness services they have utilized in the past (if any).

Physical Health. Two items from the Pittsburgh Sleep Quality Index (PSQI; Buysse et al., 1989) were modified to assess sleep duration and sleep quality over the past month on work-days and off-work days. Two items from the Alcohol Use Disorders Identification Test (AUDIT; Saunders et al., 1993) were modified to assess frequency of alcohol consumption, with response options ranging from 0 to 4 (never, monthly or less, 2-4 times a month, 2-3 times a week, 4 or more times a week), and binge drinking. A modified item from the Godin-Shephard Leisure-Time Exercise Questionnaire (Godin, 2011) was used to assess off-work frequency and duration of light, moderate, and strenuous exercise.

General Domain Satisfaction. A modified version of the single-item Self-Reported Health questionnaire (SRH; Ware et al., 1995) was used to assess general satisfaction across five domains: physical health, mental health, social life, home life, work life. Response options ranged from 1 to 5 (very unsatisfied, somewhat satisfied, neutral, somewhat satisfied, very satisfied).

Social Support. Social support in the form of information, emotional support, or tangible assistance was assessed using four items that we created. One item, ranging from 0 to 4 (never, rarely, sometimes, often, always), was used to assess support from each of the following sources: coworkers, supervisors, friends and family, and spouse/partner.

Primary Care PTSD Screen DSM-5. The PC-PTSD-5 (Prins et al., 2003) was modified to assess exposure to a traumatic event in the past 12 months and symptoms of PTSD in the past 12 months (yes/no). If participants indicated exposure, they were given five items concerning the presence (yes, coded 1) or absence (no, coded 0) of post-traumatic stress symptoms. One

additional item concerning anger/irritability following the traumatic event was added, but not included in the analyses here.

Patient Health Questionnaire – 4. The PHQ-4 (Kroenke et al., 2009) is a 4-item measure used to assess core symptoms of depression and anxiety over the past two weeks, each captured with two items. Response options ranged from 0 to 3 (not at all, several days, more than half the days, nearly every day). The PHQ-4 has been validated as a two-factor measure of depression and anxiety with strong construct validity (Löwe et al., 2010). Depression and anxiety item average scores are utilized as separate outcome measures in the current study.

Maslach Burnout Inventory. A 12-item abbreviated and modified version of the MBI (Maslach and Jackson, 1986; Maslach et al.,1996) was used to assess symptoms of emotional exhaustion, depersonalization, and low personal accomplishment, with four items corresponding to each subscale. Response options ranged from 0 to 5 (never, a few times a year, once a month, once a week, a few times a week, every day).

Dimensions of Anger Reactions. An abbreviated version of the DAR-R (Novaco, 1975) was used to assess anger disposition. Six of the seven items of the original measure were retained, which assess anger frequency, intensity, duration, impairment of work performance, social relationships, and health. Response options ranged from 0 to 4 (not at all, a little, moderately so, fairly much, very much). The measure has been validated in a cross-cultural sample (Kannis-Dymand et al., 2019), and has strong concurrent, discriminant, and construct validity (Novaco et al., 2012).

Satisfaction With Life Scale. The SWLS (Diener et al., 1985) was used to assess subjective life satisfaction. The measure has five items, with response options ranging from 1 to

7 (strongly disagree, disagree, slightly disagree, neither agree nor disagree, slightly agree, agree, strongly agree).

Perceived Organizational Support. A 6-item modified and abbreviated version of the Survey of Perceived Organizational Support (SPOS; Eisenberger et al., 1986) was used to assess perceived organizational support. Instead of referencing the "organization", wording of items was changed to reflect the police department that the employees work at. Response options ranged from 1 to 7 (strongly disagree, disagree, somewhat disagree, neither agree nor disagree, somewhat agree, agree, strongly agree).

Perceived Community Support. A 6-item modified and abbreviated version of the SPOS (Eisenberger et al., 1986) was used to assess perceived community support. Instead of referencing the "organization", wording of items was changed to reflect the residents of the city in which the employees work. Response options ranged from 1 to 7 (strongly disagree, disagree, somewhat disagree, neither agree nor disagree, somewhat agree, agree, strongly agree).

Operational - Organizational Police Stress Questionnaire. The OP-ORG PSQ (McCreary & Thompson, 2006) was modified and abbreviated (20-items) to assess the degree to which a list of ten operational and ten organizational tasks/issues cause the participant stress. Response options ranged from 1 to 7 (1 = no stress at all, 2, 3, 4 = moderate stress, 5, 6, 7 = a lot of stress).

Procedural Justice Questionnaire. A 12-item modified version of the procedural justice beliefs questionnaire from Weisburd et al. (2022) was utilized to assess beliefs in the four principles of procedural justice: Voice/Listening, Neutrality/Impartiality, Respect/Dignity, and Trustworthy Motives/Care. Three items corresponded to each principle, with response options

ranging from 1 to 7 (strongly disagree, disagree, somewhat disagree, neither agree nor disagree, somewhat agree, agree, strongly agree).

Stress Relief. One open-ended item was included at the end of the survey, which asked participants, "What are some things that are helpful to you that enable you to relieve stress from work?" This was included to assess and identify strategies that participants find effective for relieving stress from work.

Aims, Hypotheses, and Exploratory Analyses

Aim 1: Ascertain department-wide indicators of employee wellness.

Exploratory Analysis 1: Job and background variables (age, gender, relationship status, personnel type, experience level, and transfer status) will be explored for their associations with the various wellness variables (post-traumatic stress symptoms, depression, anxiety, anger, burnout, life satisfaction, physical health satisfaction, sleep quality, and alcohol consumption frequency).

Aim 2: Identify self-reported strategies for relieving stress.

Exploratory Analysis 2: Open-ended responses will be investigated for themes and categorized accordingly. Descriptive statistics will be calculated to tabulate prominent themes.

Aim 3: Identify whether organizational and operational stressors are associated with wellness issues.

Hypothesis 1: Organizational stress will be positively associated with psychological distress (post-traumatic stress symptoms, depression, anxiety, anger, burnout) and alcohol consumption, while being negatively associated with indicators of wellbeing (life

satisfaction, physical health satisfaction, and sleep quality) controlling for background variables (age, gender, personnel type, experience level) and operational stress.

Hypothesis 2: Operational stress will be will be positively associated with psychological distress (post-traumatic stress symptoms, depression, anxiety, anger, burnout) and alcohol consumption, while being negatively associated with indicators of wellbeing (life satisfaction, physical health satisfaction, and sleep quality) controlling for background variables (age, gender, personnel type, experience level) and organizational stress.

Exploratory Analysis 3: Specific operational (i.e., negative comments from the public, overtime demands, paperwork/report-writing) and organizational stressors (i.e., inconsistent leadership style, internal investigations) will be explored for their zero-order associations with the wellness criteria (post-traumatic stress symptoms, depression, anxiety, anger, burnout, life satisfaction, physical health satisfaction, sleep quality, and alcohol consumption).

Aim 4: Investigate whether perceived organizational and community support are associated with wellness issues, controlling for work stress.

Hypothesis 3: Perceived organizational support will be will be negatively associated with psychological distress (post-traumatic stress symptoms, depression, anxiety, anger, burnout) and alcohol consumption, and positively associated with indicators of wellbeing (life satisfaction, physical health satisfaction, and sleep quality) controlling for background variables (age, gender, personnel type, experience level), work stress, and community support.

Hypothesis 4: Perceived community support will be will be negatively associated with psychological distress (post-traumatic stress symptoms, depression, anxiety, anger,

burnout) and alcohol consumption, and positively associated with indicators of wellbeing (life satisfaction, physical health satisfaction, and sleep quality) controlling for background variables (age, gender, personnel type, experience level), work stress, and organizational support.

Exploratory Analysis 4: Specific organizational (i.e., "The police department that I work for really cares about my wellbeing.") and community support items (i.e., "The residents where I work value my contributions to their welfare.") will be explored for their zero-order associations with the wellness criteria (post-traumatic stress symptoms, depression, anxiety, anger, burnout, life satisfaction, physical health satisfaction, sleep quality, and alcohol consumption).

Aim 5: Investigate whether perceived organizational support and community support moderate the association between work stress and wellness outcomes.

Hypothesis 5: Perceived organizational support will moderate the association between work stress and wellness criteria (post-traumatic stress symptoms, depression, anxiety, anger, burnout, life satisfaction, physical health satisfaction, sleep quality, and alcohol consumption), such that the association between work stress and wellness criteria will be weaker at higher levels of perceived organizational support, controlling for background variables (age, gender, personnel type, experience level) and community support.

Hypothesis 6: Perceived community support will moderate the association between work stress and wellness criteria (post-traumatic stress symptoms, depression, anxiety, anger, burnout, life satisfaction, physical health satisfaction, sleep quality, and alcohol consumption), such that the association between work stress and wellness criteria will be

weaker at higher levels of perceived community support, controlling for background variables (age, gender, personnel type, experience level) and community support.

Analyses and Data Considerations

Depending on the type of variables involved and the aim of the analysis, a combination of descriptive statistics, zero-order Pearson correlations, independent-means t-tests, dependent-means t-tests, one-way ANOVAs, and ordinary least squares (OLS) linear regressions were used to test hypotheses and conduct exploratory analyses in this study. The organizational and operational stress variables were combined to form an overall work stress variable to test Hypotheses 3-6. To do this, total scores were combined, then divided by the total number of items, producing a work stress item average score. Lastly, the lead researcher and a research assistant worked alongside each other to open code the qualitative open-ended responses, identify themes, and categorize responses according to those themes.

Assumptions of the tests utilized were assessed for violation prior to conducting each analysis. For the regression analyses conducted, the normality (of residuals) assumption, the homoscedasticity assumption, and the multicollinearity assumptions were all examined for violations, none were deemed cause for concern. Regarding normality, residuals for each model were plotted and visually examined. A similar process was used to examine the degree of heteroscedasticity. VIFs (variance inflation factors) were computed for each predictor, with none exceeding levels indicating concerning levels of multicollinearity ($VIF \geq 4$). All linear regression models were then assessed for statistical outliers using indices of leverage, distance, and influence specific to each model. Sensitivity analyses were conducted with the inclusion and exclusion of the identified outliers and subsequently compared. The removal of statistical

outliers did not meaningfully impact the results of the regression models, so all cases were retained in the analyses presented here.

Power Analysis

Perceived community support has been largely unexamined in relation to officer wellness. One study investigated perceived community support in relation to police officer motivation, and found an association of r = .51 (Greene, 1989). While work on community support is sparse, other support variables have been investigated as they relate to officer wellness. Baek et al. (2022) found that coworker support, supervisor support, and familial support were associated with the emotional exhaustion element of burnout (r = -.14, -.18, and -.17, respectively). Stephens and colleagues (1997) found that peer support, supervisor support, and nonwork support were associated with PTSD symptom severity (r = -.39, -.24, and -.24, respectively). Angehrn et al. (2022) found that social support was associated with insomnia, PTSD symptom severity, anxiety, and depression (r = -.28, -.31, -.28, -.35, respectively). In order to estimate the sample size needed to reliably detect an association between the variables of interest, these associations were used to inform a power analysis. Using a conservative estimate of r = -.20 for the association between perceived community support and officer wellness outcomes in the population, a power analysis was conducted using GPower. With a statistical power of .80 and an alpha of .05, a target sample size of N = 153 was recommended to reliably identify this effect. Thus, our study is adequately powered to detect these associations.

The moderation effect of perceived organizational and community support in the stress-wellbeing relationship has not been examined in many studies. One study found that different types of support did moderate the association between work stress and mental health among police officers, with a ΔR^2 = .04, .07, and .13 for the interaction effects of belonging support,

social support, and tangible support with work stress, respectively (Singh et al., 2021). Using a conservative expected ΔR^2 of .05 for the moderation effects of perceived organizational support and perceived community support in the population, a power analysis was conducted using GPower. With a statistical power of .80 and an alpha of .05, a target sample size of $N = 212$ was recommended to identify this effect. Thus, this study should be adequately powered to detect the moderation effects of perceived organizational and perceived community support on the work stress-wellbeing relationship.

Data Management

Participant responses were collected via Qualtrics. An anonymous link, which does not tie participants to the link used, was provided to participants to complete the assessments. Participant data was housed on Qualtrics servers for the duration of data collection. Qualtrics also requires two-factor authentication for login, which adds an additional element of security. After data collection was over, the data was downloaded to a password-protected desktop in a locked research office. Only the researchers involved in the project have access to this research office. Participants were instructed not to include personal identifiers in their open-ended responses. However, the data was screened upon download for identifiers in open-ended responses. Any participant identifiers found were promptly deleted.

Results

Descriptive Statistics, Variable Information, and Correlations

Means, standard deviations, valid cases, range of values, number of items, and internal consistency coefficients for the Study 1 variables are in Table 1, while correlations among the variables of interest can be found in Table 2.

Background and Job Characteristics

As outlined in Exploratory Analysis 1, officer wellness was first examined with regard to a number of background and job characteristics (age, gender, relationship status, personnel type, experience level, and transfer/lateral status). Age was negatively associated with PTSD symptoms (r = -.18, p = .03) and burnout (r = -.16, p = .03), with older officers reporting fewer symptoms. Male officers, compared to female officers, were less anxious [t (209) = -3.12, p <.01], more satisfied with life [t (194) = 2.03, p = .04] and more satisfied with their physical health [t (214) = 3.69, p <.001]. Comparing sworn officers to civilian employees (personnel type), sworn officers were, on average, more satisfied with life [t (198) = 3.56, p <.001] and with physical health [t (218) = 3.70, p <.001]. They were also less anxious [t (70.7) = -3.25, p <.01] than civilian employees. Transfer status (lateral hire vs. not a lateral hire) was associated with physical health satisfaction, with lateral hires being more satisfied with their physical health [t (211) = 2.93, p <.01]. Relationship status and years of experience were not associated with any of the wellness variables examined.

Stress Relief Strategies

Open-ended responses regarding strategies for relieving stress were explored and categorized according to themes, as outlined in Exploratory Analysis 2. Of the 221 survey completers, 155 submitted a response when asked about effective strategies for relieving stress from work. Six categories were produced that captured all responses: Physical activity (n = 75), connecting with others (n = 62), rest and relaxation (n = 57), hobbies (n = 41), faith practices (n = 9), and alcohol use (n = 5). Many participants endorsed more than one category of strategy, with some endorsing three or four.

The most common stress relief strategies were physical activity, connecting with others, and rest and relaxation. With 48.4%, 40%, and 36.8% of respondents endorsing them, respectively. Following these, hobbies were also commonly reported, with 26.5% of respondents indicating at least one hobby. Faith practices and alcohol use were the least common strategies reported for stress relief (5.8% and 3.2% of respondents, respectively). The diversity of responses can be seen in Table 3, where each response, their respective count, and the category that they fall in is provided.

Organizational and Operational Stress Associations with Wellness

At the zero-order correlational level, organizational stress and operational stress were both associated with various wellness criteria, which can be seen in Table 2. Hypotheses 1 and 2 were tested using a series of OLS multiple regression analyses. Controlling for background variables (age, gender, personnel type, experience level), organizational stress and operational stress were simultaneously included as predictors of the range of wellness criteria (PTSD symptoms, depression, anxiety, anger, burnout, life satisfaction, physical health satisfaction, sleep quality, and alcohol consumption frequency). Results for these analyses are in Table 4.

Organizational stress was significantly associated with worse PTSD symptoms, depression, anxiety, anger, and burnout, controlling for the background variables (age, gender, personnel type, experience level) and operational stress. On the other hand, operational stress was significantly associated with worse depression, anger, life satisfaction, physical health satisfaction, and sleep quality, when controlling for background variables (age, gender, personnel type, experience level) and organizational stress. While organizational stress appeared to be related to the psychological distress criteria (PTSD, depression, anger, burnout), operational stress was related to the criteria assessing wellbeing (life satisfaction, physical health

satisfaction, sleep quality). Both forms of stress were significantly related to depression and anger, though.

Disaggregating Stress Indicators

In addition to examining the organizational and operational stress summary scores as they relate to wellness, item-level analyses were conducted to disaggregate and explore whether certain stressors were more strongly associated with wellness than others (Exploratory Analysis 3). The wellness variables examined were PTSD symptoms, depression, anxiety, anger, burnout, life satisfaction, physical health satisfaction, sleep quality, and frequency of alcohol consumption. Tables 5 and 6 contain the results for these item-level correlations.

Organizational Stress. The ten organizational stress items (ORG-STR) were individually examined for their zero-order correlations with the various wellness variables. Analyses revealed that “dealing with coworkers”, “the feeling that different rules apply to different people”, “constant changes in policy/legislation”, “staff shortages”, and “inconsistent leadership style” were all most strongly associated with anger (r = .45, .44, .38, .31, .38, respectively) and with burnout (r = .45, .49, .49, .40, .44, respectively). “If you are sick or injured your coworkers seem to look down on you” correlated most strongly with depression (r = .43, p <.001), anxiety (r = .40, p <.001), and anger (r = .40, p <.001). As with the first five organizational stress items, “leads over emphasize the negatives” was most strongly associated with anger (r = .44, p <.001) and burnout (r = .51, p <.001). The last three items, “internal investigations”, “dealing with the court system”, and “the need to be accountable for doing your job” all correlated most strongly with depression (r = .39, .30, .35, respectively) and burnout (r = .37, .36, .39, respectively).

Operational Stress. The ten operational stress (OP-STR) items were individually examined for their zero-order correlations with the various wellness variables. Analyses revealed that "over-time demands" was most strongly associated with anger (r = .30, p <.001) and burnout (r = .33, p <.001). "Work related activities on days off" was most strongly associated with burnout (r = .28, p <.001), anger (r = .22, p <.01), and sleep quality (r = -.22, p <.01). Not surprisingly, "traumatic events" exhibited the strongest correlations with PTSD symptoms (r = .47, p <.001) and depression (r = .47, p <.001). "Not enough time available to spend with friends and family" was most strongly associated with burnout (r = .48, p <.001) and sleep quality (r = -.42, p <.001). "Paperwork/report-writing" was most associated with anger (r = .31, p <.001) and depression (r = .27, p <.001). As was found with overtime demands, "Occupation-related health issues" was most strongly associated with anger (r = .43, p <.001) and burnout (r = .40, p <.001). "Lack of understanding from friends and family about your work" was most associated with burnout (r = .40, p <.001) and life satisfaction (r = -.44, p <.001). "Negative comments from the public" and "feeling like you are always on the job" both correlated most strongly with anger (r = .30, .39, respectively) and with burnout (r = .33, .46, respectively). "Friends/family feel the effects of stigma associated with your job" was correlated most strongly with depression (r = .38, p <.001) and anger (r = .42, p <.001).

Organizational and Community Support Associations with Wellness

At the zero-order correlational level, organizational support and community support were both associated with various wellness criteria, which can be seen in Table 2. Hypotheses 3 and 4 were tested using a series of OLS multiple regression analyses. Controlling for background variables (age, gender, personnel type, and experience level) and overall work stress (organizational stress and operational stress scores, averaged), the support variables

(organizational support and community support) were included as predictors of the same wellness criteria examined previously. Results for these analyses are in Table 7.

In these models, work stress was consistently significantly associated with poorer wellness, across all of the variables examined. Community support was positively associated with physical health satisfaction, and curiously, with worse PTSD symptoms and alcohol consumption frequency. Organizational support was negatively associated with PTSD symptoms, depression, anger, and burnout, while positively associated with life satisfaction.

Disaggregating Support Indicators

In addition to examining the organizational and community support summary scores as they relate to wellness, item-level analyses were conducted to disaggregate and explore whether certain support items were more strongly associated with wellness than others (Exploratory Analysis 4). The wellness variables examined were PTSD symptoms, depression, anxiety, anger, burnout, life satisfaction, physical health satisfaction, sleep quality, and frequency of alcohol consumption. Tables 8 and 9 contain the results for these item-level correlations.

Organizational Support. The six organizational support items (ORG-SUP) items were individually examined for their zero-order correlations with the various wellness outcomes. Items that read “the police department values my contributions to their mission” and “the police department fails to appreciate any extra effort from me (r)” were most strongly associated with anger (r = -.42, -.33, respectively) and burnout (r = -.51, -.36, respectively). “Even if I did the best job possible, the police department would fail to notice (r)” was most strongly correlated with depression (r = -.35, p <.001) and burnout (r = -.46, p <.001). As was found with the first two items, “The police department would forgive an honest mistake on my part” was associated most strongly with anger (r = -.19, p <.01) and burnout (r = -.24, p <.01). “The police department

takes pride in my accomplishments at work" was correlated most strongly with depression (r = -.41, p <.001), burnout (r = -.45, p <.001), and life satisfaction (r = -.41, p <.001). "The police department really cares about my wellbeing" was strongly associated with depression (r = -.42, p <.001) and burnout (r = -.45, p <.001).

Community Support. The six community support (COM-SUP) items were individually examined for their zero-order correlations with the various wellness outcomes. Analyses revealed that "the community values my contributions to their welfare" was most strongly correlated with burnout (r = -.28, p <.001) and life satisfaction (r = -.27, p <.001). "The residents of the city fail to appreciate any extra effort from me (r)" was associated most strongly with anxiety (r = -.18, p <.01) and physical health satisfaction (r = .19, p <.01). "Even if I did the best job possible, the community would fail to notice (r)" was most strongly correlated with burnout (r = -.25, p <.001) and physical health satisfaction (r = .29, p <.001). "Residents of the city would forgive an honest mistake on my part" was most strongly associated with anxiety (r = -.35, p <.001) and physical health satisfaction (r = .24, p <.001). "The community take pride in my accomplishments at work" was associated most strongly with anxiety (r = -.34, p <.001), burnout (r = -.24, p <.001), and sleep quality (r = .24, p <.001). Lastly, "the residents of the community really care about my wellbeing" correlated most strongly with anxiety (r = -.29, p <.001) and physical health satisfaction (r = .27, p <.001).

Organizational and Community Support as Moderators of the Work Stress – Wellness Relationship

The hypothesized moderation effects of organizational support (H5) and community support (H6) on the work stress – wellness relationship were tested using a series of OLS multiple regression analyses. An overall work stress variable was created by combining

participants' organizational stress and operational stress scores and dividing their total scores by the total number of items. In OLS multiple regression analyses, background variables (age, gender, personnel type, and experience level) were entered as covariates along with work stress, organizational support, and community support as predictors. The work stress by organizational support and the work stress by community support interaction terms were also entered as predictors to test for moderation (Hypotheses 5 and 6). Each wellness criterion variable (PTSD symptoms, depression, anxiety, anger, burnout, life satisfaction, physical health satisfaction, sleep quality, and alcohol consumption frequency) was sequentially analyzed. Results for the interaction terms are in Table 10, with full model results being in Tables A1-A9 (Appendix).

Community support was not a significant moderator of the relationship between work stress and the wellness criteria (PTSD, depression, anxiety, anger, burnout, life satisfaction, physical health satisfaction, sleep quality, alcohol consumption frequency). Organizational support, however, did emerge as a significant moderator of the relationship between work stress and PTSD symptoms, depression, anxiety, anger, burnout, and life satisfaction. The significant work stress by organizational support interactions were probed, revealing that the association of work stress with wellness outcomes varied as a function of organizational support.

Probing was conducted at various levels of organizational support (mean, +1SD, -1SD, and values of 1-7). This revealed that at higher levels of organizational support, the work stress-wellness relationship was consistently weakened. In contrast, when organizational support was low, the work stress-wellness relationship was strengthened. We also utilized the Johnson-Neyman technique (Johnson & Neyman, 1936) to identify the boundary value of the moderator at which the work stress is no longer significantly associated with the criterion variables. Lastly, we identified the proportion of observed scores around these various moderator levels in our

sample. It is worth noting, for example, that there were few participants who scored very high on organizational support (8.1% scored 6 “Agree” greater; 1% scored 7 “Strongly Agree”). Results for the JN Sig. values are in Table 11, and full interaction probing results are in Tables A10-A15.

Wellness Survey Closing Remarks

At the end of the wellness survey, participants were asked, in open-ended form, if they wanted to share anything that wasn’t addressed in the survey. Of the 221 survey completers, a total of 48 responded to this question. Remarks were coded and tabulated according to themes, with four categories of remarks being produced: Discontent (n = 33), department suggestions (n = 6), positive comments (n = 4), and other (n = 5).

Comments containing some form of discontent (68.8% of respondents) were by far the most common. Of these 33 remarks, 22 concerned discontent with departmental leadership, 7 with the work environment, and 5 with staffing. Few participants made suggestions (12.5% of respondents) for improving the department, and even fewer left positive comments as closing remarks (8.3% of respondents). Five remarks did not fit any of these categories. Information regarding these categories and individual responses are in Table 12.

Limitations

One major limitation of this study is that the sample of employees utilized may not be representative of all employees at the agency we’ve collaborated with. With a sample size indicating a response rate of 35%, the generalizability of our results is somewhat limited. It is impossible to know, for example, if the survey respondents differ in a meaningful way from the employees that chose not to participate. Beyond this, these results are only from one police agency in California, this limits the generalizability of our findings to other agencies that might differ from the one studied here. Since the data gathered are cross-sectional, with measurement at

only one time point, our ability to make inferences about directionality between variables is also limited. In an effort to make the survey low-burden to participants, only one measure of each dependent variable was included. Lastly, all measures in the present study are self-report in nature. Even though the survey was conveyed to participants as anonymous, it is possible that participants, police officers, in particular, were hesitant to answer questions regarding their mental health due to confidentiality concerns. Lastly, the lead researcher and an RA led the open coding of qualitative data. This introduces a potential for bias in the coding of said data. It would be best for future studies to utilize a coder that is not involved in the project, or to have multiple independent coders create themes based on the responses.

Significance

This study furthers the understanding of factors associated with the wellbeing of sworn and civilian police department employees. It was found here, that organizational stress and operational stress may be uniquely associated with certain wellness criteria, and not with others. In addition to this, perceived organizational and community support were investigated as they relate to wellness. Perceived organizational support, but not perceived community support, was found to moderate the relationship between occupational stress and many wellness criteria. This means that efforts to bolster organizational support have potential to improve the wellbeing of police department employees by mitigating potential effects of work stress. Identifying factors most associated with wellness can provide valuable information for the development of interventions and mobilization of resources to address wellness issues that employees face at agencies like the one studied here. The police department with whom we conducted this study also serves to benefit from a better understanding of the wellness profile of their employees, gleaning insight into how they might allocate resources to where they are most needed.

Study 2: Acceptability, Uptake, Utility, and Barriers of the "Train to Serve" Program

Overview

Studies 2 and 3 utilize a randomized waitlist-control experimental design to evaluate a 5-day, 40-hour procedural justice and officer wellness training for police officers. Days 1 – 4 of the training (32 hours) were dedicated to procedural justice, with day 5 focusing on officer wellness (8hrs). It was arranged with our police agency collaborators that there would be 42 patrol officer volunteers as participants. The agency coordinators designated 42 officers, who the research team then randomly assigned to either a training group or a waitlist-control group, after being rank-order matched on their ratio of arrests made to calls for service. Study 2 gives attention to the development of the training, while focusing on the acceptability, uptake of materials, and reported utility and barriers of the training by the attendees. These aims were investigated using training session rating forms given to officers over the 5-day training period.

Pen-and-paper rating forms regarding the perceived value, acceptability, and uptake of the training were given to participants at the start of day 1, and again at the end of each training day. Items concerning participants' expected value of the training, perceived value of each training day, confidence towards the skills reinforced in the training, and open-ended responses regarding the utility of and barriers of the training were included in the forms. Study 3 gives attention to whether the training produced its intended effects on officer wellness and procedural justice outcomes, using online-administered repeated measures questionnaires at three timepoints (pre-training, post-training, and 4-month follow-up). Officers in the waitlist-control group were scheduled to receive an updated version of the training in the summer of 2024.

The aims of Study 2 were (1) to assess the perceived value and acceptability of the training, (2) to assess the uptake of various materials/recommendations presented during the

training, and (3) to identify themes regarding the perceived utility of and barriers to the training using open-ended responses provided by the training's participants.

Training Development

Dubbed the "Train to Serve" program, a 40-hour procedural justice and officer wellness training program was developed by a team of police officers and researchers under the auspices of the police department's Chief of Police and command staff. The procedural justice portion was adapted from a training program, developed and evaluated by Weisburd et al. (2022). One of the authors on that publication, Dr. Cody Telep, of Arizona State University, was recruited to help modify the training to better suit the agency's goals. In addition to Dr. Telep, Sgt. Thomas Datro of the Los Angeles Police department, who is an experienced police officer and training instructor, was recruited to assist Dr. Telep in modifying the training and to ultimately serve as the instructor of the training program evaluated here.

The *Officer Wellness* portion of the training, the development of which was primarily led by the present author, Isaias Contreras, with input from Sgt. Datro, his advisor, and agency staff, consisted of five modules: *Employee Wellness*, *Demystifying Mental Illness*, *Wellness Derailed*, *Warning Signs and Intervention*, and *Resources Available to You*.

The first module, *Employee Wellness*, introduced the wellness-illness continuum, discussed recent events and police-community relations as they relate to wellness, provided recommendations for building wellness across various domains (Physical Capital, Emotional Capital, Social Capital, Spiritual Capital, Economic Capital), and promoted a "perishable skill" mindset towards wellness (Thornton, 2020). Discussions surrounding the prevalence of wellness issues among police department employees, as well as on the department-wide wellness data secured in Study 1 also took place.

The second module, *Demystifying Mental Illness*, framed stress-related mental health concerns as "occupational stress injuries." It was emphasized that concerns of this nature were fairly common, as evidenced by the department-wide wellness survey, and that people can experience symptoms of mental illness to varying degrees, without it necessarily being debilitating. Officers were familiarized with and taught to recognize the symptoms of various mental health problems (post-traumatic stress, depression and suicidal ideation, anxiety, anger and irritability, burnout, problems of excess/coping), pertinent to themselves and their colleagues. Departmental wellness data regarding each of the issues discussed was shared to underscore the fact that the prevalence of the issues described are not as rare as they might seem, and as being associated with higher levels of work stress (which was confirmed in Study 1).

The third module, *Wellness Derailed*, covered events which might derail officers from being in a state of good physical and mental health. Attention was given to physical health problems, traumatic events, work-life problems, personal-life problems, and negative community interactions as wellness-derailing events. Concrete recommendations and resources were provided for both the prevention and treatment for each of these issues.

The fourth module, *Warning Signs and Intervention*, covered signs and symptoms of wellness issues ("yellow flags" and "red flags") and provided recommendations on how to intervene for oneself and for a colleague should they encounter the aforementioned signs. Attention was also given to reasons why one should intervene in the first place, as opposed to minding one's own business. Guided role-play and vignette work at various points of the session were enacted to give participants an opportunity to practice intervening in the case of a hypothetical wellness issue with a colleague, as opposed to "minding one's own business."

The fifth module, *Resources Available to You,* covered all of the departmental wellness-related resources that are available to employees at the police department. Each resource was covered in detail, providing participants with a short description of the resource, location, contact person(s), and guidance on which resource would best suit which wellness issue(s) (i.e. physical health problems would be best addressed by the department-based wellness coordinator). The training ended by providing officers with a 7-item Wellness Plan that they should strive to check-off every day to improve their personal wellness.

Method

Participants

The 42 patrol officer participants, designated by the agency team members, were randomly assigned to conditions after being rank-order matched with another participant on their ratio of arrests made to calls for service. Each member of the matched pair was randomly assigned to either the training group or waitlist-control group. Thus, 21 officers were assigned to the training and 21 to the waitlist-control group, with matched-pairs being randomly split to each group.

While 21 officers were assigned to the training group and scheduled to attend it, four officers were unable to attend any of the training, and others were unable to attend on certain days or portions of the training. A list of participant rating form completion across the five days of the training can be found in Table 13, which indicates participant attendance. Of the 21 officers assigned to the training, 16 completed the day 1 entrance survey, 13 completed the day 1 exit survey, 16 completed the day 2 exit survey, 14 the day 3 exit survey, 16 the day 4 exit survey, 16 the day 5 exit survey, and 17 completed the overall training exit survey.

Procedure

To begin the project, the present author (Isaias Contreras) and his mentor (Dr. Raymond Novaco) had several meetings with the lead agency coordinator assigned to the project and his associate. Progressively, a project team was formed of researchers and police department representatives, including the designated instructor for the training, Sgt. Thomas Datro. The project team then met with agency command staff at the police department to discuss the training, evaluation plan, and study design. After reaching a signed agreement on the study design and procedure, officers in leadership positions relayed the training synopsis and evaluation plan to all patrol officers, asking for volunteers to participate. The 42 volunteer participant officers were randomly assigned to either a waitlist control-group or a training group (21 officers per group). The waitlist group was to receive the training in the summer of 2024.

Randomization after being rank-order matched on field performance, as opposed to simple randomization, was chosen to increase the likelihood of producing training and waitlist groups that were balanced concerning the officers' police activity. Officers were rank-ordered and matched using their ratio of arrests made to calls for service. Officers within each matched pair were then randomly assigned to either the training group or waitlist-control group. Police department record data regarding arrests made and calls for service were accumulated from April 15th, 2023 to October 20th 2023 for the purposes of matching and randomization. The training took place during the week of November 13th-17th, 2023.

Researchers were informed, three days prior to the training, that four of the officers assigned to the training would not be able to attend, and that others would miss portions of the training due to scheduling conflicts. Officers that could attend went on to receive the intervention and officers in the waitlist-control group were placed on a waitlist. Throughout the training,

officers that attended it received a total of six brief in-person surveys to evaluate the acceptability, perceived value, and uptake of the training.

As a component of the wellness training, officers assigned to the training group were also provided with a physical copy of a self-help book that was identified by the present author. The book, *The POWER Manual: A Step-by-Step Guide to Improving Police Officer Wellness, Ethics, and Resilience* (Blumberg et al., 2021), is designed for police officers as the primary audience and serves as a reference guide for how to improve officer wellness while juggling the responsibilities and stressors inherent to the job.

Measures

Training Acceptability and Uptake Forms. Officers that attended the training received multiple in-person rating forms administered at the beginning of day 1, and at the end of each training day to assess the perceived acceptability and uptake of the training materials (1 entrance form and 5 exit forms). The items on the entrance form concerned participants prior training experiences, expected value of the training, and participants baseline confidence in performing a number of training-associated tasks. The exit form items concerned participants' likelihood of implementing the training recommendations (ranging from 0 = "not at all likely" to 4 = "extremely likely"), whether participants intended to make a lifestyle change after the training and in what specific domain (social, financial, physical, etc.), whether they found the specific training sections as valuable (ranging from 0 = "not at all valuable" to 4 = "very valuable"), how confident participants were in performing tasks associated with procedural justice (ranging from 0 = "not at all confident" to 4 = "very confident"), and satisfaction ratings of the overall training and instructor(s). Also included were qualitative assessments of participants' perceived utility of the training ("Do you believe today's training will help you in your work?"), and qualitative

assessments of participants' perceived barriers to implementing the training recommendations ("Do you perceive any barriers to implementing today's training recommendations?").

Aims, Hypotheses, and Exploratory Analyses

Aim 1: Assess the acceptability and feasibility of the training, using participant ratings of the training value, satisfaction with the training experience, satisfaction with the instructor(s).

Hypothesis 1: Officers, on average, will view each day of the training, and the overall training, as more valuable than "not at all valuable" (a rating of 0).

Exploratory Analysis 1: Descriptive statistics regarding the training experience (was interesting, useful, organized, met expectations, will help on the job) and instructor satisfaction (used relevant examples, responded to questions, knew the subject matter, used audience participation) will be calculated to assess the acceptability of the training.

Aim 2: Assess the uptake of the training materials and training recommendations.

Hypothesis 2: After the training, officers will be more likely than "not at all likely" to make a lifestyle change across five domains (physical health, social life, emotional wellbeing, personal finance, and spiritual life), and implement the seven wellness plan recommendations.

Hypothesis 3: From pre- to post-training, officers will report improvement in their ability to identify mental health concerns (in themselves or in a colleague), improvement in their confidence regarding seven abilities related to procedural justice, and improvement in their overall confidence in these abilities.

Aim 3: Identify the perceived utility of the training and barriers to implementing the training.

Exploratory Analysis 2: Open-ended responses regarding participants' useful takeaways gleaned from the training, as well as barriers to implementing the training will be

investigated for themes and categorized accordingly. Descriptive statistics will be calculated to tabulate prominent themes.

Analyses and Data Considerations

Descriptive statistics, one-sample t-tests, and dependent means t-tests were used to test the study hypotheses and conduct exploratory analyses. Assumptions of one-sample t-tests (normality) and dependent means t-tests (normality, homogeneity of variances) were assessed for violations, none were deemed cause for concern. Regarding normality, the outcome variables scores for one-sample t-tests and the outcome variable difference scores for dependent means t-tests were plotted and visually examined. Open coding of qualitative responses to identify themes and categorize responses was employed by the lead researcher and a research assistant, working in tandem. Effect size estimates for changes over time were also computed. When assessing mean differences among the trained officers across two timepoints (within-subjects), estimates of the standardized mean differences were created. For these estimates, Cohen's *d* (Cohen, 1969) – using the standard deviation of the mean differences as the standardizer – and Hedges' *g* (Hedges, 1981) – using the same standardizer after an adjustment for sample size – were calculated, as the *SD* of the change scores is the preferred standardizer in these types of estimates (Dankel & Loenneke, 2021). Glass's Δ (Glass, 1976) – which uses the standard deviation of the group at pre-training as the standardizer – was also calculated to supplement the other effect sizes.

Power analysis

Procedural justice trainings have been fairly effective at improving procedural justice attitudes among police officers. With effect sizes ranging from $d = 1.42$ to 3.35 (Antrobus et al., 2019; Skogan et al., 2015), thus we do not believe that statistical power will be an issue for this

outcome variable. Given that wellness training/interventions for police officers vary widely in their curricula, duration, and effectiveness, we estimated the effect sizes of interventions most similar to the one being developed in order to estimate the statistical power of the current study.

Kuehl et al. (2016) evaluated a wellness intervention administered to 408 police officers that involved 6 hours of peer-led wellness sessions that focused on fostering social support and increasing healthy lifestyle habits. They found an effect size of d = .16 for self-reported stress and a d = .13 for depression at 6-months post-intervention. Acquadro Maran et al. (2018) evaluated the effectiveness of wellness courses and physical activity courses among 105 police officers. At 3-months post-intervention they found effect sizes of d = .67 and d = .79 for emotional problems and perceived distress, respectively. Tanigoshi et al. (2008) found that individual wellness counseling with 60 law enforcement officers was able to improve aspects of "thinking, emotions, control, positive humor, and work" by a factor of d = .34. Drake (2021) evaluated a large 2-day (16-hour) police training program (N = 174) that focused on issues of wellness and police legitimacy by the name of Blue Courage. This training is most akin to the one being developed. The pre-post effect of the Blue Courage training on "emotional wellness" was d = .27.

Using GPower, a power analysis was conducted to determine the necessary sample size for adequate statistical power, given a population effect size of d = .30 for immediate gains seen from the intervention. With statistical power set to .80 and an alpha level of .05, a target sample size of N = 90 was recommended to reliably identify this effect. Specifying a population effect size of d = .50 for immediate gains, the recommended sample size drops to N = 34. Given that only 21 participants were assigned to the training, and even fewer attended and completed the

questionnaires, this study is not adequately powered to reliably detect the anticipated effects at the level of statistical significance.

Data Management

As in Study 1, Qualtrics was utilized to administer and collect participant data. An anonymous link, which does not tie participants to the link used, was the method by which participants completed the assessments. For the duration of data collection, participant data was housed on Qualtrics servers. Qualtrics requires two-factor authentication for login. After data collection was completed, the data was downloaded to a password-protected desktop in a locked research office.

Results

Training Value

At the outset of the training session, participants were asked how valuable they expected the overall training to be. With an average rating of $M = 1.81$ ($SD = .91$, $N = 16$), participants indicated an average expectation near “somewhat valuable”. Following the conclusion of each training day, participants were also asked how valuable they found that session. Days 1 ($M = 2.54$, $SD = 1.27$, $N = 13$) and 2 ($M = 2.63$, $SD = 1.26$, $N = 16$) were reported to be between “somewhat valuable” and “moderately valuable”. Days 3 ($M = 3.14$, $SD = .86$, $N = 14$) and 4 ($M = 2.81$, $SD = 1.11$, $N = 16$) received average ratings that were somewhat higher, approximating “moderately valuable”. Day 5 of the training, which concerned officer wellness, received the highest rating with an average between “moderately valuable” and “very valuable” ($M = 3.63$, $SD = .72$, $N = 16$).

When asked to reflect on the overall training, participants rated the training to be “moderately valuable”, on average ($M = 3.00$, $SD = 1.00$, $N = 17$). Thus, the value rating

ascribed to each day, and to the overall training upon completion, was valued higher than the participants expected the training to be. The value ratings for each day improved as the training progressed, with a brief decline in perceived value on Day 4. Results for the training value ratings and the proportion of participants endorsing each response option are in Table 14. Using one-sample t-tests, the average value ascribed to each day and to the overall training was compared to a hypothetical population average of 0 ("not at all valuable"). All tests indicated the value ascribed to the training (each day and overall) was significantly greater than the test value of 0 (p <.001).

Training and Instructor Satisfaction

At the conclusion of the training, participants were asked the degree to which they found the training: "interesting", "useful", "organized", "met their expectations", and "will help them on the job". They were also asked the degree to which the instructor(s): "used relevant examples", "responded to questions", "knew the subject matter", and "used audience participation". Descriptive statistics for these items can be found in Table 15. The training satisfaction items trended toward an average rating of "Agree = 4", with average ratings ranging from M = 3.53 to M = 4.00. The instructor satisfaction items ratings trended towards "Strongly Agree = 5", ranging from M = 4.53 to M = 4.82.

Likelihood of Lifestyle Change and Wellness Plan Implementation

At the end of the wellness training, participants were asked (on a scale of 0 "not at all likely" to 4 "very likely") how likely they would be to make a lifestyle change in the following domains: physical health, social life, emotional wellbeing, personal finance, spiritual life. The average ratings across these five domains were between "somewhat likely" to "very likely". The highest ratings were given to physical health (M = 3.56, SD = .81, N = 16), personal finance (M =

3.25, *SD* = 1.00, *N* = 16), and emotional wellbeing (*M* = 3.13, *SD* = 1.09, *N* = 16). Descriptive statistics of these ratings are in Table 16. Using one-sample t-tests, the average likelihood of implementing a lifestyle change for each domain was compared to a hypothetical population average of 0 ("not at all likely"). All tests indicated participants' reported likelihood was significantly greater than 0 ($p < .001$).

Participants were given seven actionable recommendations as part of a "Wellness Plan", and were asked (on the same likelihood scale) how likely they would be to implement those recommendations every day. These seven recommendations and their corresponding ratings are in Table 16. Average ratings for these items ranged from *M* = 3.19 to *M* = 3.56. Thus, participants were, on average, between "moderately likely" and "very likely" to implement all of the seven recommendations. Using one-sample t-tests, the average likelihood of implementing the seven wellness plan recommendations was compared to a hypothetical population average of 0 ("not at all likely"). As was found for lifestyle changes, all tests here indicated participants' reported likelihood was significantly greater than 0 ($p < .001$).

Confidence in Identifying Mental Health Concerns

At the outset and conclusion of the training, participants were asked how confident they were (on a scale of 0 "not at all confident" to 4 "very confident") in identifying mental health concerns for themselves or for a colleague. Matching officers' pre- to post- scores on this variable revealed that before the training, officers indicated that they were between "somewhat confident" and "moderately confident" (*M* = 2.67, *SD* = .90, *N* = 15). After the training, they were between "moderately confident" and "very confident" (*M* = 3.47, *SD* = .52, *N* = 15). These differences between means produced effect sizes (*d* = .85, *g* = .83, Δ = .89) conventionally considered large (Cohen, 1988), indicating that there was a gain in confidence regarding one's

ability to identify mental health concerns. Descriptive statistics and effect sizes for this variable are in Table 17. Results from a dependent means t-test indicated that this gain was statistically significant [t (14) = 3.29, $p < .01$].

Confidence in Procedural Justice Abilities

At the outset of the training and at the end of the relevant training days, participants were asked to rate their confidence (on a scale of 0 "not at all confident" to 4 "very confident") in preforming eight different abilities related to procedural justice (i.e., "I can convey to citizens that I am someone to be trusted", "I can treat people respectfully, even when they are being rude to me"). Improvement in these eight confidence ratings and in participant's summary confidence ratings (the eight item scores summed and averaged) were analyzed using dependent means t-tests. Descriptive statistics and effect sizes for these comparisons are in Table 17. Matching pre- to post- overall confidence scores revealed that before the training, officers indicated that they were between "moderately confident" and "very confident" (M = 3.18, SD = .57, N = 14) in performing these abilities. After the training, they were also between "moderately confident" and "very confident" (M = 3.55, SD = .36, N = 14), but leaned closer towards "very confident". These differences between means produced an effect size (d = .66, g = .64, Δ = .65) considered medium to large by conventional standards (Cohen, 1988), indicating that there was a gain in confidence regarding one's ability to perform abilities related to procedural justice. Dependent means t-tests were conducted on each of the eight confidence ratings, as well as on participants overall confidence. Results indicated that there was a statistically significant ($p < .05$) gain only on item five ("when someone is hostile towards me, I can convey to them that I am treating them fairly") and on the summary confidence ratings [t (13) = 2.46, p = .03]. The context for these

results is that, before the training, participants had already reported being moderately confident in this regard. Thus, the reported gains are noteworthy.

Open-Ended Training Utility and Barriers

Over the course of the five days of training, officers were asked what they found useful or valuable from the training, whether they could identify any potential barriers to implementing the training. They were also asked for their overall thoughts on the training, once it had concluded. A breakdown of these takeaways and barriers are in Table 18. On the days pertaining to procedural justice, 14 of the 17 officers noted at least one useful takeaway (82.4%). They reported the importance of perspective taking (n = 6), communication skills (n = 6), being transparent/fair/impartial by explaining one's decisions (n = 6), the fact that being respectful and compassionate can improve interactions (n = 5), the important use of active listening (n = 5), and that taking one's time on a call can lead to improved outcomes (n = 2). Regarding barriers reported on the procedural justice component, they reported concerns about a lack of community support (n = 2), that it can be hard for officers to open up to citizens (n = 2), that officer safety can at times be compromised (n = 2), and that some obstinate officers may present a challenge to the training implementation (n = 3). On the fifth day of training, devote to officer wellness, 10 of the 17 officers reported useful takeaways (58.8%). Among their notes were: the importance of wellness (n = 2), mental health (n = 2), sleep (n = 2), personal improvement (n = 2), physical health (n = 1), being able to cope with stress in healthy ways (1), and that they had learned of new wellness resources (n = 1). Barriers identified to the wellness portion of the training were: mandatory overtime demands (n = 2), court (n = 1), and being denied vacation requests (n = 1). At the very end of the training, the officers were solicited for their overall thoughts on the training. When asked this, 10 of the 17 officers noted that there is a need for an improvement in

officer-supervisor relationships within the department, while 2 of the 17 mentioned that the wellness component of the training was the most valuable.

Limitations

This study has a number of important limitations. First, the number of participants that attended the training is a very small proportion of the officers that work for our agency partner, and were among a group of officer volunteers (the training was not mandated). Thus, there is the potential for sampling bias in the present study. It is unclear how the training would be perceived if it were implemented with a different group of officers, or if the officers were mandated to attend. More representative and informative information would be gathered with multiple training cohorts, as the acceptability identified here may be unique to this training session or environment. The instructor of this training was particularly skilled, being a police officer himself with many years of experience as an educator. Thus, the acceptability of the training here may also be unique in that regard. Also, nearly one-fifth of the participants (four of the 21) that were scheduled to attend the training did not do so, and some of the participants that did attend were unable to make it to certain portions or entire days of the training. We do not know how the absent participants would have responded to the training, or how full attendance would have impacted the responses of participants that partially attended the training.

Additionally, it is possible that participants may have felt pressured to endorse positive ratings of the training, as it was organized and scheduled by departmental leadership. In fact, members of the agency's command staff attended portions of the training, which may have influenced participant responses. Lastly, training value and satisfaction ratings do not indicate anything with regard to improving officer distress or wellness, or in changing officer behavior related to procedural justice. These ratings do, however, give us insight into how useful and

worthwhile the participants perceived the training to be. As was the case with Study 1, the lead researcher and an RA open coded the qualitative data. This introduces a potential for bias in the coding of that data.

Significance

This study served as a pilot-test of a novel intervention intended to improve police officer wellness, perceived stress and support, attitudes towards mental illness, and procedural justice attitudes. Based on the assessment of training acceptability, there are a number of ways to improve the training, however, the attendees did appear to value the program, and also demonstrated some gains regarding the objectives of the training. After the training, officers reported being more confident in key areas the training was intended to target, and a number of important takeaways were highlighted.

Study 3: Evaluating the Efficacy of the "Train to Serve" Program

Overview

This study evaluated whether the developed 40-hour training had its intended effects on officers' wellness ratings, perceived stress and support, attitudes towards mental illness, and procedural justice attitudes at post-training and at a 4-month follow-up. The patrol officers (N = 42) who were randomly assigned to either a training group or a waitlist-control group after being matched on an index concerning their police activity (arrests made to number of calls) was the planned sample. Participants in both the training and waitlist-control groups were asked to complete repeated measures questionnaires at pre-training, post-training, and 4-month follow-up (sent via email). These questionnaires contained items concerning various wellness criteria, perceived stressors and supports, attitudes towards mental illness, and procedural justice attitudes. In addition to these self-report measures, open-ended responses regarding ideas for improving organizational support were solicited from responding officers at 4-months post-training. The sample was unfortunately diminished at each assessment point by varying response rates.

The primary aims of this study were (1) to identify whether the training had the intended short-term effects (shortly after training completion) of lowering psychological distress, improving indicators of wellbeing, and improving attitudes towards mental illness, and attitudes of procedural justice from pre- to post-training, (2) to investigate whether the training has these intended effects at 4-months post-training, and (3) to identify strategies for departmental leadership to improve perceptions of organizational support among officers.

Method

Participants

Arrangements were made with a large police department's command staff for 42 patrol officers to participate on a volunteer basis in the evaluation of the 40-hour procedural justice and officer wellness training. In those arrangements, 21 officers were assigned to the training group and 21 to the waitlist-control group. However, officer participation was variable. Many of the officers did not complete the repeated measures questionnaires that were circulated via email at pre-training, post-training, and at 4-month follow-up.

At pre-training (baseline), 18 officers in the training group and 6 officers in the waitlist-control group completed the online questionnaire. At post-training, only 6 training and 5 waitlisted officers completed the questionnaire. At 4-month follow-up, where officers were compensated with a $50 gift card (regardless of their completion of the questionnaire), 14 training and 12 waitlist officers completed the study questionnaire. Attendance at the training sessions was also variable, as reported in Study 2, ranging from 14 to 17 officers across the five days.

Procedure

Prior to the training, officers in both the intervention and waitlist conditions were emailed the first of three repeated-measures questionnaires by agency staff, with the email being drafted by the present author. This method of delivery was chosen so that project researchers would not have access to officers' contact information, which was a concern raised by agency partners. In order to link officers' responses at the various timepoints without identifying information, officers were assigned an ID number created by the research team that they were asked to indicate on each of the assessments. The online questionnaires were piloted for a 20-minute

completion time. A 72-hour window prior to the start of the training was given to participants to complete the questionnaire.

After the 5-day training, officers in both conditions were sent an online post-training questionnaire containing the same measures (repeated), distribution method, and time-frame to complete it as the pre-training questionnaire. The response rate at post-training was particularly low, with 6 officers in the training condition and 5 officers in the waitlist condition completing the assessment. Alarmed by this, compensation options were explored to boost participation at the 4-month follow-up assessment. Arrangements were made with agency staff to compensate all 42 officers with a $50 Amazon gift card just prior to the delivery of the 4-month assessment in an attempt to boost participation. After compensation was delivered to officers by agency staff, an email was circulated according to the research procedure, containing the 4-month follow-up questionnaire.

Measures

Pre-Training Assessment. The same measures used in Study 1 to assess demographic and background variables, post-traumatic stress, depression, anxiety, anger, domain satisfaction, life satisfaction, burnout, physical health, perceived organizational and community support, organizational and operational stress, and procedural justice attitudes were used in the pre-training assessment for Study 3. Additionally, knowledge and attitudes towards mental illness were measured one item from the Mental Health Knowledge Scale (MAKS; Evans-Lacko et al., 2010) and three items the Police Officer Stigma Scale (POSS; Stuart, 2017). These items were used to assess the belief that “mental illness is a sign of weakness or personal failure” (POSS, item 5), the degree to which one feels comfortable discussing a mental health concern with a colleague or supervisor (POSS items 1 and 2, averaged), and knowledge concerning where to

refer a colleague to seek help with a mental health concern (MAKS, item 2). Response options range from 1 “strongly disagree” to 7 “strongly agree.”

Post-Training Assessment. Excluding the demographic and background questionnaire, repeated measures of the instruments listed in the pre-training assessment were administered in the post-training assessment.

4-Month Follow-up Assessment. The same measures used in the pre-training and post-training assessment were administered at the 4-month post-training follow-up assessment. An open-ended question regarding soliciting ideas for improving organizational support was also included at this timepoint, in light of what was learned about officer concerns in Studies 1 and 2.

Aims, Hypotheses, and Exploratory Analyses

Aim 1: Identify whether the training has the intended short-term effects of lowering psychological distress (PTSD, depression, anxiety, anger, burnout) and alcohol consumption frequency, while improving indicators of wellbeing (life satisfaction, physical health satisfaction, sleep quality), attitudes towards mental illness, and procedural justice attitudes from pre- to post-training.

Hypothesis 1: Trained officers will report improvements in job-related assessments of organizational and operational stress, burnout, perceived organizational support and community support, improved attitudes towards mental illness, and improved procedural justice attitudes from pre- to post-training.

Exploratory Analysis 1: As the training is not a clinical intervention, we do not expect to see immediate improvements in most psychological distress outcomes (post-traumatic stress, depression, anxiety, anger), wellbeing indicators (life satisfaction, physical health

satisfaction, sleep quality), or alcohol consumption frequency. However, within-subjects differences on these outcomes from pre- to post- training will be explored.

Hypothesis 2: Trained officers will report less burnout, greater organizational support and community support, less organizational and operational stress, better attitudes towards mental illness, and better procedural justice attitudes compared to waitlist-control officers.

Exploratory Analysis 2: For similar reasons mentioned in EA1, we do not expect to see immediate differences between trained and waitlist-control officers for most psychological distress outcomes (PTSD symptoms, depression, anxiety, anger), wellbeing indicators (life satisfaction, physical health satisfaction, sleep quality), or alcohol consumption frequency. Between-subjects differences on these outcomes from pre- to post- training will be explored.

Aim 2: Investigate whether, at 4-months post-training, the training has the intended effects of reducing psychological distress and occupational stress, improving indicators of wellbeing, perceived support, attitudes towards mental illness, and procedural justice attitudes.

Hypothesis 3: At 4-months post-training compared to their own baseline, trained officers will report less psychological distress (PTSD symptoms, depression, anxiety, anger, burnout) and occupational stress (organizational and operational), improved wellbeing (life satisfaction, physical health satisfaction, sleep quality, alcohol consumption frequency), improved support (organizational and community), improved attitudes towards mental illness, and procedural justice attitudes at 4-months post-training compared to baseline.

Hypothesis 4: At 4-months post-training, trained officers compared to waitlist-control officers, will report less psychological distress (post-traumatic stress, depression, anxiety, anger, burnout) and occupational stress (organizational and operational), greater wellbeing (life satisfaction, physical health satisfaction, sleep quality, alcohol consumption frequency), greater perceived support (organizational and community), better attitudes towards mental illness, and procedural justice attitudes.

Aim 3: Identify strategies for departmental leadership to improve perceptions of organizational support.

Exploratory Analysis 2: Open-ended responses regarding ideas for ways in which departmental command staff can improve perceptions of organizational support will be investigated for themes and categorized accordingly. Descriptive statistics will be calculated to tabulate prominent themes.

Analyses and Data Considerations

Due to the very small sample size, the low response rate from participants, and inadequate statistical power, t-tests were not performed to test the study hypotheses and conduct exploratory analyses. Instead, effect sizes were calculated and reported. When comparing the training and waitlist-control groups at the same timepoint (between-subjects), estimates of the standardized differences between means were created. For these estimates, Cohen's *d* (Cohen, 1969) – which uses the pooled and weighted standard deviation of the two groups as the standardizer –, Hedges' *g* (Hedges, 1981) – which uses the same standardizer after an adjustment for sample size –, and Glass's Δ (Glass, 1976) – which uses the standard deviation of the control group as the standardizer - were calculated. When assessing mean differences among the trained

officers across two timepoints (within-subjects), the same effect sizes and standardizers used in Study 2 were utilized here.

Reliable change indices (RCIs; Jacobson & Truax, 1991; Blampied, 2022) were also calculated for all participants for which gain scores could be calculated, however, the low participation also made these data limited. Cronbach's alpha at the pre-training timepoint was chosen as the reliability coefficient to be used in the calculation of the RCIs (Evans et al., 1998), while the standard deviation of the relevant variable at pre-training was used as the indicator of variability. For variables that were not able to produce a Cronbach's alpha (such as measures comprised of 1 item), RCIs were not calculated.

As a check on the balance of the training and waitlist-control groups after randomization, the training and waitlist-control groups were compared at pre-training on the various wellness criteria, perceived stress and support, attitudes towards mental illness, and procedural justice attitudes. Lastly, working in tandem, the lead researcher and a research assistant used open coding of qualitative responses to identify themes and categorize responses.

Power analysis

Because of the nature of the training, which involves various recommendations for improving wellness and educating officers on the wellness resources available to them, it was expected that training effects for most wellness outcomes would be stronger in the months that followed it, compared to immediately after the training. In order to determine the estimated statistical power at 4-months post-training for officer wellness outcomes, studies were examined that utilized a comparable training and follow-up period.

Kuehl et al. (2016) evaluated a 6-hour wellness intervention administered to 408 police officers and found an effect size of $d = .16$ for self-reported stress and a $d = .13$ for depression at

6-months post-intervention. Acquadro Maran et al. (2018) evaluated the effectiveness of wellness courses among 105 police officers. At 3-months post-intervention, they found effect sizes of d = .67 and d = .79 for emotional problems and perceived distress, respectively. Tanigoshi et al. (2008) found that individual wellness counseling was able to improve aspects of "thinking, emotions, control, positive humor, and work" among police officers by a factor of d = .34. Drake (2021) evaluated the Blue Courage training, which is arguably the most similar to the proposed training. Immediate pre-post effects of the Blue Courage training on emotional wellness was d = .27.

For the immediate pre-post training gains in Study 2, we estimated effect sizes ranging from d = .30 to .50 in the population. As stated previously, Studies 2 and 3 are not adequately powered to detect either of those within-subjects' effects at the level of statistical significance. Recommended sample sizes at 80% power and an alpha level of .05 for those population effect sizes were N = 90 and 34, respectively. For between-subjects' comparisons, the picture is bleaker. Using GPower, a power analysis was conducted, specifying 80% statistical power, an alpha level of .05, and a population effect size of d = .50 for differences between training and waitlist groups. The recommended sample size to achieve 80% power under those conditions was N = 128. If all participants completed the assessments, the maximum sample size for the present study would equal 42. Thus, Study 3 is not adequately powered to reliably detect between or within-subjects' differences, given a population effect size of d = .50.

Data Management

Qualtrics was utilized to administer and collect participant data, which was then downloaded to a password-protected desktop in a locked research office. This study utilized a similar data screening, coding, and storage process as outlined in Studies 1 and 2.

Results

Randomization Assessment

The baseline wellness data (pre-training assessment) for officers in the training and waitlist conditions were compared to assess balance of the two groups after randomization. The two conditions were compared on PTSD symptoms, depression, anxiety, anger, burnout, life satisfaction, physical health satisfaction, organizational stress, operational stress, organizational support, community support, attitudes towards mental illness, and procedural justice beliefs. While $N = 18$ (of the 21) officers assigned to the training group completed the repeated measures questionnaire at pre-training, only $N = 6$ (of the 21) officers on the waitlist did so. Raw differences between means and effect sizes for comparisons of the two groups at pre-training are in Table A16.

Differences between the training and waitlist-control group respondents on variables of interest varied somewhat inconsistently. Effect sizes capturing the magnitude of these differences ranged from $d = -.97$ to .70. For psychological distress variables, the training group was somewhat worse off than the waitlist-control group (ranging from $d = .34$ to .70). For life satisfaction, they were largely the same ($d = -.03$). For physical health satisfaction ($d = .47$), sleep quality ($d = .28$), and alcohol consumption frequency ($d = -.61$), the training group was slightly better off. For the stress ($d = -.12, -.42$) and support ($d = .10, .41$) variables, the training group was also somewhat better off. Scores on procedural justice attitudes were comparable ($d = -.11$). Lastly, the waitlist-control group agreed more strongly with the statement that mental illness is a sign of weakness ($d = -.97$). They also were less knowledgeable about mental health referral services ($d = .27$), and were less comfortable discussing a mental health concern with a peer or colleague ($d = .59$).

Short-Term Training Effects

Training Condition Pre- vs Post-Training. Training condition officers' outcome variable scores were matched from pre- to post-training in order to assess the short-term effects of the intervention. Only five officers in the training condition completed the repeated measures questionnaire at both pre- and post-training. Raw mean difference scores and effect sizes for these within-subjects' comparisons can be found in Table 19.

For these five participants, pre- to post-training PTSD symptoms dropped slightly (d = -.45), depression and anger stayed largely unchanged (d = .18 and .00), while anxiety and burnout increased (d = .67 and .98). Life satisfaction (d = -.30), physical health satisfaction (d = -.12), sleep quality (d = -.24), and alcohol consumption frequency (d = -.45) were slightly higher at pre-training than post-training. Organizational stress (d = .69) and operational stress (d = .32) increased somewhat. Procedural justice attitudes increased (d = .88) quite a bit. Attitudes towards mental illness being a sign of weakness increased (d = .34), mental health referral knowledge was unchanged, while willingness to discuss a mental health concern increased from pre- to post-training (d = .85).

Trained vs Waitlisted Officers at Post-Training. Training and waitlist officers were compared on the outcome variables at post-training to assess the short-term effects of the intervention. Six officers in the training condition and five officers on the waitlist completed the repeated measures questionnaire at post-training. Effect sizes for these between-subjects' comparisons can be found in Table 20.

The respondents in the training condition reported greater PTSD symptoms (d = .53), depression (d = 1.13), anxiety (d = .58), and anger (d = .40) than the respondents in the waitlist-control condition. Burnout was comparable (d = .09), life satisfaction was somewhat greater for

the waitlist-control group (*d* = -.36), while physical health satisfaction was greater for the training group (*d* = .51). Sleep quality was largely the same (*d* = -.15), while alcohol consumption frequency was lower for the training group (*d* = -.66). Organizational and operational stress were nearly the same (*d* = .07 and -.05, respectively). Organizational support was slightly higher (*d* = .19) and community support was slightly lower (*d* = -.14) for the training group. Procedural justice attitudes were higher for the training officers (*d* = .35). Mental illness being seen as a sign of weakness was slightly lower (*d* = -.17) for the training officers, whereas knowledge about mental health referrals (*d* = .41) and comfort discussing a mental health concern (*d* = .55) was higher for the training group.

4-Month Training Effects

Training Condition Pre-Training vs 4-Months Post-Training. Training condition officers' outcome variable scores were matched from pre-training to 4-month follow-up in order to assess the long-term effects of the intervention. Only 13 officers in the training condition completed the repeated measures questionnaire at both pre-training and 4-month follow-up. Raw mean difference scores and effect sizes for these within-subjects' comparisons can be found in Table 21.

Among the training group respondents, officer's PTSD symptoms (*d* = -.18) and depression (*d* = -.18) were slightly lower at the 4-month follow-up, compared to pre-training. Anxiety was somewhat higher (*d* = .34), anger was somewhat lower (*d* = -.35), and burnout was higher (*d* = .75) at the follow-up. Life satisfaction was unchanged, physical health satisfaction (*d* = -.13), sleep quality (*d* = -.22), and alcohol consumption frequency (*d* = -.12) were all slightly lower at follow-up. Organizational stress increased (*d* = .46), operational stress decreased somewhat (*d* = -.34), while organizational and community support were largely changed (*d* =

-.03 and .02, respectively). Procedural justice attitudes greatly increased from pre-training to 4-month follow-up (d = 1.19). Attitudes towards mental illness being a sign of weakness were unchanged, and officers were slightly more knowledgeable about mental health referral (d = .16) and slightly more comfortable discussing mental health concerns (d = .17) at the follow-up.

Trained vs Waitlisted Officers at 4-Months Post-Training. Training and waitlist officers were compared on the outcome variables at the 4-month follow-up timepoint to assess the long-term effects of the intervention. 14 officers in the training condition and 12 officers on the waitlist completed the repeated measures questionnaire at post-training. Effect sizes for these between-subjects' comparisons can be found in Table 22.

Comparing the 14 trained officers to the 12 waitlist-control officers a 4-months post-training revealed that the trained officers, on average, reported less PTSD symptoms (d = -.59), were less angry (d = -.64), and reported less burnout (d = -.42). The two groups were comparable on depression (d = .06), anxiety (d = .00), and life satisfaction (d = -.02). Trained officers also reported more satisfaction with physical health (d = .43), greater sleep quality (d = .34), and less frequent alcohol consumption (d = -.35). Interestingly, too, trained officers reported less organizational stress (d = -.62), less operational stress (d = -.95), greater organizational support (d = .69), greater community support (d = 1.23), and better attitudes towards procedural justice (d = .71). They were also less inclined to view mental illness as a sign of weakness (d = -.83), were more knowledgeable about mental health referral (d = .52), and were more comfortable discussing a mental health concern with a peer or colleague (d = .41). Thus, nearly all of the between-subjects' comparisons at 4-months post-training were indicative of the training being successful.

Reliable Change Indices

For participants among the training and waitlist groups whose data were amenable to gain score calculations (i.e., a participant that completed the pre-training and post-training assessments, or who completed the pre-training and 4-month follow-up assessments), reliable change indices were calculated. Participants whose gain scores produced an RCI greater than 1.96 were considered to have significantly increased across the two timepoints. For RCIs less than -1.96, they were considered to have significantly decreased. Tables A17 and A18 contain the count of participants from each respective group who were considered to have significantly increased or decreased across time.

Due to the low participation across the assessments, not much can be gleaned from the RCIs calculated. One notable finding here was that among the trained officers, 5/11 of them significantly increased in their procedural justice attitudes from pre-training to 4-months post-training (45.5%). Aside from this, the number of people in each respective group who demonstrated a significant change over time was very small, and the low response rate to study questionnaires makes these results even less informative.

Ways to Improve Organizational Support

At the 4-month follow-up, officers were asked, “In your opinion, what can leadership at this police department do to better support their officers?”. Of the 26 officers (14 training, 12 waitlist-control) that completed the assessment, 19 suggested a way to improve support perceptions among officers. These open-ended responses were coded and categorized according to main themes, results for these responses are in Table 23. The most common response by officers was to hold all officers to the same standards (n = 6), another common response was to address immediate needs of the workforce, such as equipment and facilities improvements (n =

5). Three officers suggested that leadership should spend some time working patrol in order to gain perspective (n = 3), to commend officers more frequently when they do good work (n = 3), and to not micromanage officers out in the field (n = 3). A few officers noted that leadership should focus on officer wellness (n = 2), to not rush to discipline officers without hearing their perspective (n = 2), and to make themselves open and available for discussions (n = 2). Lastly, one officer suggested that command staff should consult officers prior to making decisions that directly affect them (n = 1), to be transparent about departmental issues (n = 1), and to be friendlier and more supportive of subordinates (n = 1).

Limitations

This study shares many limitations with Study 2. First, the number of officers randomized to the training and waitlist-control groups was small, with 21 officers per group. Even with full participation, the statistical power of this study was lacking, impacting our ability to detect training effects at the level of statistical significance. However, low participation from the officers randomized to conditions limits the internal validity of this study. Not much can be gleaned from the means produced if only a small proportion of the sample responded to the assessments. We have no way of determining whether assessment non-completers were systematically different from those who completed the assessments, and also whether non-completers in the training and waitlist conditions were themselves different. Estimates of the size of training effects were still calculated, but must be interpreted with caution. Aside from the internal validity issue, statistically significant effect sizes produced from underpowered studies tend to be overinflated (Ioannidis, 2008). As was the case in Studies 1 and 2, the lead researcher and an RA were responsible for open coding qualitative data. This introduces a potential for bias in how this data was coded and what themes emerged.

Random assignment of participants to trained and waitlist-control groups is a strength of the proposed study, accounting for what might otherwise be attributed to change over time. It is important to note, though, that the likelihood of equivalence of groups via random assignment increases with sample size, and we are unlikely to achieve equivalence of groups at baseline with such a small sample (Shibasaki & Martins, 2018). For this reason, balance on key outcome variables for the training and waitlist-control groups was assessed at pre-training. Another important limitation of this study is that we will be unable to infer which portion of the training is responsible for effects observed, as the training consisted of multiple modules and topics. Because assessments were completed at pre-training, post-training, and 4-month follow-up, we do not know which section/day/module of the training was the most impactful. In addition to this, it is likely that there was some contamination between trained and waitlist-control officers in the 4-months that follow the training, which may diminish observed between-groups training effects at the 4-month follow-up.

Significance

This study served to provide support for the efficacy of a novel 40-hour procedural justice and officer wellness training. Unfortunately, results from this investigation are, at best, mixed. Due to low participation in the training evaluation assessments, little can be said about the training's efficacy. While results at the 4-month follow-up comparison are promising, they have several limitations. Identifying whether the training was associated with wellness gains would inform police departments regarding future training decisions. Few studies have examined the lasting effects of wellness training among police officers with multiple wellness criteria, and fewer have utilized a comparison group. Some suggestions for improving organizational support were gleaned from study participants, which can inform future research.

Discussion

A well-functioning police force is essential for a productive and healthy society. Police officers whose physical and mental health are not optimal do not make for good guardians. Stigma associated with “mental illness” in police departments complicates this issue further (Bell et al., 2022; Drew & Martin, 2021; Fix et al., 2023; Beckley et al., 2023). As a job with significant risk for injury or death, and many routine stressors, it is important that police officers are supported and equipped with the resources necessary to maintain a healthy life. However, wellness programming is insufficiently prioritized for police officers. A nationwide assessment by Thoen et al. (2020) found that roughly 25% of law enforcement officers in the US did not know if their agencies provided wellness programming, with 35% feeling as though their agencies did not support their mental wellbeing. In addition to this, officers in the worst health do not participate in wellness programming at rates higher than those in the best of health (Lawrence & Dockstader, 2024). Recognizing the mental health issues facing police officers, which they call a “crisis”, Jackson and Theroux (2023) advocate that wellness check screening programs be adopted.

Many of the wellness programs implemented have not been evaluated for effectiveness (Carleton & Beshai, 2016) or have produced negligible effects (Patterson et al., 2012). The current dissertation sought to advance what is known about risk and protective factors associated with employee wellness in the context of law enforcement, and to develop, implement, and evaluate a novel training aimed at improving officer wellness and bolstering community-officer relations. By identifying factors that bear on wellness, developing an agency tailored training program to improve officer wellness, and evaluating it for its short-term and 4-month efficacy, the needle can be moved on this pressing issue.

Project Synopsis

This dissertation project was conducted in partnership with a large police department in California. Research partnerships with community stakeholders have considerable complexities and present a number of obstacles, along with rewarding opportunities. The value of the intended research program for the community stakeholder was at the forefront of considerations. In the current project, the author and his mentor responded to the interest of a large police department's Chief of Police and Vice President of the associated Police Foundation (a retired member of the agency's command staff) who sought to improve community-officer interactions by fortifying the "heart" of officers, as they believed that attention to this aspect was neglected in state mandated trainings and police academy teachings.

After some discussion, it was agreed that officer wellness should be featured as an element in the training. In search of a complementary training component, the present author's advisor identified a promising procedural justice training that was evaluated by Weisburd and colleagues (2022). The present author then contacted Dr. Cody Telep of Arizona State University, who was an author on the aforementioned publication, and who led the development of the evaluated training and served as its instructor. A skilled training instructor and police officer at the Los Angeles Police Department, Sgt. Thomas Datro, was also recruited to the project. Together, Sgt. Datro and Dr. Telep worked to tailor the evaluated procedural justice training to suit the collaborating agency. Sgt. Datro agreed to serve as the instructor of the envisioned training. The present author and Sgt. Datro also worked on developing the officer wellness component, with input from the collaborating agency's staff and the present author's advisor. Progressively, a team of researchers and agency partners was established, including Dr.

Emily Owens of UCI and her graduate student, Carolyn Coles, and steps were taken toward achieving an intervention research project.

Among the first arrangements made was to assess the wellness profile of employees at the collaborating agency. The department-wide wellness survey (Study 1) was an important first step to identify the specific needs of employees at the agency wherein the training would be implemented. With the endorsement of the agency's then Chief of Police, the department-wide wellness survey was launched. With over a third of the agency's employees responding, and preliminary analyses conducted and presented to the department's command staff, the present author then took the lead in developing the wellness component of the training. Researchers met regularly with the agency partners to establish a feasible design for the training implementation and evaluation (Studies 2 and 3).

It was decided that the agency partners would lead the recruitment of participants, that university researchers would match and randomly assign participants to training or waitlist conditions, and that departmental records data and self-report data would be used as a means of evaluating the trainings' efficacy. Departmental records data was not utilized in the current dissertation, as the focus was on officer wellness. After informing their patrol officers about the training and its evaluation plan, agency staff notified the research team that 42 officers had volunteered for the study. The 42 officers, after being rank-ordered and matched on patrol activity, were then assigned to the training or waitlist conditions by university researchers, and the training was scheduled. Researchers worked with agency staff to circulate the online questionnaires used in Study 3. The present author attended the training in its entirety, assisted in its delivery, and administered and collected rating forms regarding officer responses to the training (Study 2).

Predictors and Moderators Bearing on Officer Wellness

While stress in police work tends to manifest on two main fronts (Alves et al., 2023; McCreary & Thompson, 2006), results from Study 1 of this project suggest that organizational stress tends to be more strongly associated with wellness than operational stress. In this investigation, organizational stress was more salient in the minds of officers, both in the department-wide wellness survey (Study 1) and in the open-ended responses obtained during the training sessions (Study 2). This finding is consistent with prior investigations of organizational stress in policing (Biggam et al., 1997; Purba & Demou, 2019). Thus, efforts made to identify and minimize sources of stress among law enforcement employees may benefit the wellbeing of police department employees, with stressors originating from within the organization, being promising targets.

A novel inquiry that this study put forward was the role of both organizational and community support in the context of officer wellness. The findings on community support, though, were mixed. It was insightful to see that officers' and civilian employees' perceptions of community support were associated with many of the wellness criteria at the zero-order level (Table 2). However, when background factors, work stress, and the support variables were accounted for in the same model, stronger perceptions of community support were associated with more satisfaction with physical health, but also with more frequent alcohol consumption, and with worse PTSD symptoms. These findings are curious, as they suggest higher levels of community support are associated with some negative outcomes (alcohol consumption, PTSD symptoms).

Organizational support, on the other hand, was inversely associated with all of the psychological distress variables (PTSD, depression, anger, and burnout), barring anxiety, and

was positively associated with life satisfaction, in multivariate analyses. In addition, organizational support was found to mitigate the work stress-wellness relationship for many of the wellness criteria examined (PTSD symptoms, depression, anxiety, anger, burnout, life satisfaction). This suggests that boosting organizational support and officer recognition of it can mitigate the deleterious effects of work stress on officer wellbeing. This is a promising finding. In practice, increasing organizational support perceptions may not be easy. Action ideas, though, were suggested by participants in Study 3 (Table 23). Department leadership giving attention to and addressing the immediate needs of officers (equipment/facility improvements), and holding all officers to the same standards were suggested by many participants in this study as ways of improving organizational support perceptions.

Training Response

Study 2 of this dissertation investigated how officers responded to the designed training. Given that the wellness training was developed by the present author, and not imported from elsewhere, it was particularly important to see how officers responded to the training content. Across the five days of training that officers attended, consisting of the procedural justice (4 days) and officer wellness (1 day) modules, the attendees rated the wellness portion as being the most valuable.

There were a number of themes emphasized in the wellness modules that participants particularly liked. It appeared effective to introduce wellness as a multidimensional construct that encompasses elements beyond the absence of psychopathology. The first few sections of the module encouraged participants to consider ways in which they could improve or build various domains of wellness (physical, mental, social, financial, spiritual), and made actionable recommendations for ways to do so. This preventative, “umbrella” approach of improving

wellness for all officers, not just among officers experiencing distress is seen as an effective way to broach the topic of mental health without singling out officers who are unwell (Fix et al., 2023).

Subsequent sections gave attention to defining and identifying the symptoms of common mental health concerns such as post-traumatic stress, burnout, and depression. The goal was to improve officers' general awareness and knowledge of these concerns and associated symptoms. There were also demonstrated gains in participants' confidence in identifying mental health concerns from pre- to post-training. Among the useful takeaways reported by participants relating to wellness were: the importance of self-care, emotional wellbeing, and physical health, and the discovery of departmental wellness resources available to them.

When asked about reported barriers to implementing the wellness training, not many concerns were raised. A few officers mentioned mandatory overtime, court responsibilities, and limited time off as potentially getting in the way of implementing the wellness training recommendations.

Training Efficacy

The assessment of officers in Study 3 over a 4-month period was intended to gauge the efficacy of the training. Largely due to the diminished participation rate, the findings are inconclusive. Data were problematically incomplete at the pre- and post-training assessments, due to low participation. The most complete data (26 of 42) came from the 4-month follow-up questionnaire, for which all 42 study-designated officers were compensated with a $50 gift card.

Comparisons between training and waitlist officers at this timepoint were nearly all indicative of the training being associated with improved wellness, reduced work stress, improved support perceptions, improved attitudes towards mental illness, and improved

procedural justice attitudes. Still, though, only 61.9% of participants in the evaluation completed the assessment at 4-months. It cannot be known how the training and waitlist conditions would have compared if all participants completed the questionnaires, thus, we cannot say for certain whether the training was successful.

Low Response Rate Problem

What led to the low response rate over the course of the evaluation is unclear. One prime possibility is that officers felt pressure to volunteer for the training and research project by departmental leadership, which may have changed over the course of the project with the appointment of a new Chief of Police and new command staff members. There were indications of diminished engagement in open discussion during the training, as an officer openly indicated having been "voluntold" to participate, to which other officers in the room assented. At the outset, the target sample size for the intervention was 48 officers. The planned sample pool of officers for the study was then cut to 42. Agency partners were hopeful that enough patrol officers would volunteer for the program, and that enthusiasm for it would be high. After realizing that enthusiasm for the project was lower than anticipated, it is possible that agency command staff or supervisors exerted some pressure on officers to volunteer for the project, being concerned that they wouldn't be able to meet the original plan for 48 officer volunteers. This may explain why four officers who were scheduled for the training did not attend at all, although they told departmental leadership that their reason for doing so was due to scheduling conflicts.

Some officers had concerns about the confidentiality of their responses, despite researchers' assurances of identity protection. During the training, one officer brought to the present author's attention that he/she did not feel comfortable indicating the research participant

ID on the study questionnaires, concerned that responses would be read by departmental leadership and linked back to them. The present author explained to this participant that the procedures in place prevented that from happening, such as removing identifiers (including the participant ID) and demographic information from the dataset before sharing it with command staff. This participant and others, though, may have remained skeptical about the confidentiality of their responses.

Due to the agency leaders' anticipated enthusiasm for the project, the research team was told that there would be no need to compensate the officer participants. However, after identifying the low response rate in the pre- and post-training online questionnaires (57.1% and 26.2%, respectively), compensation options were explored. The research team arranged for all 42 officers to be compensated, through a grant from The Abdul Latif Jameel Poverty Action Lab (J-PAL), with a $50 gift card for the 4-month follow-up assessment. Despite the awarded compensation, only 61.9% of officers completed the questionnaire. Given that the response rate was highest when officers were compensated, it is likely that motivation to complete the pre-training and post-training questionnaires would have been better had compensation been provided at those timepoints.

The project's research data were primarily gathered through questionnaires circulated via email. This method worked reasonably well in Study 1, but it may have affected the low participation rate in the Study 3 assessments. One participant in Study 1 noted in an open-ended response that officers are frequently required by their agency to complete policy acknowledgements and other agency trainings on their mobile devices. It is possible that online delivery has negative associations among this population, and that they may have responded better to in-person assessments. All officers that attended the training completed the in-person

rating forms. However, it is also possible that departmental leadership was often in attendance, which may have served to pressure participants to complete the rating forms.

Lastly, officers may have viewed the assessments as being too burdensome to complete. The questionnaires were piloted to take 20 minutes, which was communicated to participants in the emails sent to them. Twenty minutes may have been appraised as too time consuming by participants, who are working stressful, full-time jobs and juggling other responsibilities.

Considerations for Future Intervention Research

Over the course of this project, much was learned about implementing and evaluating a psychologically-based intervention in a police department. Firstly, the recruitment and retention of study participants must be made a top priority. One critical misstep in the current investigation was the reliance placed on the police department staff for the recruitment of officer participants and communication to those participants of the study procedures. If possible, researchers should meet with prospective participants in the recruitment phase to discuss the intervention, its evaluation, and its procedures. It is also critical to reassure participants of the confidentiality of their responses and of the voluntary nature of participation in the study. The confidentiality concern was raised by participants and addressed, yet our participants' concerns remained, despite our reassurances. The reinforcement of officers' perceptions of confidentiality protection is an important agenda for future studies.

In Study 3, links to questionnaires were sent to participants via email by police department staff. Many of those emails were ignored. It is possible that the participants perceived them as too burdensome to complete or dismissed them as organizational input overload. In the future, it may be best for researchers to deliver assessments. Making it clear to participants that the research component is being conducted by an external organization may be one way to overcome

departmental mistrust and concerns about confidentiality (Fix et al., 2023). This was indeed communicated to participants in the current project, but emphasis and repeated reminders about who will receive access to the data may be needed.

Our agency partners also thought that compensation would not be necessary and that participants would be eager to be involved in the study – that is – until the low response rate issue was identified. At that point, all participants were compensated for the follow-up questionnaires, and yet, the response rate remained relatively low. Thus, the presentation, amount, and delivery of participant compensation must be wisely arranged by researchers, perhaps for each stage of data collection.

An issue for studies evaluating a police officer training using a comparison group is the potential for contamination across conditions. This is particularly relevant for those interested in conducting a randomized controlled trial style of evaluation. It would be good to identify whether patrol officers tend to ride two-to-a-car, or one-to-a-car, as this varies by agency. If seeking to avoid contamination between training and control-groups, it would be wise to avoid car-partners being assigned to different conditions. If trained officers ride alongside control-group officers, there may be spillover of training material/effects to their car-partner in the months following the training.

Cluster-randomization of pairs of officers to either treatment and control conditions would be one way of minimizing contamination in this way. This method of randomization was considered by the research team in the current project, but the intervention designated officer volunteers were not all partner-pairs. In practice, recruitment and cluster-randomization of partner-pairs can be difficult to accomplish, as there may be changes among partners and patrol assignments that are difficult to predict ahead of time. At the very least, attempts to assess contamination between

treated and control participants should be implemented, such as by asking participants in the control group if they have discussed the training with officers who received it.

Reactivity (Heppner et al., 1992), or "masking" (Novaco, 2010), where participants alter their responses due to the instrument, their awareness of being monitored, or perceptions about how their responses will be interpreted remains a problem in this population, in light of the well-documented stigma among police officers concerning the issue of mental health (Drew & Martin, 2021; Drew & Martin, 2023). This problem may lead police officers to intentionally underreport psychological distress due to concerns about how their disclosure of it will be handled by agency administration. Pertinent to the testing and detecting an interventions effect, if a wellness program engenders officers to be more forthcoming about distress, it is possible that their responses at post-training would indicate more distress than reported at pre-training. This further highlights the importance of officers' trust in the confidentiality of their responses as essential to achieve accurate measurement of distress.

Facilitating and Enhancing Officer Wellness Interventions

This investigation prompts several insights about conducting and enhancing officer wellness interventions. First, the content of an officer wellness program ought to be tailored to the police department in which it is implemented and, ideally, to the specific audience attending it (sworn vs. civilian employees, patrol vs. supervisory officers). Work stress associated with job demands and organizational contexts may differ significantly across agencies. Assessing wellness and wellness-related concerns in a department-wide survey, prior to training development, can provide useful information to guide the creation of the training, as was done in the current project. Doing so may lend itself to more engagement and buy-in from the training participants, such as by having data from the survey incorporated into the training program content to frame

its rationale. Data on officers' mental health concerns, from both department-wide surveys, as well as from national studies, served as a means of normalizing discussion around mental health topics during the project's program.

A common concern raised by police officers with regard to mental health professionals is that those providers would not understand their job (Drew & Martin, 2021). One reason this training program was so well-received was that the instructor was a police officer with many years of field experience and training expertise, along with him having a doctoral degree in education. The present author assisted in the training sessions, but the main instructor had first-hand experience in police work and in dealing with police officer wellness issues. That provided for credibility and relatability. Thus, it would be wise for future wellness interventions to have a police officer as the facilitator.

This project's program sought to improve participants' responsiveness to the needs of citizens whom they encounter on patrol and to improve their knowledge and skills concerning officer wellness. The latter involved promoting a "perishable skill" mindset towards wellness (Thornton, 2020), identifying warning signs of wellness concerns, providing knowledge of available wellness resources and contact information for them, and guidance on how to seek help or refer a colleague to those resources. During the training role-play and vignette work, it was clear that officers were not comfortable broaching the topic of wellbeing with their peers, and often did not know how to begin conversations inquiring about their colleagues' mental and physical health.

Something that was not covered in the training implemented here was clarification of the departmental consequences for an officer who seeks mental health resources, such as individual counseling or peer support services. In interviews with officers, Fix et al. (2023) found that lack

of clarity about the repercussions associated with an officer seeking help posed a barrier to seeking services. Many officers worry that they may be punished or terminated for seeking assistance from mental health services. Merely having knowledge of the available resources is thus not enough, as anxiety about job termination or suspension may keep officers from seeking help. Drew and Martin (2021), in their national sample of nearly 8,000 officers found that among officers reporting stigma as a barrier to help-seeking, 84.7% reported concerns about being seen as unfit for duty, and 76.1% reported concerns about putting their job at risk as reasons for their stigma-related perceptions.

Various investigations have also observed that officers exhibit a general lack of trust in supervisors, departmental resources, and leadership within policing agencies (Fix et al., 2023; Bell et al., 2022). In Study 3, discontent with leadership was mentioned by 22 of the 48 participants (45.8%) that left comments at the end of department-wide wellness survey (Table 12), and the need for improved officer-supervisor relationships by 12 of the 17 (70.6%) officers who participated in the training implemented in this project (Table 18). Mistrust often surrounds officers in leadership positions regarding the confidentiality of an officers' mental health concerns and the consequences of seeking help. Thus, police agencies need to be very clear about what would happen, procedurally, if an officer seeks services for mental health (Fix et al., 2023). Protections put in place for officers seeking mental health services should be reflected in department policy. It is contended here, that in order for officers to feel comfortable seeking mental health services, they must trust that their doing so will not be met with ridicule by peers or disciplinary action by supervisors.

The wellness component of the training implemented here was constrained to one 8-hour day, and was appended to four days of procedural justice training that preceded it. Being the

most valued of the five training days, it is likely that the officers may have benefitted from more attention to the wellness topic. Two or three 8-hour days dedicated to wellness, that involved a broader coverage of topics and that incorporated engagement with wellness ambassadors from the police department (peer support program, chaplain program, financial advisors, fitness instructors, etc.) could have been particularly impactful. In addition to this, engaging in PJ training for four 8-hour days prior to the wellness component may have diminished receptiveness to it, as participants were mentally fatigued from the earlier days.

Suggestions for Future Research

There are many promising avenues for future research suggested by this project. The department-wide survey was one of few studies to investigate the association of community support perceptions with the wellbeing of police department employees. More work is needed to determine what affects officers' community support perceptions and whether officer's perceptions of community support, or lack thereof, prospectively affects their wellbeing, motivation, and job satisfaction. Additionally, little is known regarding what shapes officers' perceptions of community support, and whether those perceptions are subject to change based on positive or negative interactions with community members.

Second, organizational support has been identified here and elsewhere (Syed et al., 2020; Alvez et al., 2023) as an important factor associated with the wellbeing of police department employees, both sworn officers and civilians. Study 1 identified organizational support as a powerful moderator of the work stress – wellness relation. Additional research is needed that investigates effective methods of enhancing these support perceptions among employees. In Study 3, officers offered ideas for how to accomplish this, such as departmental leadership giving attention to and addressing the needs of their officers (outdated equipment/facilities,

denied time off requests), by holding all officers to the same standards, and by working patrol with some regularity alongside subordinate officers (Table 23). Cohen and colleagues (2019) argue that leadership can improve support perceptions by conveying care and concern for each of their employees through department-wide messaging, expanding the number of wellness-ambassadors within an agency through peer support programs, and by providing anonymous annual mental and physical health "check-ups" on their employees, much like the department-wide wellness survey implemented in this project. These suggested methods of improving organizational support perceptions would benefit from empirical investigation.

Third, there is a real need to investigate solutions to the pervasive stigma that surrounds mental health within police departments (Fix et al., 2023; Drew & Martin, 2021; Bell et al., 2022; Beckley et al., 2023). The implementation and evaluation of anti-stigma campaigns is one important area for future research, which was recommended by Drew and Martin (2021). Many mental health anti-stigma campaigns have been implemented globally with different approaches: education-based, contact-based, protest-based (Walsh & Foster, 2021). These campaigns tend to focus on increasing awareness of mental health concerns and emphasizing the costs associated with not seeking help. A qualitative interview study by Millard (2020) found that peer support programs served a similar function, as they often provide officers a judgement-free space to discuss their mental health and can encourage them to seek help. Investment and expansion of peer support programs and anti-stigma campaigns are possible ways to reduce stigma surrounding mental health in law enforcement, however, more research is needed to examine the effectiveness of these efforts.

Lastly, further evaluation of officer wellness interventions is needed. There remains few officer wellness trainings or interventions that have been evaluated and considered effective

(Patterson et al., 2012). The HEROES project (Thornton et al., 2020), mentioned previously, is one such intervention that displayed promising results (Blumberg et al., 2020), and would benefit from additional evaluation using an RCT design with a larger sample of police officers. The evaluation effort in this project was largely inconclusive due to low participation, but the training itself received positive reviews by its attendees. This area of research continues to grow, and may benefit from meta-analytic work in the coming years.

Conclusion

Over the course of this project, much was learned about research partnerships with police departments and the issues that appear unique to those contexts. Risk and protective factors associated with sworn and civilian employee wellness were also uncovered, as organizational support was featured as consistent moderator of the work stress-wellness relation. While it is unclear whether the evaluated training had its intended effects, the officers' reception to it was encouraging. Features of a well-received officer wellness training and topics for future training content were gleaned. Methods of improving organizational support perceptions among officers is a promising area for future research, as well as ways of reducing stigma towards mental illness. The project also serves to inform future evaluation efforts of wellness interventions in police departments, notably, researchers must give attention to the confidentiality concerns of participating officers and officer recruitment and retention must be made a priority. Ultimately, more attention and partnerships between police agencies and researchers are needed to improve the health and wellbeing of those who keep our communities safe.

References

Acquadro Maran, D., Varetto, A., Zedda, M., & Ieraci, V. (2015). Occupational stress, anxiety and coping strategies in police officers. *Occupational Medicine*, *65*(6), 466–473.

Acquadro Maran, D., Zedda, M., & Varetto, A. (2018). Physical practice and wellness courses reduce distress and improve wellbeing in police officers. *International Journal of Environmental Research and Public Health*, *15*(4), 1–10.

Alves, L., Abreo, L., Petkari, E., & Pinto da Costa, M. (2023). Psychosocial risk and protective factors associated with burnout in police officers: A systematic review. *Journal of Affective Disorders*, *332*, 283–298.

Angehrn, A., Vig, K. D., Mason, J. E., Stelnicki, A. M., Shields, R. E., Asmundson, G. J., & Carleton, R. N. (2022). Sex differences in mental disorder symptoms among Canadian police officers: The mediating role of social support, stress, and sleep quality. *Cognitive Behaviour Therapy*, *51*, 3–20.

Antrobus, E., Thompson, I., & Ariel, B. (2019). Procedural justice training for police recruits: Results of a randomized controlled trial. *Journal of Experimental Criminology*, *15*, 29–53.

Baek, H., Han, S., & Seepersad, R. (2022). The impact of social support and occupational stress on burnout in the Trinidad and Tobago police service. *Police Quarterly*, *25*, 310–337.

Beckley, A., Wang, J., & Birch, P. (2023). Are organisational responses by police forces appropriate to adequately safeguard police officer wellness? A review of the scientific evidence. *Safer Communities*, *22*(4), 312–326.

Bell, S., Palmer-Conn, S., & Kealey, N. (2022). Swinging the lead and working the head' – An explanation as to why mental illness stigma is prevalent in policing. *The Police Journal*, *95*, 4–23.

Biggam, F. H., Power, K. G., Macdonald, R. R., Carcary, W. B., & Moodie, E. (1997). Self-perceived occupational stress and distress in a Scottish police force. *Work & Stress*, *11*, 118–133.

Bikos, L. J. (2021). It's all window dressing:" Canadian police officers' perceptions of mental health stigma in their workplace. *Policing: An International Journal*, *44*, 63–76.

Blampied, N. M. (2022). Reliable change and the reliable change index: Still useful after all these years? *The Cognitive Behaviour Therapist*, *15*, 1–18.

Blumberg, D. M., Giromini, L., Papazoglou, K., & Thornton, A. R. (2020). Impact of The HEROES Project on First Responders' Well-Being. *Journal of Community Safety and Well-Being*, *5*(1), 8–14.

Blumberg, D., Papazoglou, K., & Schlosser, M. (2021). *The POWER Manual: A Step-by-Step Guide to Improving Police Officer Wellness, Ethics, and Resilience*. American Psychological Association.

Blumberg, D. M., Papazoglou, K., & Creighton, S. (2018). Bruised badges: The moral risks of police work and a call for officer wellness. *International Journal of Emergency Mental Health and Human Resilience*, *20*, 1–14.

Brenan, M. (2020, August 12). *Amid Pandemic, Confidence in Key U.S. Institutions Surges*. Retrieved April 27, 2023, from https://news.gallup.com/poll/317135/amid-pandemic-confidence-key-institutions-surges.aspx

Brenan, M. (2024, July 15). *U.S. Confidence in Institutions Mostly Flat, but Police Up*. Retrieved August 8, 2024, from https://news.gallup.com/poll/647303/confidence-institutions-mostly-flat-police.aspx

Buysse, D. J., Reynolds, C. F., Monk, T. H., Berman, S. R., & Kupfer, D. J. (1989). The Pittsburgh sleep quality index: A new instrument for psychiatric practice and research. *Psychiatry Research*, *28*(2), 193–213.

Carleton, R. N., Afifi, T. O., Turner, S., Taillieu, T., Duranceau, S., LeBouthillier, D. M., Sareen, J., Ricciardelli, R., MacPhee, R. S., Groll, D., Hozempa, K., Brunet, A., Weekes, J. R., Griffiths, C. T., Abrams, K. J., Jones, N. A., Beshai, S., Cramm, H. A., Dobson, K. S., … Asmundson, G. J. G. (2018). Mental disorder symptoms among public safety personnel in Canada. *The Canadian Journal of Psychiatry*, *63*(1), 54–64.

Carleton, R. N., & Beshai, S. (2016). *Peer Support and Crisis-Focused Psychological Intervention Programs in Canadian First Responders*. Blue Paper. Regina, SK: University of Regina Collaborative Centre for Justice and Safety.

Carleton, R. N., Jamshidi, L., Maguire, K. Q., Lix, L. M., Stewart, S. H., Afifi, T. O., Sareen, J., Andrews, K. L., Jones, N. A., Nisbet, J., Sauer-Zavala, S., Neary, J. P., Brunet, A., Krätzig, G. P., Fletcher, A. J., Teckchandani, T. A., Keane, T. M., & Asmundson, G. J. G. (2023). Mental Health of Royal Canadian Mounted Police at the Start of the Cadet Training Program. *The Canadian Journal of Psychiatry*, *68*(9), 651–662.

Carlson-Johnson, O., Grant, H., & Lavery, C. F. (2020). Caring for the guardians—Exploring needed directions and best practices for police resilience practice and research. *Frontiers in Psychology*, *11*, 1–5.

Cohen, J. (1969). *Statistical Power Analysis for the Behavioral Sciences*. Academic Press.

Cohen, I. M., McCormick, A. V., & Rich, B. (2019). Creating a culture of police officer wellness. *Policing: A Journal of Policy and Practice*, *13*, 213–229.

Cohen, S., & McKay, G. (1984). Social support, stress and the buffering hypothesis: A theoretical analysis. In *Handbook of Psychology and Health: Vol. IV* (pp. 253–267). Routledge.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, *98*, 310–357.

Corbin, C. B., & Pangrazi, R. P. (2001). Toward a uniform definition of wellness: A commentary. *President's Council on Physical Fitness and Sports Research Digest*.

Dankel, S. J., & Loenneke, J. P. (2021). Effect Sizes for Paired Data Should Use the Change Score Variability Rather Than the Pre-test Variability. *The Journal of Strength & Conditioning Research*, *35*(6), 1773-1778.

Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*, 71–75.

Doyle, J. N., Campbell, M. A., & Gryshchuk, L. (2021). Occupational stress and anger: Mediating effects of resiliency in first responders. *Journal of Police and Criminal Psychology*, *36*, 463–472.

Drake, G. (2021). Assessing the impact of the national police training program Blue Courage on officer attitudes toward mental and emotional wellness. *Policing: An International Journal*, *44*, 999–1013.

Drew, J. M., & Martin, S. (2023). Mental health and wellness initiatives supporting United States law enforcement personnel: The current state-of-play. *Journal of Community Safety and Well-Being, 8(Suppl_1)*, S12–S22.

Drew, J. M., & Martin, S. (2021). A National Study of Police Mental Health in the USA: Stigma, Mental Health and Help-Seeking Behaviors. *Journal of Police and Criminal Psychology*, *36*(2), 295–306.

Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, *71*, 500–507.

Evans, C., Margison, F., & Barkham, M. (1998). The contribution of reliable and clinically significant change methods to evidence-based mental health. *BMJ Ment Health*, *1*(3), 70–72.

Evans-Lacko, S., Little, K., Meltzer, H., Rose, D., Rhydderch, D., Henderson, C., & Thornicroft, G. (2010). Development and psychometric properties of the mental health knowledge schedule. *The Canadian Journal of Psychiatry*, *55*, 440–448.

Fix, R. L., Papazoglou, K., Padilla, K. E., & Blumberg, D. M. (2023). Factors Promoting and Inhibiting Use of Wellness Resources Among Police: A Mixed Methods Study. *Police Quarterly*, *0*, 1–31.

Garbarino, S., Guglielmi, O., Puntoni, M., Bragazzi, N. L., & Magnavita, N. (2019). Sleep quality among police officers: Implications and insights from a systematic review and meta-analysis of the literature. *International Journal of Environmental Research and Public Health*, *16*, 1–15.

Gillet, N., Huart, I., Colombat, P., & Fouquereau, E. (2013). Perceived organizational support, motivation, and engagement among police officers. *Professional Psychology: Research and Practice*, *44*, 46–55.

Glass, G. V. (1976). Primary, Secondary, and Meta-Analysis of Research. *Educational Researcher*, *5*(10), 3–8.

Godin, G. (2011). The Godin-Shephard leisure-time physical activity questionnaire. *The Health & Fitness Journal of Canada, 4,* 18–22.

Greene, J. R. (1989). Police officer job satisfaction and community perceptions: Implications for community-oriented policing. *Journal of Research in Crime and Delinquency, 26,* 168–183.

Hedges, L. V. (1981). Distribution theory for glass's estimator of effect size and related estimators. *Journal of Educational Statistics, 6*(2), 107–128.

Heppner, P. P., Kivlighan Jr., D. M., & Wampold, B. E. (1992). *Research design in counseling*. Pacific Grove, CA: Brooks/Cole Publishing Company.

Hope, L. (2016). Evaluating the effects of stress and fatigue on police officer response and recall: A challenge for research, training, practice and policy. *Journal of Applied Research in Memory and Cognition, 5,* 239–245.

Ioannidis, J. P. A. (2008). Why Most Discovered True Associations Are Inflated. *Epidemiology, 19*(5), 640–648.

Jackson, L., & Theroux, M. (2023). Police need wellness checks too: Embedding a culture of wellness and resilience in policing. *Journal of Community Safety and Well-Being, 8,* S4–S6.

Jacobson, N. S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology, 59*(1), 12–19.

Johnson, P. O., & Neyman, J. (1936). Tests of certain linear hypotheses and their application to some educational problems. *Statistical Research Memoirs, 1,* 57–93.

Kannis-Dymand, L., Salguero, J. M., Ramos-Cejudo, J., & Novaco, R. W. (2019). Dimensions of Anger Reactions-Revised (DAR-R): Validation of a brief anger measure in Australia and Spain. *Journal of Clinical Psychology, 75,* 1233–1248.

Kop, N., Euwema, M., & Schaufeli, W. (1999). Burnout, job stress and violent behaviour among Dutch police officers. *Work & Stress, 13,* 326–340.

Kroenke, K., Spitzer, R. L., Williams, J. B., & Löwe, B. (2009). An ultra-brief screening scale for anxiety and depression: The PHQ–4. *Psychosomatics, 50,* 613–621.

Kuehl, K. S., Elliot, D. L., MacKinnon, D. P., O'Rourke, H. P., DeFrancesco, C., Miočević, M., & Kuehl, H. (2016). The SHIELD (Safety & Health Improvement: Enhancing law enforcement departments) study: Mixed methods longitudinal findings. *Journal of Occupational and Environmental Medicine, 58,* 492–498.

Lawrence, D. S., & Dockstader, J. (2024). Determinants of Wellness Program Utilization Among Law Enforcement Personnel: A Focus on Psychological and Physical Health. *Journal of Police and Criminal Psychology,* 1–16.

Lentz, S. A., & Chaires, R. H. (2007). The invention of Peel's principles: A study of policing 'textbook'history. *Journal of Criminal Justice, 35,* 69–79.

Löwe, B., Wahl, I., Rose, M., Spitzer, C., Glaesmer, H., Wingenfeld, K., & Brähler, E. (2010). A 4-item measure of depression and anxiety: Validation and standardization of the Patient Health Questionnaire-4 (PHQ-4) in the general population. *Journal of Affective Disorders, 122,* 86–95.

Magnavita, N., Capitanelli, I., Garbarino, S., & Pira, E. (2018). Work-related stress as a cardiovascular risk factor in police officers: A systematic review of evidence. *International Archives of Occupational and Environmental Health, 91*(4), 377–389.

Manderscheid, R. W., Ryff, C. D., Freeman, E. J., McKnight-Eily, L. R., Dhingra, S., & Strine, T. W. (2010). Peer reviewed: Evolving definitions of mental illness and wellness. *Preventing Chronic Disease, 7,* 1–6.

Maslach, C., & Jackson, S. E. (1986). Maslach Burnout Inventory. *Manual*, 2nd edn. Consulting Psychologists Press, Palo Alto, CA.

Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). Maslach Burnout Inventory. *Manual*, 3rd edn. Consulting Psychologists Press, Palo Alto, CA.

McCreary, D. R., & Thompson, M. M. (2006). Development of two reliable and valid measures of stressors in policing: The operational and organizational police stress questionnaires. *International Journal of Stress Management*, *13*, 494–518.

Milliard, B. (2020). Utilization and Impact of Peer-Support Programs on Police Officers' Mental Health. *Frontiers in Psychology*, *11*, 1–8.

Nisar, S. K., & Rasheed, M. I. (2019). Stress and performance: Investigating relationship between occupational stress, career satisfaction, and job performance of police employees. *Journal of Public Affairs*, *20*(1), 1-9.

Novaco, R. W. (1975). *Dimensions of anger reactions*. University of California Press.

Novaco, R. (2010). Anger assessment in forensic settings. *Forensic Update, 100*, 42–47.

Novaco, R. W., Swanson, R. D., Gonzalez, O. I., Gahm, G. A., & Reger, M. D. (2012). Anger and postcombat mental health: Validation of a brief anger measure with US soldiers postdeployed from Iraq and Afghanistan. *Psychological Assessment*, *24*, 661–675.

Patterson, G. T., Chung, I. W., & Swan, P. G. (2012). The effects of stress management interventions among police officers and recruits. *Campbell Systematic Reviews, 8*, 1–54.

Prins, A., Ouimette, P. C., Kimerling, R., Cameron, R. P., Hugelshofer, D. S., & ShawHegwer, J. (2003). The Primary Care PTSD Screen (PC-PTSD): Development and operating characteristics. *International Journal of Psychiatry in Clinical Practice*, *9*, 9–14.

Purba, A., & Demou, E. (2019). The relationship between organisational stressors and mental wellbeing within police officers: A systematic review. *BMC Public Health, 19*, 1–21.

Queirós, C., Passos, F., Bártolo, A., Faria, S., Fonseca, S. M., Marques, A. J., Silva, C. F., & Pereira, A. (2020). Job Stress, Burnout and Coping in Police Officers: Relationships and Psychometric Properties of the Organizational Police Stress Questionnaire. *International Journal of Environmental Research and Public Health*, *17*(18), 1-19.

Richards, N. K., Suarez, E. B., & Arocha, J. F. (2021). Law enforcement officers' barriers to seeking mental health services: A scoping review. *Journal of Police and Criminal Psychology*, *36*, 351–359.

Saunders, J. B., Aasland, O. G., Babor, T. F., Fuente, J. R., & Grant, M. (1993). Development of the alcohol use disorders identification test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption-II. *Addiction*, *88*, 791–804.

Shibasaki, W. M., & Martins, R. P. (2018). Simple randomization may lead to unequal group sizes. Is that a problem? *American Journal of Orthodontics and Dentofacial Orthopedics*, *154*(4), 600–605.

Singh, S., Gupta, B., & Mishra, P. C. (2021). Coping strategies and social support as moderators of occupational stress and mental health link among police personnel. *Industrial Psychiatry Journal*, *30*, 67–73.

Skaggs, S. L., Harris, C., & Montgomery, L. (2022). The impact of police–community relations: Recruitment and retention concerns of local police agencies. *Policing: A Journal of Policy and Practice*, *16*, 462–475.

Skogan, W. G., Craen, M., & Hennessy, C. (2015). Training police for procedural justice. *Journal of Experimental Criminology*, *11*, 319–334.

Stephens, C., Long, N., & Miller, I. (1997). The impact of trauma and social support on posttraumatic stress disorder: A study of New Zealand police officers. *Journal of Criminal Justice, 25*, 303–314.

Stuart, H. (2017). Mental Illness Stigma Expressed by Police to Police. *Israel Journal of Psychiatry*, *54*(1), 18–23.

Sunshine, J., & Tyler, T. R. (2003). The role of procedural justice and legitimacy in shaping public support for policing. *Law & Society Review*, *37*, 513–548.

Syed, S., Ashwick, R., Schlosser, M., Jones, R., Rowe, S., & Billings, J. (2020). Global prevalence and risk factors for mental health problems in police personnel: A systematic review and meta-analysis. *Occupational and Environmental Medicine*, *77*(11), 737–747.

Tanigoshi, H., Kontos, A. P., & Remley Jr., T. P. (2008). The effectiveness of individual wellness counseling on the wellness of law enforcement officers. *Journal of Counseling & Development*, *86*(1), 64–74.

Thoen, M. A., Dodson, L. E., Manzo, G., Piña-Watson, B., & Trejos-Castillo, E. (2020). Agency-offered and officer-utilized suicide prevention and wellness programs: A national study. *Psychological Services*, *17*(2), 129–140.

Thornton, A. R. (2020). Police officer wellness. In *POWER: Police Officer Wellness Ethics and Resilience* (pp. 7–27). Academic Press.

Thornton, A. R., Blumberg, D. M., Papazoglou, K., & Giromini, L. (2020). The HEROES Project: Building Mental Resilience in First Responders. In *Mental Health Intervention and Treatment of First Responders and Emergency Workers* (pp. 154–168). IGI Global.

Tyler, T. R. (2003). Procedural justice, legitimacy, and the effective rule of law. *Crime and Justice*, *30*, 283–357.

Tyler, T. R., & Huo, Y. J. (2002). *Trust in the law: Encouraging public cooperation with the police and courts*. Russell Sage Foundation.

Valmari, E. G., Ghazinour, M., Nygren, U., & Gilenstam, K. (2023). A systematic review of lifestyle and health among patrolling police officers. *Scandinavian Journal of Occupational Therapy*, *30*(5), 721–744.

Violanti, J. M., & Aron, F. (1993). Sources of police stressors, job attitudes, and psychological distress. *Psychological Reports*, *72*, 899–904.

Violanti, J. M., Hartley, T. A., Gu, J. K., Fekedulegn, D., Andrew, M. E., & Burchfiel, C. M. (2013). Life expectancy in police officers: A comparison with the U.S. general population. *International Journal of Emergency Mental Health*, *15*(4), 217–228.

Wade, L. M. (2017). Social unrest and community oriented policing services. *Journal of Human Behavior in the Social Environment*, *27*, 636–638.

Walsh, D. A. B., & Foster, J. L. H. (2021). A Call to Action. A Critical Review of Mental Health Related Anti-stigma Campaigns. *Frontiers in Public Health*, *8*, 1–15.

Ware, J. E., Kosinski, M., Bayliss, M. S., McHorney, C. A., Rogers, W. H., & Raczek, A. (1995). Comparison of Methods for the Scoring and Statistical Analysis of SF-36 Health Profile and Summary Measures: Summary of Results from the Medical Outcomes Study. *Medical Care*, *33*(4), AS264–AS279.

Weisburd, D., Telep, C. W., Vovak, H., Zastrow, T., Braga, A. A., & Turchan, B. (2022). Reforming the police through procedural justice training: A multicity randomized trial at crime hot spots. *Proceedings of the National Academy of Sciences*, *119*, 1–6.

TABLES

Table 1

Wellness Survey: Descriptive Statistics, Sample Sizes, and Variable Information

Variable	Mean (SD)	*N*	Range	*N* items	*α*
PTSD	1.41 (1.49)	132	0 to 5	5	.70
Depression	.46 (.68)	214	0 to 3	2	.81
Anxiety	.57 (.75)	215	0 to 3	2	.84
Anger	.75 (.74)	201	0 to 4	6	.90
Burnout	2.23 (1.03)	194	0 to 5	12	.87
Life Satisfaction	5.02 (1.46)	200	1 to 7	5	.93
Physical Health	3.32 (1.27)	220	1 to 5	1	-
Sleep Quality	3.24 (1.07)	220	1 to 5	1	-
Alcohol Freq.	1.81 (1.17)	219	0 to 4	1	-
Org. Stress	3.59 (1.37)	193	1 to 7	10	.89
Op. Stress	3.27 (1.28)	196	1 to 7	10	.87
Org. Support	3.61 (1.43)	197	1 to 7	6	.90
Com. Support	3.77 (1.22)	198	1 to 7	6	.89

Note: PTSD (PC-PTSD-5 total score), Depression (PHQ - 4, 2 items averaged), Anxiety (PHQ - 4, 2 items averaged), Anger (DAR-R, 6 items averaged), Burnout (MBI, 12 items averaged), Life Satisfaction (SWLS, 5 items averaged), Physical Health (Physical Health Satisfaction, 1 item), Sleep Quality (PSQI, 1 item), Alcohol Freq. (AUDIT, 1 item), Org. Stress (OP-ORG PSQ, 10 items averaged), Op. Stress (OP-ORG PSQ, 10 items averaged), Org. Support (SPOS, 6 items averaged), Com. Support (SPOS, 6 items averaged). Sample sizes vary due to missing data.

Table 2

Wellness Survey: Correlations Among Study Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.
1. PTSD		.46**	.51**	.43**	.50**	-.46**	-.09	-.28**	.08	.38**	.31**	.38**	-.30**	.03
2. Depression			.57**	.54**	.59**	-.62**	-.30**	-.48**	-.01	.51**	.46**	.53**	-.41**	-.18
3. Anxiety				.52**	.47**	-.43**	-.33**	-.42**	.02	.45**	.41**	.47**	-.30**	-.34**
4. Anger					.65**	-.48**	-.27**	-.38**	.09	.51**	.51**	.55**	-.41**	-.23**
5. Burnout						-.52**	-.20*	-.43**	.09	.61**	.55**	.63**	-.50**	-.30**
6. Life Sat.							.38**	.43**	.01	-.39**	-.40**	-.43**	.39**	.22*
7. Physical H.								.22*	-.01	-.15	-.26**	-.22*	.14	.30**
8. Sleep Qual.									-.08	-.40**	-.44**	-.45**	.33**	.23**
9. Alcohol F.										.12	.22*	.18	-.06	.05
10. Org. Str.											.73**	.93**	-.59**	-.30**
11. Op. Str.												.92**	-.39**	-.33**
12. W. Str.													-.53**	-.34**
13. Org. Sup.														.33**
14. Com Sup.														

Note: * $p < .01$, ** $p < .001$. PTSD (PC-PTSD-5 total score), Depression (PHQ - 4, 2 items averaged), Anxiety (PHQ - 4, 2 items averaged), Anger (DAR-R, 6 items averaged), Burnout (MBI, 12 items averaged), Life Satisfaction (SWLS, 5 items averaged), Physical Health (Physical Health Satisfaction, 1 item), Sleep Quality (PSQI, 1 item), Alcohol Freq. (AUDIT, 1 item), Org. Stress (OP-ORG PSQ, 10 items averaged), Op. Stress (OP-ORG PSQ, 10 items averaged), W. Stress (OP-ORG PSQ, 20 items averaged), Org. Support (SPOS, 6 items averaged), Com. Support (SPOS, 6 items averaged).

Table 3

Wellness Survey: Open-Ended Stress Relief Strategies

Category	Number of people	% of Prompt Respondents	% of Survey Completers	Strategies
Physical activity	75	48.4%	33.9%	Exercise/Working out (54), Walking (8), Running/Jogging (4), Fitness/Being Active (3), Hiking (2), Hockey (2), Jiu Jitsu (1), Stretching (1), Surfing (1), Golf (1).
Connecting with Others	62	40%	28.1%	Family (40), Friend (17), Not specified (7), Colleagues (5), People away from work (5), Animals (3).
Rest and Relaxation	57	36.8%	25.8%	Time off/breaks (34), Vacation (15), Sleep (4), Meditation (3), Self-care (1), Breathing exercises (1), Massages (1), Mental health days (1), Wellness programs (1).
Hobbies	41	26.5%	18.6%	Not specified (10), Reading (8), Watching shows/tv/podcasts (7), Cooking/eating (6), Traveling (5), Camping/fishing (3), Music/concerts (3), Gaming (3), Comedy (1), Building/making thing (1), Gardening (1), Arts n crafts (1), Lapidary (1), Coaching sports (1), Working with animals (1), Shopping (1), Going to Disneyland (1), Guns (1), Motorcycles (1), Crocheting (1).
Faith Practices	9	5.8%	4.1%	Prayer (4), Church (3), God (2), Chaplain Services (1), Bible study (1), Worship Music (1).
Alcohol Use	5	3.2%	2.3%	Beer (2), Alcohol (1), Booze (1), Nightcap (1).

Note: Participants responses are to an open-ended question at the end of the department-wide wellness survey, where participants were asked, “What are some things that are helpful to you that enable you to relieve stress from work?” $N = 155$ participants responded to this prompt, and $N = 221$ completed the survey. All reported strategies are captured in the far-right column. Some participants reported more than one strategy, both within and across categories.

Table 4

Wellness as Associated with Organizational and Operational Stress

		Organizational Stress					Operational Stress				
Wellness Criterion	*N*	*b*	b^*	*t*	*p*	sr^2	*b*	b^*	*t*	*p*	sr^2
PTSD	115	.36*	.31*	2.54	.012	.048	.13	.10	.82	.412	.005
Depression	182	.19***	.38***	3.94	<.001	.064	.11*	.20*	2.05	.042	.017
Anxiety	183	.18***	.34***	3.67	<.001	.051	.09	.16	1.68	.094	.011
Anger	183	.18***	.33***	3.53	<.001	.048	.14*	.23*	2.46	.015	.023
Burnout	176	.37***	.49***	5.63	<.001	.106	.13	.16	1.84	.067	.011
Life Satisfaction	185	-.16	-.15	-1.58	.116	.010	-.34**	-.31**	-3.13	.002	.040
Physical Health	185	.09	.10	.93	.354	.004	-.40***	-.39***	-3.83	<.001	.067
Sleep Quality	185	-.14	-.18	-1.80	.073	.014	-.23**	-.28**	-2.75	.006	.033
Alcohol Frequency	184	-.03	-.03	-.31	.758	.001	.18	.20	1.77	.078	.017

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Results depicted are from multiple regression analyses including age, gender, civilian/sworn status, experience, organizational stress, and operational stress as predictors. PTSD (PC-PTSD-5 total score), Depression (PHQ - 4, 2 items averaged), Anxiety (PHQ - 4, 2 items averaged), Anger (DAR-R, 6 items averaged), Burnout (MBI, 12 items averaged), Life Satisfaction (SWLS, 5 items averaged), Physical Health (Physical Health Satisfaction, 1 item), Sleep Quality (PSQI, 1 item), Alcohol Freq. (AUDIT, 1 item), Org. Stress (OP-ORG PSQ, 10 items averaged), Op. Stress (OP-ORG PSQ, 10 items averaged).

Table 5

Operational Stress Item Correlations with Wellness Variables

Operational Stress Items	PTSD	Depression	Anxiety	Anger	Burnout	Life Satisfaction	Physical Health	Sleep Quality	Alcohol Freq.
Over-time demands.	.19	.23*	.26**	.30**	.33**	-.22*	.20*	-.29**	.13
Work related activities on days off.	.02	.14	.12	.22*	.28**	-.18	-.10	-.22*	.18
Traumatic events.	.47**	.47**	.39**	.41**	.44**	-.32**	-.12	-.39**	.13
Not enough time available to spend with friends and family.	.25*	.38**	.35**	.36**	.48**	-.37**	-.19*	-.42**	.11
Paperwork/report writing.	.05	.27**	.22*	.31**	.23*	-.17	-.18	-.23*	.06
Occupation-related health issues.	.28*	.38**	.32**	.43**	.40**	-.27**	-.36**	-.34**	.16
Lack of understanding from friends and family about your work.	.19	.38**	.26**	.37**	.40**	-.44**	-.26**	-.31**	.22*
Negative comments from the public.	.07	.24**	.23**	.30**	.33**	-.18	-.11	-.18	.16
Feeling like you are always on the job.	.27*	.35**	.34**	.39**	.46**	-.31**	-.14	-.36**	.13
Friends/family feel the effects of stigma associated with your job.	.15	.38**	.34**	.42**	.37**	-.30**	-.17	-.27**	.13

Note: *p < .01, **p < .001. Operational Stress items are from the OP-ORG PSQ, ratings range from 1 = "no stress at all" to 7 "a lot of stress." PTSD (PC-PTSD-5 total score), Depression (PHQ - 4, 2 items averaged), Anxiety (PHQ - 4, 2 items averaged), Anger (DAR-R, 6 items averaged), Burnout (MBI, 12 items averaged), Life Satisfaction (SWLS, 5 items averaged), Physical Health (Physical Health Satisfaction, 1 item), Sleep Quality (PSQI, 1 item), Alcohol Freq. (AUDIT, 1 item).

Table 6

Organizational Stress Item Correlations with Wellness Variables

Organizational Stress Items	PTSD	Depression	Anxiety	Anger	Burnout	Life Satisfaction	Physical Health	Sleep Quality	Alcohol Freq.
Dealing with coworkers.	.26*	.38**	.34**	.45**	.45**	-.36**	-.21*	-.23*	.12
The feeling that different rules apply to different people.	.32**	.34**	.35**	.44**	.49**	-.30**	-.11	-.34**	.12
Constant changes in policy/legislation	.26*	.32**	.27**	.38**	.49**	-.21*	-.06	-.26**	.10
Staff shortages.	.22	.28**	.30**	.31**	.40**	-.30**	-.16	-.21*	.06
Inconsistent leadership style.	.31**	.31**	.31**	.38**	.44**	-.25**	-.07	-.24**	.17
If you are sick or injured your coworkers seem to look down on you.	.39**	.43**	.40**	.40**	.38**	-.32**	-.19*	-.30**	.05
Leads over emphasize the negatives.	.34**	.43**	.37**	.44**	.51**	-.31**	-.12	-.35**	.06
Internal investigations.	.27*	.39**	.28**	.30**	.37**	-.24**	.02	-.27**	.09
Dealing with the court system.	.08	.30**	.23*	.18	.36**	-.09	.04	-.25**	.10
The need to be accountable for doing your job.	.01	.35**	.30**	.33**	.39**	-.28**	-.21*	-.34**	.05

Note: *p < .01, **p < .001. Organizational Stress items are from the OP-ORG PSQ, ratings range from 1 = "no stress at all" to 7 "a lot of stress." PTSD (PC-PTSD-5 total score), Depression (PHQ - 4, 2 items averaged), Anxiety (PHQ - 4, 2 items averaged), Anger (DAR-R, 6 items averaged), Burnout (MBI, 12 items averaged), Life Satisfaction (SWLS, 5 items averaged), Physical Health (Physical Health Satisfaction, 1 item), Sleep Quality (PSQI, 1 item), Alcohol Freq. (AUDIT, 1 item).

Table 7

Wellness as Associated with Perceived Organizational and Community Support

		Organizational Support					Community Support				
Wellness Criterion	*N*	*b*	*b**	*t*	*p*	sr^2	*b*	*b**	*t*	*p*	sr^2
PTSD	114	-.28*	-.25*	-2.46	.015	.042	.28*	.22*	2.40	.018	.040
Depression	181	-.11*	-.22*	-2.84	.005	.031	.02	.04	.55	.581	.001
Anxiety	182	-.01	-.01	-.19	.852	<.001	-.07	-.11	-1.52	.130	<.001
Anger	182	-.10*	-.19*	-2.49	.014	.023	.01	.02	.27	.787	<.001
Burnout	175	-.20*	-.28*	-4.06	<.001	.052	-.03	-.03	-.46	.647	<.001
Life Satisfaction	184	.24*	.23*	3.03	.003	.036	.06	.05	.65	.519	.002
Physical Health	184	.04	.04	.47	.641	<.001	.25*	.23*	3.02	.003	.041
Sleep Quality	184	.09	.11	1.40	.163	.008	.03	.03	.46	.649	<.001
Alcohol Freq.	183	.04	.05	.53	.599	.001	.16*	.17*	1.98	.049	.021

Note: $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$. Results are from multiple regression analyses including age, gender, civilian/sworn status, experience, work stress, organizational support, and community support as predictors. Organizational Support (SPOS, 6 items averaged), Community Support (SPOS, 6 items averaged). PTSD (PC-PTSD-5 total score), Depression (PHQ - 4, 2 items averaged), Anxiety (PHQ - 4, 2 items averaged), Anger (DAR-R, 6 items averaged), Burnout (MBI, 12 items averaged), Life Satisfaction (SWLS, 5 items averaged), Physical Health (Physical Health Satisfaction, 1 item), Sleep Quality (PSQI, 1 item), Alcohol Freq. (AUDIT, 1 item). Work stress was a significant predictor of all wellness criteria.

Table 8

Organizational Support Item Correlations with Wellness Variables

Organizational Support Items	PTSD	Depression	Anxiety	Anger	Burnout	Life Satisfaction	Physical Health	Sleep Quality	Alcohol Freq.
The police department values my contributions to their mission.	-.32**	-.40**	-.25**	-.42**	-.51**	.40**	.14	.29**	-.06
The police department fails to appreciate any extra effort from me. (r)	-.22	-.25**	-.17	-.33**	-.36**	.25**	.06	.21*	-.03
Even If I did the best job possible, the police department would fail to notice. (r)	-.16	-.35**	-.26**	-.33**	-.46**	.27**	.13	.29**	.03
The police department would forgive an honest mistake on my part.	-.11	-.14	-.14	-.19*	-.24*	.13	.03	.15	.02
The police department takes pride in my accomplishments at work.	-.33**	-.41**	-.29**	-.36**	-.45**	.41**	.15	.26**	-.11
The police department really cares about my well-being.	-.30**	-.42**	-.28**	-.39**	-.45**	.38**	.14	.35**	-.15

Note: *p < .01, **p < .001. Organizational Support items are from the SPOS, ratings range from 1 = "strongly disagree" to 7 "strongly agree." The (r) indicates a reverse-coded item. PTSD (PC-PTSD-5 total score), Depression (PHQ - 4, 2 items averaged), Anxiety (PHQ - 4, 2 items averaged), Anger (DAR-R, 6 items averaged), Burnout (MBI, 12 items averaged), Life Satisfaction (SWLS, 5 items averaged), Physical Health (Physical Health Satisfaction, 1 item), Sleep Quality (PSQI, 1 item), Alcohol Freq. (AUDIT, 1 item).

Table 9

Community Support Item Correlations with Wellness Variables

Community Support Items	PTSD	Depression	Anxiety	Anger	Burnout	Life Satisfaction	Physical Health	Sleep Quality	Alcohol Freq.
The community values my contributions to their welfare.	-.11	-.19*	-.22*	-.19*	-.28**	.27**	.21*	.16	.06
Residents of the city fail to appreciate any extra effort from me. (r)	.15	-.07	-.18*	-.10	-.14	.08	.19*	.12	.09
Even if I did the best job possible, the community would fail to notice. (r)	.15	-.10	-.23*	-.15	-.25**	.12	.29**	.18	.09
Residents of the city would forgive an honest mistake on my part.	.01	-.13	-.35**	-.23**	-.23*	.15*	.24**	.23*	.06
The community takes pride in my accomplishments at work.	-.01	-.19*	-.34**	-.19*	-.24**	.18*	.22*	.24**	-.02
The residents of the community really care about my well-being.	-.04	-.19*	-.29**	-.22*	-.26**	.22*	.27**	.19*	-.03

Note: *p < .01, **p < .001. Community Support items are from the SPOS, ratings range from 1 = "strongly disagree" to 7 "strongly agree." The (r) indicates a reverse-coded item. PTSD (PC-PTSD-5 total score), Depression (PHQ - 4, 2 items averaged), Anxiety (PHQ - 4, 2 items averaged), Anger (DAR-R, 6 items averaged), Burnout (MBI, 12 items averaged), Life Satisfaction (SWLS, 5 items averaged), Physical Health (Physical Health Satisfaction, 1 item), Sleep Quality (PSQI, 1 item), Alcohol Freq. (AUDIT, 1 item).

Table 10

Organizational and Community Support as Moderators of the Work Stress-Wellness Relationship

		Work Stress x Organizational Support (Interaction Term)					Work Stress x Community Support (Interaction Term)				
Wellness Criterion	*N*	*b*	b^*	*t*	*p*	sr^2	*b*	b^*	*t*	*p*	sr^2
PTSD	114	-.25**	-.89**	-2.87	.005	.054	.09	.28	.87	.388	.005
Depression	181	-.12***	-.91***	-4.41	<.001	.069	.04	.24	1.18	.238	.005
Anxiety	182	-.08**	-.60**	-2.87	.005	.030	<.001	-.01	-.04	.967	<.001
Anger	182	-.10***	-.69***	-3.38	<.001	.040	-.01	-.08	-.40	.688	.001
Burnout	175	-.12***	-.62***	-3.35	<.001	.034	.08	.35	1.88	.062	.011
Life Satisfaction	184	.11*	.42*	1.99	.048	.015	-.01	-.03	-.13	.897	<.001
Physical Health	184	-.06	-.23	-.98	.331	.004	.03	.09	.39	.700	.001
Sleep Quality	184	<.01	.02	.09	.926	<.001	.08	.36	1.59	.114	.011
Alcohol Freq.	183	<.01	.02	.08	.939	<.001	.07	.26	1.06	.292	.006

Note: *p < .05, **p < .01, ***p < .001. Results are from multiple regression analyses including age, gender, civilian/sworn status, experience, work stress, organizational support, community support, and the two interaction terms as predictors. Interaction terms were created using the work stress variable and the mean-centered support variables. PTSD (PC-PTSD-5 total score), Depression (PHQ - 4, 2 items averaged), Anxiety (PHQ - 4, 2 items averaged), Anger (DAR-R, 6 items averaged), Burnout (MBI, 12 items averaged), Life Satisfaction (SWLS, 5 items averaged), Physical Health (Physical Health Satisfaction, 1 item), Sleep Quality (PSQI, 1 item), Alcohol Freq. (AUDIT, 1 item). Work stress was a significant predictor of all wellness criteria.

Table 11

Probing the Work Stress - Wellness Relationship at Different Levels of Organizational Support

Wellness Criterion	JN Sig. Org. Support Values	*b*	*b**	*t*	*p*	% at or above	% below
PTSD	4.22	.28	.21	1.99	.05	34	66
Depression	4.87	.11	.19	1.97	.05	18.8	81.2
Anxiety	5.11	.12	.2	1.98	.05	16.8	83.2
Anger	4.97	.12	.19	1.98	.05	18.8	81.2
Burnout	5.71	.18	.22	1.98	.05	11.2	88.8
Life Satisfaction	4.74	-.22	-.19	-1.97	.05	20.3	79.7

Note: Results are from multiple regression analyses including age, gender, civilian/sworn status, experience, work stress, organizational support, community support, and the work stress by community support interaction term as predictor variables. "JN Sig." value refers to the conditional value of organizational support where work stress is no longer a significant predictor of the wellness criteria. Organizational support (OP-ORG PSQ, 10 items averaged), response options are 1 "Strongly Disagree, 2 "Disagree", 3 "Somewhat Disagree", 4 "Neither Agree or Disagree", 5 "Somewhat Agree", 6 "Agree", 7 "Strongly Agree." Proportion of scores from the sample at or above and below the conditional levels of Org. Support are provided in the far-right columns. PTSD (PC-PTSD-5 total score), Depression (PHQ - 4, 2 items averaged), Anxiety (PHQ - 4, 2 items averaged), Anger (DAR-R, 6 items averaged), Burnout (MBI, 12 items averaged), Life Satisfaction (SWLS, 5 items averaged). Tables with all interaction probing results are located in the appendix.

Table 12

Wellness Survey: Officers' Open-Ended Closing Remarks

Category	Number of people	% of Prompt Respondents	% of Survey Completers	Remarks
Discontent	33	68.8%	14.9%	Leadership (22), Work environment (7), Staffing (5), Equipment/facilities (4), Civilian staff underappreciation (3), Time off issues (2).
Department Suggestions	6	12.5%	2.7%	Require team building exercises (1), Hybrid work schedules (1), Strategies to boost morale (1), Measure trust in leaders (1), Cover financial literacy (1), Get mat room for Jiu Jitsu classes (1).
Positive Comments	4	8.3%	1.8%	Appreciates wellness interest (2), Great place to work/family environment (1), Great equipment (1).
Other	5	10.4%	2.3%	Not interested in wellness programming (2), Job is about money (1), Too many things to say (1), Getting promoting changed my perspective (1).

Note: Participants responses are to an open-ended question at the end of the department-wide wellness survey, where participants were asked, "If there is anything else you would like to tell us that was not covered in the survey, please let us know in the box below (optional)." $N = 48$ participants responded to this prompt, and $N = 221$ completed the survey. All remarks reported are captured in the far-right column. Some participants reported more than one remark within the same category.

Table 13

Completion of Training Session Rating Forms

Participant ID	Day 1 Entrance	Day 1 Exit	Day 2 Exit	Day 3 Exit	Day 4 Exit	Day 5 Exit	Overall Exit
1							
2	X	X		X	X	X	X
3	X	X	X	X	X	X	X
4							
5	X		X	X	X		X
6	X	X	X	X	X	X	X
7	X	X	X	X	X	X	X
8			X	X	X	X	X
9							
10	X	X	X	X	X	X	X
11	X	X	X	X	X	X	X
12	X	X	X	X	X	X	X
13	X	X	X	X	X	X	X
14	X	X	X	X	X	X	X
15	X	X	X	X	X	X	X
16	X	X	X	X	X	X	X
17							
18	X		X		X	X	X
19	X	X	X	X	X	X	X
20	X		X			X	X
21	X	X	X		X	X	X
Total	16	13	16	14	16	16	17

Note: One entrance form was given to participants just prior to the first training session. Exit forms were given to participants at the end of each training day. An overall training exit form was circulated after the exit form on the fifth day. Xs indicate completion of the rating form, shaded areas indicate participant non-completion (due to absence).

Table 14

Anticipated, Daily, and Overall Training Session Value Ratings

				Frequency of Responses				
	M	*SD*	*N*	"0"	"1"	"2"	"3"	"4"
Expected	1.81	.91	16	1	5	6	4	0
Day 1	2.54	1.27	13	1	1	5	2	4
Day 2	2.63	1.26	16	1	2	4	4	5
Day 3	3.14	.86	14	0	0	4	4	6
Day 4	2.81	1.11	16	0	3	2	6	5
Day 5	3.63	.72	16	0	0	2	2	12
Overall	3.00	1.00	17	0	2	2	7	6

Note: Expected training value ratings were obtained just prior to the start of the training, respective day value ratings were obtained at the end of each training day, overall training value ratings were obtained at the conclusion of the training: 0 = "not at all valuable", 1 = "slightly valuable", 2 = "somewhat valuable", 3 = "moderately valuable", and 4 = "very valuable". Frequency of participant responses are in the far-right columns.

Table 15

Training and Instructor Satisfaction Ratings

					Frequency of Responses				
		M	*SD*	*N*	"1"	"2"	"3"	"4"	"5"
The training…	was interesting.	3.82	1.02	17	0	2	4	6	5
	was useful.	3.88	.99	17	0	2	3	7	5
	was organized.	4	1.06	17	0	3	0	8	6
	met expectations.	3.53	.80	17	0	2	5	9	1
	will help on the job.	3.82	.88	17	0	2	2	10	3
The instructor(s)…	used relevant examples.	4.53	.72	17	0	0	2	4	11
	responded to questions.	4.82	.39	17	0	0	0	3	14
	knew the subject matter.	4.76	.44	17	0	0	0	4	13
	used audience participation.	4.76	.44	17	0	0	0	4	13

Note: Training and instructor satisfaction ratings were obtained at the conclusion of the training: 1 = "strongly disagree", 2 = "disagree", 3 = "neither agree nor disagree", 4 = "agree", and 5 = "strongly agree." Frequency of participant responses are in the far-right columns.

Table 16

Intended Lifestyle Change and Wellness Plan Implementation

					Frequency of Responses				
		M	*SD*	*N*	"0"	"1"	"2"	"3"	"4"
Lifestyle Change	Physical Health	3.56	.81	16	0	0	3	1	12
	Social Life	2.69	1.49	16	2	2	2	3	7
	Emotional Wellbeing	3.13	1.09	16	0	2	2	4	8
	Personal Finance	3.25	1.00	16	0	1	3	3	9
	Spiritual Life	2.63	1.31	16	0	5	2	3	6
Wellness Plan	Get at least 7 hours of sleep.	3.19	1.28	16	1	1	2	2	10
	Exercise for at least 45 minutes.	3.44	1.09	16	1	0	1	3	11
	Have a conversation with a friend or loved one.	3.56	.73	16	0	0	2	3	11
	Spend time doing something that you enjoy.	3.38	.96	16	0	1	2	3	10
	Eat and drink with your health in mind.	3.38	.72	16	0	0	2	6	8
	Take time to breathe deeply and be grateful.	3.19	1.22	16	1	1	1	4	9
	Remind yourself of what matters.	3.31	1.01	16	0	1	3	2	10

Note: Likelihood of lifestyle change across wellness domains and likelihood of implementing wellness plan recommendations were obtained at the end of the wellness training module (Day 5): 0 = "not at all likely", 1 = "slightly likely", 2 = "somewhat likely", 3 = "moderately likely", and 4 = "very likely." Frequency of participant responses are in the far-right columns.

Table 17

Training Entrance vs. Exit Confidence in Mental Health Concern Identification and Procedural Justice Abilities

	Entrance (T1)			Exit (T2)			T2 – T1		
	M	*SD*	*N*	*M*	*SD*	*N*	*d*	*g*	*Δ*
Mental Health Concern Identification	2.67	.90	15	3.47	.52	15	.85	.83	.89
I can convey to citizens that I am someone to be trusted.	3.47	.74	15	3.60	.51	15	.21	.20	.18
When interacting with the public, I can convey that I am acting impartially.	3.73	.46	15	3.67	.49	15	-.11	-.11	-.13
I can treat people respectfully, even when they are being rude to me.	3.53	.61	15	3.73	.46	15	.30	.29	.33
Even when I am enforcing the law, I can still make people feel heard.	3.53	.64	15	3.73	.46	15	.26	.25	.31
When someone is hostile towards me, I can convey to them that I am treating them fairly.	3.13	.74	15	3.60	.51	15	.56	.54	.64
Convincing people that distrust the police that I care about them is something I can do.	2.47	1.25	15	3.00	.85	15	.47	.46	.42
I can overcome initial stereotypes that I might have about people.	3.33	1.11	15	3.93	.26	15	.54	.52	.54
I can break through preconceived notions that people might have about the police.	2.47	1.30	15	3.20	.77	15	.53	.51	.56
Overall Confidence	3.18	.57	14	3.55	.36	14	.66	.64	.65

Note: Confidence ratings regarding participants ability to identify mental health concerns, and to perform procedural justice abilities were obtained prior to the start of the training, and again upon exiting the relevant training day. Only participants with valid pairings of entrance and exit data are represented here. Response options to these items were: 0 = “not at all confident, 1 = “slightly confident”, 2 = “somewhat confident”, 3 = “moderately confident”, 4 = “very confident.” See Study 2 analyses section for *d*, *g*, and *Δ* calculations.

Table 18

Open-Ended Takeaways and Barriers Reported Across All Training Sessions

	Category	Number of people	% of Respondents	Remarks
Procedural Justice (Days 1-4)	Takeaways	14	82.4%	Perspective-taking (6), communication skills (6), explaining decisions/being transparent/impartial/fair (6), being respectful/compassionate goes a long way (5), using active listening (5), taking things slower (2).
	Barriers	5	29.4%	Obstinate officers (3), lack of community support (2), it's hard for officers to open up (2), officer safety can be compromised (2).
Wellness (Day 5)	Takeaways	10	58.8%	The importance of wellness (2) mental health (2), sleep (2), personal improvement (2), physical health (1), healthy coping (1), learned of new resources (1).
	Barriers	2	11.8%	Mandatory overtime (2), court (1), denied vacation requests (1).
Overall Training	Takeaways	12	70.6%	Officer-supervisor relationships need improvement (10), wellness component was the most valuable (2).

Note: Participant responses (N = 17) are to open-ended questions at the end of each training day, with the overall training responses being collected at the end of the last day. Participants were asked about what they found helpful in the training and whether they anticipated any barriers to implementing the training content. All responses are captured in the far-right column. Some participants reported more than one remark, both within and across categories.

Table 19

Training Condition: Pre-Training vs Post-Training Comparisons (Within-Subjects)

	Pre-Training	*n*	Post-Training	*n*	*M diff.*	*d*	*g*	*Δ*
PTSD	1.80 (1.92)	5	1.60 (2.07)	5	.20	-.45	-.40	-.10
Depression	.80 (1.30)	5	.90 (1.02)	5	.10	.18	.16	.08
Anxiety	.60 (.89)	5	.90 (1.24)	5	.30	.67	.61	.34
Anger	.85 (.65)	5	.85 (.52)	5	.00	.00	.00	.00
Burnout	2.13 (1.06)	5	2.44 (.97)	5	.31	.98	.88	.29
Life Satisfaction	4.80 (1.90)	5	4.72 (2.00)	5	-.08	-.30	-.27	-.04
Physical Health Satisfaction	4.00 (1.23)	5	3.80 (1.30)	5	-.20	-.12	-.11	-.16
Sleep Quality	3.20 (.84)	5	3.00 (1.41)	5	-.20	-.24	-.22	-.24
Alcohol Frequency	1.60 (.55)	5	1.40 (.55)	5	-.20	-.45	-.40	-.36
Org Stress	3.26 (1.47)	5	3.74 (1.70)	5	.49	.69	.62	.33
Op Stress	3.03 (1.22)	5	3.23 (1.30)	5	.20	.32	.29	.16
Org Support	3.44 (2.16)	5	3.48 (1.27)	5	.04	.04	.04	.02
Com Support	4.48 (1.40)	5	4.12 (1.32)	5	-.36	-.48	-.43	-.26
Procedural Justice	5.33 (1.08)	5	5.87 (.67)	5	.54	.88	.80	.50
MI Weakness	1.40 (.55)	5	2.20 (2.17)	5	.80	.34	.30	1.45
MI Referring	6.60 (.55)	5	6.60 (.55)	5	.00	.00	.00	.00
MI Discussing	3.20 (2.36)	5	4.20 (2.36)	5	1.00	.85	.77	.42

Note: See previous tables for wellness, stress, and support variable information. Procedural Justice (12 items, averaged), MI Weakness (MAKS, 1 item), MI Referring (POSS, 1 item), MI Discussing (POSS, 2 items averaged), response options for these variables range from 1 = "strongly disagree" to 7 "strongly agree." See Study 3 analyses section for *d*, *g*, and *Δ* calculations.

Table 20

Training vs Waitlist Condition: Comparisons at Post-Training (Between-Subjects)

	Training	*n*	Waitlist	*n*	*M diff.*	*d*	*g*	*Δ*
PTSD	2.17 (2.32)	6	1.00 (1.41)	2	1.17	.53	.46	.83
Depression	.83 (.93)	6	.00 (.00)	4	.83	1.13	1.02	-
Anxiety	.92 (1.11)	6	.38 (.48)	4	.54	.58	.53	1.13
Anger	1.04 (.66)	6	.75 (.84)	4	.29	.40	.36	.35
Burnout	2.59 (.94)	6	2.52 (.17)	3	.07	.09	.08	.41
Life Satisfaction	4.40 (1.95)	6	5.05 (1.46)	4	-.65	-.36	-.33	-.45
Physical Health Satisfaction	3.83 (1.17)	6	3.20 (1.30)	5	.63	.51	.47	.48
Sleep Quality	2.83 (1.33)	6	3.00 (.82)	4	-.17	-.15	-.13	-.21
Alcohol Frequency	1.67 (.82)	6	2.25 (.96)	4	-.58	-.66	-.60	-.60
Org Stress	3.86 (1.54)	6	3.75 (1.30)	4	.11	.07	.07	.08
Op Stress	3.26 (1.16)	6	3.32 (1.25)	4	-.06	-.05	-.04	-.05
Org Support	3.20 (1.33)	6	2.95 (1.37)	4	.25	.19	.17	.18
Com Support	3.93 (1.27)	6	4.10 (.99)	4	-.17	-.14	-.13	-.17
Procedural Justice	5.47 (1.14)	6	5.03 (1.55)	3	.44	.35	.31	.28
MI Weakness	2.67 (2.25)	6	3.00 (1.41)	4	-.33	-.17	-.15	-.23
MI Referring	6.33 (.82)	6	6.00 (.82)	4	.33	.41	.37	.40
MI Discussing	4.00 (2.17)	6	2.88 (1.75)	4	1.13	.55	.50	.65

Note: See previous tables for wellness, stress, and support variable information. Procedural Justice (12 items, averaged), MI Weakness (MAKS, 1 item), MI Referring (POSS, 1 item), MI Discussing (POSS, 2 items averaged), response options for these variables range from 1 = "strongly disagree" to 7 "strongly agree." See Study 3 analyses section for *d*, *g*, and *Δ* calculations.

Table 21

Training Condition: Pre-Training vs 4-Month Follow-up (Within-Subjects)

	Pre-Training	*n*	4-Month	*n*	*M diff.*	*d*	*g*	*Δ*
PTSD	1.50 (1.96)	10	1.40 (1.96)	10	-.10	-.18	-.17	-.05
Depression	.42 (.90)	12	.33 (.54)	12	-.08	-.18	-.17	-.09
Anxiety	.42 (.67)	12	.63 (.86)	12	.21	.34	.32	.31
Anger	.86 (.81)	11	.75 (.64)	11	-.11	-.35	-.34	-.14
Burnout	2.27 (1.16)	10	2.53 (.92)	10	.27	.75	.72	.23
Life Satisfaction	5.11 (1.45)	11	5.11 (1.43)	11	.00	.00	.00	.00
Physical Health Satisfaction	4.00 (.95)	12	3.92 (1.17)	12	-.08	-.13	-.12	-.08
Sleep Quality	3.38 (.77)	13	3.23 (1.09)	13	-.15	-.22	-.22	-.19
Alcohol Frequency	1.31 (1.11)	13	1.23 (1.01)	13	-.08	-.12	-.12	-.07
Org Stress	3.21 (1.41)	11	3.68 (1.77)	11	.47	.46	.44	.33
Op Stress	2.70 (1.11)	11	2.45 (1.18)	11	-.25	-.34	-.33	-.23
Org Support	3.53 (1.67)	11	3.49 (1.65)	11	-.04	-.03	-.03	-.02
Com Support	4.40 (1.28)	11	4.42 (1.28)	11	.02	.02	.02	.02
Procedural Justice	5.14 (.98)	11	5.92 (.80)	11	.79	1.19	1.15	.81
MI Weakness	2.09 (1.58)	11	2.09 (1.51)	11	.00	.00	.00	.00
MI Referring	5.91 (1.45)	11	6.18 (.75)	11	.27	.16	.15	.19
MI Discussing	3.87 (2.32)	11	4.18 (1.86)	11	.31	.17	.16	.13

Note: See previous tables for wellness, stress, and support variable information. Procedural Justice (12 items, averaged), MI Weakness (MAKS, 1 item), MI Referring (POSS, 1 item), MI Discussing (POSS, 2 items averaged), response options for these variables range from 1 = "strongly disagree" to 7 "strongly agree." See Study 3 analyses section for *d*, *g*, and *Δ* calculations.

Table 22

Training vs Waitlist Conditions: Comparisons at 4-Month Follow-up (Between-Subjects)

	Training	*n*	Waitlist	*n*	*M diff.*	*d*	*g*	*Δ*
PTSD	1.17 (1.85)	12	2.33 (2.25)	6	-1.17	-.59	-.56	-.52
Depression	.32 (.50)	14	.29 (.45)	12	.03	.06	.06	.07
Anxiety	.54 (.82)	14	.54 (.54)	12	.00	.00	.00	.00
Anger	.61 (.63)	14	1.21 (1.21)	12	-.60	-.64	-.62	-.50
Burnout	2.01 (1.17)	14	2.44 (.79)	12	-.43	-.42	-.41	-.54
Life Satisfaction	5.33 (1.36)	14	5.35 (1.14)	12	-.02	-.02	-.02	-.02
Physical Health Satisfaction	4.00 (1.11)	14	3.50 (1.24)	12	.50	.43	.41	.40
Sleep Quality	3.36 (1.15)	14	3.00 (.95)	12	.36	.34	.33	.38
Alcohol Frequency	1.29 (.99)	14	1.67 (1.16)	12	-.38	-.35	-.34	-.33
Org Stress	3.23 (1.81)	14	4.24 (1.39)	12	-1.01	-.62	-.60	-.73
Op Stress	2.31 (1.11)	14	3.52 (1.45)	11	-1.21	-.95	-.92	-.83
Org Support	3.97 (1.82)	14	2.90 (1.16)	12	1.07	.69	.67	.92
Com Support	4.59 (1.33)	14	3.12 (1.00)	12	1.47	1.23	1.19	1.47
Procedural Justice	5.92 (.79)	14	5.17 (1.34)	11	.76	.71	.68	.57
MI Weakness	1.86 (1.41)	14	3.00 (1.34)	11	-1.14	-.83	-.80	-.85
MI Referring	6.21 (.70)	14	5.45 (2.07)	11	.76	.52	.50	.37
MI Discussing	4.65 (1.89)	14	3.82 (2.19)	11	.83	.41	.40	.38

Note: See previous tables for wellness, stress, and support variable information. Procedural Justice (12 items, averaged), MI Weakness (MAKS, 1 item), MI Referring (POSS, 1 item), MI Discussing (POSS, 2 items averaged), response options for these variables range from 1 = "strongly disagree" to 7 "strongly agree." See Study 3 analyses section for *d*, *g*, and *Δ* calculations.

Table 23

Open-Ended Suggestions for Improving Organizational Support at 4-Month Follow-up

Suggestion	Number of people	% of Respondents
Hold all officers to the same standards.	6	31.6%
Give attention to immediate workforce needs (equipment, facilities, etc.).	5	26.3%
Spend time working patrol.	3	15.8%
Commend officers for good work.	3	15.8%
Don't micromanage officers.	3	15.8%
Focus on officer wellness.	2	10.5%
Don't rush to discipline officers, hear them out first.	2	10.5%
Be open and available for discussions.	2	10.5%
Consult officers before making decisions that affect them.	1	5.3%
Be transparent about departmental issues.	1	5.3%
Be friendlier and more supportive of subordinates.	1	5.3%

Note: Participant responses (N = 19) are from an open-ended question circulated at 4-month follow-up to training and waitlist conditions. Participants were asked, "In your opinion, what can leadership at your agency do to better support their officers?" Some participants made more than one suggestion.

APPENDIX: Supplemental Tables

Table A1

Organizational and Community Support as Moderators of the Work Stress-PTSD Relationship

	b	*b**	*t*	*p*	*sr*²
Age	-.15	-09	-.77	.441	.004
Female/Male	-.23	-.06	-.59	.558	.002
Civilian/Sworn	-.85*	-.22*	-2.00	.048	.026
Experience	-.07	-.04	-.34	.734	.001
Work Stress	.42**	.32**	3.30	.001	.071
Organizational Support	.68	.61	1.94	.055	.024
Community Support	-.06	-.05	-.15	.882	<.001
Work Stress X Org Support	-.25**	-.89**	-2.87	.005	.054
Work Stress X Com Support	.09	.28	.87	.388	.005

Note: *p < .05, **p < .01, ***p < .001. *Adj* R^2 = .256, *N* = 114. Results are from multiple regression analyses including age, gender (female coded 0, male coded 1), civilian/sworn status (civilian coded 0, sworn coded 1), experience, work stress (OP-ORG PSQ, 20 items averaged), organizational support (SPOS, 6 items averaged), community support (SPOS, 6 items averaged), and the two interaction terms as predictors. Interaction terms were created using the work stress variable and the mean-centered support variables. The criterion variable is PTSD (PC-PTSD-5 total score).

Table A2

Organizational and Community Support as Moderators of the Work Stress-Depression Relationship

	b	b^*	*t*	*p*	sr^2
Age	.01	.02	.20	.843	<.001
Female/Male	.13	.08	.91	.332	.003
Civilian/Sworn	-.25	-.16	-1.78	.077	.011
Experience	-.04	-.05	-.62	.535	.001
Work Stress	$.24^{***}$	$.42^{***}$	5.79	<.001	.118
Organizational Support	$.32^{**}$	$.64^{**}$	3.05	.003	.033
Community Support	-.11	-.19	-.92	.359	.003
Work Stress X Org Support	$-.12^{***}$	$-.91^{***}$	-4.41	<.001	.069
Work Stress X Com Support	.04	.24	1.18	.238	.005

Note: $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$. Adj $R^2 = .360$, $N = 181$. Results are from multiple regression analyses including age, gender (female coded 0, male coded 1), civilian/sworn status (civilian coded 0, sworn coded 1), experience, work stress (OP-ORG PSQ, 20 items averaged), organizational support (SPOS, 6 items averaged), community support (SPOS, 6 items averaged), and the two interaction terms as predictors. Interaction terms were created using the work stress variable and the mean-centered support variables. The criterion variable is Depression (PHQ - 4, 2 items averaged).

Table A3

Organizational and Community Support as Moderators of the Work Stress-Anxiety Relationship

	b	b^*	*t*	*p*	sr^2
Age	-.11	-.13	-1.70	.091	.010
Female/Male	-.14	-.09	-1.00	.317	.003
Civilian/Sworn	$-.41^{**}$	$-.25^{**}$	-2.83	.005	.028
Experience	.04	.04	.59	.554	.001
Work Stress	$.24^{***}$	$.41^{***}$	5.60	<.001	.113
Organizational Support	$.28^{*}$	$.55^{*}$	2.59	.010	.024
Community Support	-.06	-.10	-.47	.639	.001
Work Stress X Org Support	$-.08^{**}$	$-.60^{**}$	-2.87	.005	.030
Work Stress X Com Support	<.001	-.01	-.04	.967	<.001

Note: $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$. Adj $R^2 = .347$, $N = 182$. Results are from multiple regression analyses including age, gender (female coded 0, male coded 1), civilian/sworn status (civilian coded 0, sworn coded 1), experience, work stress (OP-ORG PSQ, 20 items averaged), organizational support (SPOS, 6 items averaged), community support (SPOS, 6 items averaged), and the two interaction terms as predictors. Interaction terms were created using the work stress variable and the mean-centered support variables. The criterion variable is Anxiety (PHQ - 4, 2 items averaged).

Table A4

Organizational and Community Support as Moderators of the Work Stress-Anger Relationship

	b	b^*	*t*	*p*	sr^2
Age	-.09	-.10	-1.28	.202	.006
Female/Male	.11	.07	.78	.435	.002
Civilian/Sworn	-.34*	-.20*	-2.25	.026	.018
Experience	.10	.12	1.55	.122	.008
Work Stress	.26***	.42***	5.78	<.001	.118
Organizational Support	.24*	.46*	2.21	.029	.017
Community Support	.06	.10	.47	.640	.001
Work Stress X Org Support	-.10***	-.69***	-3.38	<.001	.040
Work Stress X Com Support	-.01	-.08	-.40	.688	.001

Note: *p < .05, **p < .01, ***p < .001. Adj R^2 = .357, N = 182. Results are from multiple regression analyses including age, gender (female coded 0, male coded 1), civilian/sworn status (civilian coded 0, sworn coded 1), experience, work stress (OP-ORG PSQ, 20 items averaged), organizational support (SPOS, 6 items averaged), community support (SPOS, 6 items averaged), and the two interaction terms as predictors. Interaction terms were created using the work stress variable and the mean-centered support variables. The criterion variable is Anger (DAR-R, 6 items averaged).

Table A5

Organizational and Community Support as Moderators of the Work Stress-Burnout Relationship

	b	b^*	*t*	*p*	sr^2
Age	-.06	-.05	-.74	.458	.002
Female/Male	.41*	.19*	2.32	.022	.016
Civilian/Sworn	-.63***	-.27***	-3.36	<.001	.034
Experience	.04	.04	.51	.609	.001
Work Stress	.38***	.45***	6.81	<.001	.139
Organizational Support	.23	.32	1.67	.097	.008
Community Support	-.31	-.36	-1.93	.055	.011
Work Stress X Org Support	-.12***	-.62***	-3.35	<.001	.034
Work Stress X Com Support	.08	.35	1.88	.062	.011

Note: *p < .05, **p < .01, ***p < .001. Adj R^2 = .475, N = 175. Results are from multiple regression analyses including age, gender (female coded 0, male coded 1), civilian/sworn status (civilian coded 0, sworn coded 1), experience, work stress (OP-ORG PSQ, 20 items averaged), organizational support (SPOS, 6 items averaged), community support (SPOS, 6 items averaged), and the two interaction terms as predictors. Interaction terms were created using the work stress variable and the mean-centered support variables. The criterion variable is Burnout (MBI, 12 items averaged).

Table A6

Organizational and Community Support as Moderators of the Work Stress-Life Satisfaction Relationship

	b	b^*	*t*	*p*	sr^2
Age	.01	.00	.05	.959	<.001
Female/Male	-.36	-.12	-1.30	.195	.007
Civilian/Sworn	1.28^{***}	$.39^{***}$	4.28	<.001	.071
Experience	-.04	-.02	-.29	.774	<.001
Work Stress	$-.34^{***}$	$-.29^{***}$	-3.88	<.001	.058
Organizational Support	-.17	-.17	-.77	.443	.002
Community Support	.09	.07	.34	.731	<.001
Work Stress X Org Support	$.11^{*}$	$.42^{*}$	1.99	.048	.015
Work Stress X Com Support	-.01	-.03	-.13	.897	<.001

Note: $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$. Adj $R^2 = .288$, $N = 184$. Results are from multiple regression analyses including age, gender (female coded 0, male coded 1), civilian/sworn status (civilian coded 0, sworn coded 1), experience, work stress (OP-ORG PSQ, 20 items averaged), organizational support (SPOS, 6 items averaged), community support (SPOS, 6 items averaged), and the two interaction terms as predictors. Interaction terms were created using the work stress variable and the mean-centered support variables. The criterion variable is Life Satisfaction (SWLS, 5 items averaged).

Table A7

Organizational and Community Support as Moderators of the Work Stress-Physical Health Satisfaction Relationship

	b	b^*	*t*	*p*	sr^2
Age	-.38**	-.25**	-2.87	.005	.038
Female/Male	.43	.15	1.54	.126	.011
Civilian/Sworn	.21	.07	.72	.474	.002
Experience	.28*	.18*	2.14	.034	.021
Work Stress	-.21*	-.20*	-2.43	.016	.027
Organizational Support	.24	.25	1.08	.283	.005
Community Support	.16	.15	.62	.534	.002
Work Stress X Org Support	-.06	-.23	-.98	.331	.004
Work Stress X Com Support	.03	.09	.39	.700	.001

Note: *p < .05, **p < .01, ***p < .001. Adj R^2 = .162, N = 184. Results are from multiple regression analyses including age, gender (female coded 0, male coded 1), civilian/sworn status (civilian coded 0, sworn coded 1), experience, work stress (OP-ORG PSQ, 20 items averaged), organizational support (SPOS, 6 items averaged), community support (SPOS, 6 items averaged), and the two interaction terms as predictors. Interaction terms were created using the work stress variable and the mean-centered support variables. The criterion variable is Physical Health (Physical Health Satisfaction, 1 item).

Table A8

Organizational and Community Support as Moderators of the Work Stress-Sleep Quality Relationship

	b	b^*	*t*	*p*	sr^2
Age	.10	.08	.93	.353	.004
Female/Male	-.06	-.03	-.27	.787	<.001
Civilian/Sworn	.25	.10	1.07	.287	.005
Experience	-.05	-.04	-.45	.656	.001
Work Stress	$-.31^{***}$	$-.36^{***}$	-4.52	<.001	.089
Organizational Support	.08	.10	.45	.653	.001
Community Support	-.27	-.31	-1.35	.180	.008
Work Stress X Org Support	<.01	.02	.09	.926	<.001
Work Stress X Com Support	.08	.36	1.59	.114	.011

Note: $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$. Adj. $R^2 = .200$, $N = 184$. Results are from multiple regression analyses including age, gender (female coded 0, male coded 1), civilian/sworn status (civilian coded 0, sworn coded 1), experience, work stress (OP-ORG PSQ, 20 items averaged), organizational support (SPOS, 6 items averaged), community support (SPOS, 6 items averaged), and the two interaction terms as predictors. Interaction terms were created using the work stress variable and the mean-centered support variables. The criterion variable is Sleep Quality (PSQI, 1 item).

Table A9

Organizational and Community Support as Moderators of the Work Stress-Alcohol Frequency Relationship

	b	*b**	*t*	*p*	*sr*²
Age	-.11	-.08	-.84	.400	.004
Female/Male	.20	.08	.74	.460	.003
Civilian/Sworn	-.05	-.02	-.18	.855	<.001
Experience	.02	.01	.15	.880	<.001
Work Stress	.22*	.23*	2.62	.010	.036
Organizational Support	.03	.04	.14	.887	<.001
Community Support	-.08	-.09	-.35	.730	.001
Work Stress X Org Support	<.01	.02	.08	.939	<.001
Work Stress X Com Support	.07	.26	1.06	.292	.006

Note: *p < .05, **p < .01, ***p < .001. Adj. R^2 = .024, N = 183. Results are from multiple regression analyses including age, gender (female coded 0, male coded 1), civilian/sworn status (civilian coded 0, sworn coded 1), experience, work stress (OP-ORG PSQ, 20 items averaged), organizational support (SPOS, 6 items averaged), community support (SPOS, 6 items averaged), and the two interaction terms as predictors. Interaction terms were created using the work stress variable and the mean-centered support variables. The criterion variable is Alcohol Frequency (AUDIT, 1 item).

Table A10

Probing the Work Stress - PTSD Relationship at Different Levels of Organizational Support

Org. Support Values	*b*	*b**	*t*	*p*	% at or above	% below
1.0 (Str. Disagree)	1.05***	.79***	4.2	<.001	100	0
2.0 (Disagree)	.81***	.61***	4.46	<.001	86.3	13.7
2.18 (-1SD)	.77***	.58***	4.49	<.001	80.2	19.8
3.0 (Som. Disagree)	.57***	.53***	4.25	<.001	68	32
3.61 (Mean)	.43**	.32**	3.34	.001	50.8	49.2
4.0 (Neither A or D)	.33*	.25*	2.49	.014	42.1	57.9
4.22 (JN SIG.)	.28	.21	1.99	.05	34	66
5.0 (Som. Agree)	.09	.07	.51	.608	16.8	83.2
5.04 (+1SD)	.08	.06	.45	.651	11.2	88.8
6.0 (Agree)	-.15	-.11	-.6	.552	8.1	91.9
7.0 (Str. Agree)	-.39	-.29	-1.2	.234	1	99

Note: *p < .05, **p < .01, ***p < .001. Results are from multiple regression analyses including age, gender, civilian/sworn status, experience, work stress, organizational support, community support, and the work stress by community support interaction term as predictor variables. "JN Sig." value refers to the conditional value of organizational support where work stress is no longer a significant predictor of the wellness criteria. Org. support (OP-ORG PSQ, 10 items averaged), response options are 1 "Strongly Disagree, 2 "Disagree", 3 "Somewhat Disagree", 4 "Neither Agree or Disagree", 5 "Somewhat Agree", 6 "Agree", 7 "Strongly Agree." Proportion of scores from the sample at or above and below the conditional levels of Org. Support are provided in the far-right columns. PTSD (PC-PTSD-5 total score).

Table A11

Probing the Work Stress - Depression Relationship at Different Levels of Organizational Support

Org. Support Values	*b*	*b**	*t*	*p*	% at or above	% below
1.0 (Str. Disagree)	.52***	.91***	7.07	<.001	100	0
2.0 (Disagree)	.41***	.72***	7.53	<.001	86.3	13.7
2.18 (-1SD)	.39***	.69***	7.57	<.001	80.2	19.8
3.0 (Som. Disagree)	.31***	.54***	7.14	<.001	68	32
3.61 (Mean)	.24***	.42***	5.8	<.001	50.8	49.2
4.0 (Neither A or D)	.20***	.35***	4.59	<.001	42.1	57.9
4.87 (JN Sig.)	.11	.19	1.97	.05	18.8	81.2
5.0 (Som. Agree)	.09	.16	1.65	.101	16.8	83.2
5.04 (+1SD)	.09	.16	1.56	.122	11.2	88.8
6.0 (Agree)	-.01	-.02	-.184	.854	8.1	91.9
7.0 (Str. Agree)	-.12	-.21	-1.25	.215	1	99

Note: *p < .05, **p < .01, ***p < .001. Results are from multiple regression analyses including age, gender, civilian/sworn status, experience, work stress, organizational support, community support, and the work stress by community support interaction term as predictor variables. "JN Sig." value refers to the conditional value of organizational support where work stress is no longer a significant predictor of the wellness criteria. Org. support (OP-ORG PSQ, 10 items averaged), response options are 1 "Strongly Disagree, 2 "Disagree", 3 "Somewhat Disagree", 4 "Neither Agree or Disagree", 5 "Somewhat Agree", 6 "Agree", 7 "Strongly Agree." Proportion of scores from the sample at or above and below the conditional levels of Org. Support are provided in the far-right columns. Depression (PHQ - 4, 2 items averaged).

Table A12

Probing the Work Stress - Anxiety Relationship at Different Levels of Organizational Support

Org. Support Values	*b*	*b**	*t*	*p*	% at or above	% below
1.0 (Str. Disagree)	.46***	.77***	6	<.001	100	0
2.0 (Disagree)	.38***	.64***	6.59	<.001	86.3	13.7
2.18 (-1SD)	.36***	.61***	6.67	<.001	80.2	19.8
3.0 (Som. Disagree)	.29***	.5***	6.58	<.001	68	32
3.61 (Mean)	.24***	.41***	5.62	<.001	50.8	49.2
4.0 (Neither A or D)	.21***	.36***	4.66	<.001	42.1	57.9
5.0 (Som. Agree)	.13*	.22*	2.2	.029	18.8	81.2
5.04 (+1SD)	.13*	.21*	2.12	.036	16.8	83.2
5.11 (JN Sig.)	.12	.2	1.98	.05	16.8	83.2
6.0 (Agree)	.05	.08	.59	.556	8.1	91.9
7.0 (Str. Agree)	-.04	-.06	-.36	.719	1	99

Note: *p < .05, **p < .01, ***p < .001. Results are from multiple regression analyses including age, gender, civilian/sworn status, experience, work stress, organizational support, community support, and the work stress by community support interaction term as predictor variables. "JN Sig." value refers to the conditional value of organizational support where work stress is no longer a significant predictor of the wellness criteria. Org. support (OP-ORG PSQ, 10 items averaged), response options are 1 "Strongly Disagree, 2 "Disagree", 3 "Somewhat Disagree", 4 "Neither Agree or Disagree", 5 "Somewhat Agree", 6 "Agree", 7 "Strongly Agree." Proportion of scores from the sample at or above and below the conditional levels of Org. Support are provided in the far-right columns. Anxiety (PHQ - 4, 2 items averaged).

Table A13

Probing the Work Stress - Anger Relationship at Different Levels of Organizational Support

Org. Support Values	*b*	*b**	*t*	*p*	% at or above	% below
1.0 (Str. Disagree)	.52***	.86***	6.64	<.001	100	0
2.0 (Disagree)	.42	.69***	7.16	<.001	86.3	13.7
2.18 (-1SD)	.4***	.66***	7.21	<.001	80.2	19.8
3.0 (Som. Disagree)	.32***	.52***	6.96	<.001	68	32
3.61 (Mean)	.26***	.42***	5.8	<.001	50.8	49.2
4.0 (Neither A or D)	.22***	.35***	4.7	<.001	42.1	57.9
4.97 (JN Sig.)	.12	.19	1.98	.05	18.8	81.2
5.0 (Som. Agree)	.11	.16	1.91	.057	16.8	83.2
5.04 (+1SD)	.11	.18	1.82	.07	11.2	88.8
6.0 (Agree)	.01	.02	.14	.892	8.1	91.9
7.0 (Str. Agree)	-.09	-.15	-.9	.37	1	99

Note: *p < .05, **p < .01, ***p < .001. Results are from multiple regression analyses including age, gender, civilian/sworn status, experience, work stress, organizational support, community support, and the work stress by community support interaction term as predictor variables. "JN Sig." value refers to the conditional value of organizational support where work stress is no longer a significant predictor of the wellness criteria. Org. support (OP-ORG PSQ, 10 items averaged), response options are 1 "Strongly Disagree, 2 "Disagree", 3 "Somewhat Disagree", 4 "Neither Agree or Disagree", 5 "Somewhat Agree", 6 "Agree", 7 "Strongly Agree." Proportion of scores from the sample at or above and below the conditional levels of Org. Support are provided in the far-right columns. Anger (DAR-R, 6 items averaged).

Table A14

Probing the Work Stress - Burnout Relationship at Different Levels of Organizational Support

Org. Support Values	*b*	*b**	*t*	*p*	% at or above	% below
1.0 (Str. Disagree)	.62***	.74***	6.26	<.001	100	0
2.0 (Disagree)	.53***	.63***	7.12	<.001	86.3	13.7
2.18 (-1SD)	.51***	.61***	7.26	<.001	80.2	19.8
3.0 (Som. Disagree)	.43***	.52***	7.5	<.001	68	32
3.61 (Mean)	.38***	.45***	6.78	<.001	50.8	49.2
4.0 (Neither A or D)	.34***	.41***	5.86	<.001	42.1	57.9
5.0 (Som. Agree)	.25**	.3**	3.31	.001	18.8	81.2
5.04 (+1SD)	.24**	.29**	3.23	.002	16.8	83.2
5.71 (JN Sig.)	.18	.22	1.98	.05	11.2	88.8
6.0 (Agree)	.16	.19	1.55	.122	8.1	91.9
7.0 (Str. Agree)	.06	.08	.49	.627	1	99

Note: Note: *p < .05, **p < .01, ***p < .001. Results are from multiple regression analyses including age, gender, civilian/sworn status, experience, work stress, organizational support, community support, and the work stress by community support interaction term as predictor variables. “JN Sig.” value refers to the conditional value of organizational support where work stress is no longer a significant predictor of the wellness criteria. Org. support (OP-ORG PSQ, 10 items averaged), response options are 1 “Strongly Disagree, 2 “Disagree”, 3 “Somewhat Disagree”, 4 “Neither Agree or Disagree”, 5 “Somewhat Agree”, 6 “Agree”, 7 “Strongly Agree.” Proportion of scores from the sample at or above and below the conditional levels of Org. Support are provided in the far-right columns. Burnout (MBI, 12 items averaged).

Table A15

Probing the Work Stress – Life Satisfaction Relationship at Different Levels of Organizational Support

Org. Support Values	*b*	*b**	*t*	*p*	% at or above	% below
1.0 (Str. Disagree)	-.63***	-.55***	-4.04	<.001	100	0
2.0 (Disagree)	-.52***	-.45***	-4.46	<.001	86.3	13.7
2.18 (-1SD)	-.50***	-.43***	-4.52	<.001	80.2	19.8
3.0 (Som. Disagree)	-.41***	-.35***	-4.5	<.001	68	32
3.61 (Mean)	-.34***	-.29***	-3.89	<.001	50.8	49.2
4.0 (Neither A or D)	-.30**	-.26**	-3.26	.001	42.1	57.9
4.74 (JN Sig.)	-.22	-.19	-1.97	.05	20.3	79.7
5.0 (Som. Agree)	-.19	-.16	-1.58	.115	16.8	83.2
5.04 (+1SD)	-.18	-.16	-1.53	.129	11.2	88.8
6.0 (Agree)	-.08	-.07	-.48	.634	8.1	91.9
7.0 (Str. Agree)	.04	.03	.18	.859	1	99

Note: *p < .05, **p < .01, ***p < .001. Results are from multiple regression analyses including age, gender, civilian/sworn status, experience, work stress, organizational support, community support, and the work stress by community support interaction term as predictor variables. "JN Sig." value refers to the conditional value of organizational support where work stress is no longer a significant predictor of the wellness criteria. Org. support (OP-ORG PSQ, 10 items averaged), response options are 1 "Strongly Disagree, 2 "Disagree", 3 "Somewhat Disagree", 4 "Neither Agree or Disagree", 5 "Somewhat Agree", 6 "Agree", 7 "Strongly Agree." Proportion of scores from the sample at or above and below the conditional levels of Org. Support are provided in the far-right columns. Life Satisfaction (SWLS, 5 items averaged).

Table A16

Pre-Training Randomization Assessment (Between Subjects)

	Training	*n*	Waitlist	*n*	*M diff.*	*d*	*g*	*Δ*
PTSD	1.67 (2.02)	15	.33 (.58)	3	1.33	.70	.67	2.31
Depression	.47 (1.01)	17	.17 (.41)	6	.30	.34	.32	.73
Anxiety	.47 (.87)	17	.17 (.41)	6	.30	.39	.37	.73
Anger	.98 (1.22)	15	.50 (.67)	6	.48	.44	.42	.72
Burnout	2.42 (1.28)	14	1.64 (.62)	5	.78	.67	.64	1.26
Life Satisfaction	5.09 (1.61)	16	5.13 (1.83)	6	-.05	-.03	-.03	-.02
Physical Health Satisfaction	3.88 (1.17)	17	3.33 (1.21)	6	.55	.47	.45	.45
Sleep Quality	3.28 (1.02)	18	3.00 (.89)	6	.28	.28	.27	.31
Alcohol Frequency	1.22 (1.00)	18	1.83 (.98)	6	-.61	-.61	-.59	-.62
Org Stress	3.04 (1.46)	15	3.21 (1.42)	6	-.18	-.12	-.12	-.13
Op Stress	2.72 (1.34)	15	2.90 (1.24)	6	-.18	-.14	-.13	-.15
Org Support	3.86 (1.65)	16	3.70 (1.67)	6	.16	.10	.09	.10
Com Support	4.53 (1.27)	16	4.03 (.89)	6	.49	.41	.40	.55
Procedural Justice	5.08 (.90)	15	5.18 (.98)	5	-.10	-.11	-.10	-.10
MI Weakness	2.38 (1.67)	16	4.17 (2.32)	6	-1.79	-.97	-.93	-.77
MI Referring	5.75 (1.34)	16	5.33 (1.97)	6	.42	.27	.26	.21
MI Discussing	4.13 (2.03)	16	2.92 (2.16)	6	1.21	.59	.56	.56

Note: See previous tables for wellness, stress, and support variable information. Procedural Justice (12 items, averaged), MI Weakness (MAKS, 1 item), MI Referring (POSS, 1 item), MI Discussing (POSS, 2 items averaged), response options for these variables range from 1 = "strongly disagree" to 7 "strongly agree." See Study 3 analyses section for *d*, *g*, and *Δ* calculations.

Table A17

Pre- to Post-Training: Reliable Change Indices Indicating Significant Increase or Decrease

		Training Condition			Waitlist Condition		
	S-diff	Valid *N*	*N* Increased	*N* Decreased	Valid *N*	*N* Increased	*N* Decreased
PTSD	.90	5	0	0	1	0	0
Depression	.42	5	1	0	3	0	0
Anxiety	.37	5	1	0	3	0	0
Anger	.47	5	0	0	3	1	0
Burnout	.67	5	0	0	2	0	0
Life Satisfaction	.51	5	0	0	3	0	0
Org Stress	.72	5	0	1	3	0	0
Op Stress	.79	5	0	0	3	0	0
Org Support	.72	5	0	1	3	0	0
Com Support	.60	5	0	1	3	0	0
Procedural Justice	.49	5	1	0	2	0	0

Note: See previous tables for wellness, stress, and support variable information. Procedural Justice (12 items, averaged). Reliable change indices were calculated for all participants with data at pre- and post-training by calculating gain scores then dividing by *S-diff*. RCIs greater than 1.96 are considered a significant increase, RCIs less than -1.96 are considered a significant decrease. Valid *N* refers to the number of RCIs calculated per condition, *N* Increased indicates how many participants received an RCI above 1.96, *N* Decreased indicates how many participants received an RCI below -1.96 in the respective condition.

Table A18

Pre- to 4-Month Follow-Up: Reliable Change Indices Indicating Significant Increase or Decrease

		Training Condition			Waitlist Condition		
	S-diff	Valid *N*	*N* Increased	*N* Decreased	Valid *N*	*N* Increased	*N* Decreased
PTSD	.90	10	0	0	1	0	0
Depression	.42	12	0	1	4	1	0
Anxiety	.37	12	1	0	4	0	0
Anger	.47	11	0	0	4	1	0
Burnout	.67	10	0	0	3	0	0
Life Satisfaction	.51	11	0	1	4	1	0
Org Stress	.72	11	1	2	4	0	1
Op Stress	.79	11	0	0	3	0	0
Org Support	.72	11	1	2	4	0	1
Com Support	.60	11	1	0	4	0	1
Procedural Justice	.49	11	5	0	2	1	0

Note: See previous tables for wellness, stress, and support variable information. Procedural Justice (12 items, averaged). Reliable change indices were calculated for all participants with data at pre-training and 4-month follow-up by calculating gain scores then dividing by *S-diff*. RCIs greater than 1.96 are considered a significant increase, RCIs less than -1.96 are considered a significant decrease. Valid *N* refers to the number of RCIs calculated per condition, *N* Increased indicates how many participants received an RCI above 1.96, *N* Decreased indicates how many participants received an RCI below -1.96 in the respective condition.