

Understanding the Relationship between Correctional Officer Job Demands, Job Resources, &
Decision-Making: Embracing Public Management Perspectives to Improve the Administration of
Justice

By

Jessica A Harney

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

Public Policy

in the

Graduate Division

of the

University of California, Berkeley

Committee in charge:

Professor Amy E. Lerman, Chair

Professor Avi Feller

Professor Steve Raphael

Professor Jen Skeem

Spring 2023

Understanding the Relationship between Correctional Officer Job Demands, Job Resources, &
Decision-Making: Embracing Public Management Perspectives to Improve the Administration of
Justice

Copyright 2023
by
Jessica A Harney

Abstract

Understanding the Relationship between Correctional Officer Job Demands, Job Resources, & Decision-Making: Embracing Public Management Perspectives to Improve the Administration of Justice

by

Jessica A Harney

Doctor of Philosophy in Public Policy

University of California, Berkeley

Professor Amy E. Lerman, Chair

This dissertation includes four essays, each of which speak to the importance of embracing a public management perspective in understanding the ways in which correctional officers play a critical role in the administration of justice.

Chapter 1 includes a systematic review of the literature on factors associated with violence in carceral settings, calling for greater inclusion of public management perspectives. While there are several prominent theories on what is associated with or causes violence in carceral settings, much of this work is dominated by importation theory and has been driven by analyses on limited sets of data in specific geographic contexts and with mainly individual-level factors situated largely within importation theory. This paper focuses especially on the lack of incorporation of management perspectives in the study of carceral violence. Through scraping Google Scholar results, I find that much of the literature is driven by individual-level data only, which cannot fully account for the context in which individuals are incarcerated, studies from the geographic context of the United States, largely published in criminal justice journals, and seldomly controls for staff-specific factors (i.e., disregards many crucial factors related to institutional management.) Implications for the future study of carceral violence and the limitations of the current body of evidence and our ability to develop effective solutions to carceral violence are discussed.

Chapter 2 includes previously-published, co-authored work, analyzing survey data from correctional officers, focusing on how the coping mechanisms correctional officers employ to manage work-related stress, and how coping mechanisms are related to workplace outcomes. To address these questions, we utilize original survey data about California correctional officers. We draw on the Stress Process Paradigm to model the relationship between exposure to violence and mental health, the impact of occupational stress on the development of coping mechanisms, and whether differential coping mechanism utilization impacts officers' levels of cynicism and

desire to leave corrections. Our findings suggest that emotion-focused coping (e.g., having someone to talk to) is associated with lower intentions to leave correctional employment, while the opposite is true for avoidant coping (i.e., alcohol abuse). These insights shed light on the problem of officer turnover and retention and provide potential direction to policymakers and practitioners seeking to create an effective, healthy workforce.

Chapter 3 includes co-authored work, focusing on the role of hierarchy in correctional officer decision-making. Hierarchy exists within bureaucratic agencies for several reasons, including to foster employee accountability. However, with hierarchy comes rigidity, and in times of emergency, this can stymie effective, expedient organizational response. Existing literature has examined the implications of hierarchy in emergency management, but limited work exists to understand hierarchy's impacts on frontline worker decision-making during crises. In this paper, we contribute to this literature through an exploratory examination of the role of hierarchy on officer decision-making in a state prison system during the COVID-19 pandemic. As bureaucrats with the most direct interaction with incarcerated individuals, the decisions officers make have profound consequences for well-being of incarcerated people. Drawing on 50 interviews conducted amongst prison staff and incarcerated people, we utilize an expanded definition of hierarchy, one that reflects the ways in which power is granted and imposed both formally and informally. We find that correctional hierarchy is pervasive and complex, influencing officer decision-making through varying their perceived level of autonomy, despite the reality that, as street-level bureaucrats, they themselves are policymakers. Our results suggest that, to some extent, in contexts within which the imposition of hierarchy is reduced, officers' autonomy may be bolstered, and this may improve their decision-making, particularly in ways that may leave incarcerated individuals under their care better-off.

Finally, Chapter 4, also including co-authored work, focuses on burnout among officers. Though correlational evidence links predictors of burnout to service delivery, limited causal evidence exists on how to improve officer well-being and how that impacts interactions with incarcerated individuals. In collaboration with a mid-sized U.S. Sheriff Department, we report results from a large-scale field experiment aimed at reducing burnout ($n = 712$). In an eight-week intervention, the treatment group was nudged to anonymously share experiences with others on a common platform (peer support), whereas the control was nudged to reflect on their experiences individually on a solo-access platform. Our findings suggest that peer support not only improved well-being and belonging amongst correctional officers, but also significantly improved their perceptions of incarcerated individuals. We fail to find significant differences in turnover or incident involvement, the latter of which is measured as both direct and indirect involvement in incidents within the jail or detention center. Thus, this study contributes to a burgeoning literature on how investments in public servants can causally improve well-being and perceptions of those they serve.

To TEH

Acknowledgements

I am incredibly thankful to the participants of the Economics of Crime online seminar and the Workshop on the Economics of Crime for Junior Scholars conference, the Goldman School of Public Policy research seminar, Harvard University, the Mount Tamalpais College Research Clinic students, and participants from the APPAM and IRSPM 2022 research conference for their helpful comments on Chapter 3. I would also like to thank the National Institute of Health Computational Social Science Training Program for their fellowship support. This is also the program where I met an absolutely wonderful cohort of scholars, friends, and truly phenomenal humans: Monica De La Cruz, Elleni Hailu, Ángel Ross, and Mahader Tamene. Thank you all for being who you are, and for your support and friendship. I am so excited to see what amazing and impactful work all of you thoughtful and brilliant humans accomplish.

To most of the mental health professionals I have seen, thank you for giving me support, strength, and the skills to be and do better; to the remaining of these professionals, thanks for helping me be able to clearly articulate some of the problems with mental health care in America. To all the students I have been a teaching assistant (or in Berkeley terms, a GSI) for: thank you. Especially when I was deep in classes during the PhD program, being able to connect with you all really got me through and reminded me of why I was here. I cannot thank you enough. To the GSPP PhD students, thank you for creating a space where the motivation to do good comes before most else. Being able to be in this space meant a lot, especially during the coursework years. And to Cecille, the most incredible PhD Student Affairs Advisor, I hope you know how deeply appreciated you are. I know I can speak confidently for the PhD program when I say that you are beyond phenomenal and we cannot thank you enough for how much you go above and beyond to show up for us. Thank you sincerely for all that you do.

Mom, thank you for the sacrifices you've made, for raising two kids single-handedly, and for never losing your inner child (I will never forget your endorsement of Jamie and I launching ourselves into a pile of couch pillows from the living room coffee table). Jamikins, I am so deeply honored to be your little sister. You are a badass, brilliant, and kind human, and I am so proud of who you are. To Jamie, thanks for being a great bro-in-law and a truly wonderful partner to my sister. I love you all.

To my committee – Jen, Steve, Avi, and Amy: I will never forget that at the end of my qualifying exam, you each shared how supportive you all were of my career plans – I cannot express how much that meant to me, and how much I appreciate each of you, for that and for your presence in this space. Jen, thank you for your thoughtfulness and your encouragement, and all of your time and effort in helping support myself and other fellow PhD students in developing important skills for academia that we have limited access to elsewhere. Steve, thank you for your kindness and for helping me feel seen, understood, and capable. Avi, thank you for graciously and generously accepting the role of the go-to methods person and for modeling how to keep your students entertained through self-deprecating humor. And to Amy, my advisor, I cannot thank you enough for the support you've given me, for your generosity, for the encouragement you provided in helping me pursue my career goals, even when they felt out of reach to me, and for providing me the opportunity to begin to develop into the kind of academic I aspire to be.

To my friends: Christopher, I love that our friendship grew out of us getting to the Goldman living room so damn early in the morning. I am beyond grateful to call you a friend

and enormously thankful for how supportive you have been, especially during the job market. As always, our long conversations over delicious food has and continues to mean so much. I so appreciate your support and confidence in me, your feedback and thought partnership, and your passion for doing good. You are enormously intelligent, and I am so grateful to learn so much from you. I am really excited for the day we can work together, but mostly, I am so thankful that being up oddly early resulted in meeting a wonderful human and making a great friend as a result.

May, I feel so fortunate to have been able to collaborate with you in different capacities for so long, and I am so excited for that to continue. I am so proud of all that you have accomplished and how thoughtfully you approach your work. Thank you for being a true friend, a wonderful colleague and collaborator, and an amazing thought partner.

Nicole, the honorary public policy PhD, I am so incredibly thankful you joined our little Fauxhort. Thank you for sharing your kindness and brilliance with us, as well as your absurdly delicious baked goods. I sincerely appreciate your friendship and our very overlapping sense of humor. I am so glad to have had such a great friend to drudge through the metrics curriculum with and deeply look forward to seeing all the incredible work you will do.

Raheem, thank you for being a truly wonderful friend, colleague, and roommate. I feel so grateful to have learned from you and alongside you the last four years, and I am honored to be in the same cohort as someone so brilliant, thoughtful, and motivated to do good as you. Your support during the job market was and is so deeply appreciated: from driving me to the airport at 4am to picking me up with a milkshake in-hand, I honestly cannot thank you enough for being a wonderfully supportive friend. Above all, I thank you for the lack of judgment when I would fall asleep eating a cheeseburger on the family room floor at 8:00pm on a Friday night during the job market. In all sincerity, I am so excited to see the positive impacts you and your work will have.

Helen, thank you for being a wonderful thought partner, such a positive and genuine human, and a true friend. Your support and soft insistence on getting me to protect my time and myself as I entered the job market is so appreciated, and I cannot thank you enough for that. Your guidance and feedback has been so invaluable, and I so look forward to finding opportunities for us to work together long into the future, though not more than the opportunity to continue being your friend.

Heidi, I hope you forever know how critical you were in helping me get through the job market. You are so phenomenally good at what you do, but more importantly, you are steadfastly compassionate and kind. I will always appreciate how much support you have provided professionally, but I am so thankful to have you as a friend and to have met a fellow Midwesterner out here who calls it “pop” instead of “soda”. But in all seriousness, I am deeply grateful that the lab has helped foster friendships like ours.

Brenda, I so appreciate all your support, kindness, and friendship. I am wildly impressed with how you navigate being a phenomenal mom, a great PhD student, and a brilliant and productive scholar. I am deeply humbled by you. I have so enjoyed spending time with you, Gus, and the kiddos throughout the program – from New Year’s Eves to lunches in the park and more, and I cannot wait for that to continue, wherever we all are throughout our lives.

And to Jessica, the same goes to you, you absolute research goddess. On a professional level, I am eternally grateful for how much you have taught me and how much you helped me

grow. You were an incredibly key component to me being able to go on the market when I did, and for that I am absolutely indebted and appreciative. But more importantly, you are a truly kind and deeply passionate human who I am beyond honored to have met. I so appreciated our margarita walks and the chance to connect more deeply, though bonding over you teaching me field experiment best practices has been great too. Whatever might take the place of those walks in the future, I am so happy to call you a friend. Thank you for the good that you have and will continue to bring to this world.

Elizabeth, thank you for your appreciation and acceptance of me as I am, for being a wonderful mentor, colleague, and friend, and for introducing me to the academic space where I can feel a sense of belonging. Thank you for your trust in me, for being who you are in this space, for the joy you foster, and for your overwhelming kindness. For the first time in my life, I feel truly capable and that is largely thanks to you. Mostly, I feel so fortunate to be able to witness the work you do and how absolutely brilliant you are, but most importantly, how phenomenal of a role model you are in this space. Thank you, sincerely.

Karalyn, I am so incredibly thankful to have met you, to constantly learn from someone as incredibly intelligent as you, and for our deep friendship. Your presence on site visits was so appreciated, and I am forever grateful to have done the work with you and been able to observe the deep and genuine passion, kindness, and care you bring to everything you do. I cannot express how much it has meant to me to be able to have someone I can trust as much as you. From the post-site visit Taco Bell trips to walks along Lake Merritt, and everything in between, I cannot thank you enough for being who you are, your incredible friendship, and your support in helping me get through. You bring so much love to those around you, and people are better off because of it. I cannot wait to see the amazing things you do in this life, but mostly, I just want to see you have the enormously joyful life you more than deserve.

Kyna, there is so much I could say here, but I'll try to keep it brief. There is not a chance that this would have happened without you. You are the friend I needed but didn't deserve. You are forever my chosen family, and I will always be here. I will never stop being incredibly grateful for how you've supported me and seen value in me when I didn't see it myself. I wish you all of the joy that you can embrace, and I will never stop being grateful for having met such a wonderful human.

Lastly, and most certainly not least, I sincerely thank our partners for making this possible. To the incredible leaders at the City and County of Denver, your collaboration made the peer support program possible, and I am so honored to see how passionately you serve your city. To the public servants and system-involved individuals we spoke with in California, thank you for sharing your experiences, your stories, and your wisdom. You have the answers for where we need to go. To Hillary & the staff of For The People, I am deeply honored to be collaborating with such an impassioned and thoughtful organization, and I am in awe of what you have built, and to Mina, I am so impressed by what you do and who you are. I have enjoyed working with you so much, and I am incredibly excited to see what you do next.

To everyone mentioned here and many others who provided support, guidance, and encouragement in myriad forms: thank you for making this possible. I am eternally grateful to be able to work hard and do what I love for life, none of which would be possible alone. To quote one of the greatest fictional public servants of all time, Leslie Knope, I am deeply thankful to

have "...the chance to work hard at work worth doing, alongside a team of people [I] love." To all of you, thank you for your support and encouragement, and now, for some communal celebration. To quote the wonderful Leslie once again, "I'm going to be direct and honest with you. I would like a glass of red wine and I'll take the cheapest one you have because I can't tell the difference."

Introduction

This dissertation, situated within the job demands-resources framework and drawing from related theories, seeks to deepen our understanding of the importance of investing in well-being of a particular group of street-level bureaucrats: correctional officers. Though empirical evidence on the job demands and resources of correctional officers began to proliferate during the late 20th century, the momentum was not sustained through the turn of the century (Wooldredge, 2020), meaning that much of this early evidence speaks to a vastly different context, namely one before the peak and persistence of mass incarceration. While the interest in studying the job demands and resources of correctional officers has been renewed over the past decade, this population is still understudied, and considering the persistent – and very valid – concerns over the outcomes of and experiences within the justice system, it is a critical area of study that deserves more attention than it has received.

Public management is an especially important (and again, seldom embraced) perspective within empirical literature, especially within the fields of criminal justice and criminology. Chapter 1 of this dissertation highlights this through a review of the literature on carceral violence, specifically focusing on the extent to which institutional management factors are incorporated into studies on violence in carceral settings. Violence in these settings severely impacts incarcerated populations, as well as correctional officers: in fact, correctional officers face the second highest rate of workplace injury relative to any other occupation (Finn, 2000). Job demands – like institutional violence – are associated with mental health and well-being of officers (Lerman et al., 2021), and thus, it is important to understand how officers cope with these demands, and how manners of coping may be associated with key occupational outcomes and officer decision-making. Chapter 2 explores this question more deeply through analysis of survey data from California correctional officers to understand how coping with institutional violence is associated with intention to quit one's job.

One of these coping styles explored in Chapter 2 is problem-focused coping, specifically focusing heavily on perceived social support. Perceived social support is a well-documented and crucial job resource (Bakker & Demerouti, 2006; Baruch-Feldman et al., 2002; Kim et al., 2018; Linos et al., 2021; Lizano & Mor Barak, 2012; Moynihan & Pandey, 2007). Another job resource is autonomy, which is explored more deeply in Chapter 3. Being in a hierarchical, command and control style occupation, correctional officers often feel beholden to explicit dictates of policy, even though they are street-level bureaucrats with considerable discretionary power (Alberts & Hayes, 2006; Balko, 2013; Lipsky, 1980). Chapter 3 highlights the influence of correctional hierarchy on officer decision-making, specifically noting the importance of autonomy. Finally, given the considerable barriers to intervening upon job demands (though acknowledging the importance of doing so), it is important to understand the potential impact of investment in job resources, such as perceived social support. Even outside of the realm of correctional work, limited empirical evidence exists to understand the causal relationship between perceived social support and worker well-being (Linon et al., 2021). Chapter 4 seeks to provide evidence of this relationship through testing the impact of access to a peer-focused wellness intervention, relative to a status quo, individually-focused wellness program.

Chapter 1: Rethinking factors associated with violence in carceral institutions: A call for incorporating public management perspectives

Jessie Harney

UC Berkeley Goldman School of Public Policy

Introduction

Violence in carceral institutions¹ is a significant problem that directly impacts many, with extant literature suggesting that approximately 200 per 1,000 incarcerated individuals are impacted in prisons (Wolff et al., 2007), and an estimated 8% of people experiencing assault in jail within a year (Ellison et al., 2022). Exposure to violence in carceral settings and its impacts are salient for those who are most proximal, including both incarcerated individuals and correctional staff; however, violence in carceral settings receives minimal attention as a problem that impacts communities more broadly. This is a considerable oversight, as violence in these settings (not entirely unlike violence in non-carceral communities) does not operate within a vacuum (Dahlberg & Krug, 2006), and the link between exposure to violence and worsened well-being is well-documented, with findings of violence exposure being associated with worsened emotional & mental health (Coll et al., 2012; Flannery et al., 2007; Golembiewski et al., 1992; Kadra et al., 2014; Lerman et al., 2021; Pastore et al., 1996; Wieclaw et al., 2006), financial health (Sezer, 2022), and physical health (Coker et al., 2000; Lacey et al., 2013; Resnick et al., 1997). Given that an estimated 95% of people incarcerated in state prisons will be released (Hughes & Wilson, 2003) and the average length of stay in jail is approximately 26 days (National Conference of State Legislatures, 2021), reducing violence exposure in carceral settings can be framed as a public health problem, and one with potentially vast, though under-studied implications for community-wide well-being and safety.

While there is an incredible wealth of literature on the factors associated with violence in carceral institutions, scholars in the field have also expressed concerns about the state of extant evidence, citing myriad changes relating to methodology (Wooldredge & Steiner, 2009), data collection (Wooldredge & Steiner, 2009), and importantly, the need to increase incorporation of factors related to the management of prisons and jails (Wooldredge, 2020). Even when management issues, such as turnover and retention, have been incorporated into the carceral violence literature or have been cited as needing greater attention, these issues are often framed as a problem of not being able to find staff that are capable enough, rather than acknowledging the systemic and political factors that create and maintain carceral policies, determine what the roles and responsibilities are of staff in carceral institutions, and shape the environment within which individuals are incarcerated. This too is a considerable oversight, and one that I will suggest has profound ramifications for the future of empirical research on violence in carceral settings and the ability to develop data-driven solutions to reducing the incidence of violence in prisons and jails globally, especially within the United States.

I substantiate this claim through conducting a systematic literature review of published studies on factors related to violence in carceral settings. I focus primarily on characterizing the extent to which this extant literature incorporates management factors and how this varies depending on the context, geographical setting, disciplinary background of the peer-reviewed journal, and other important characteristics. To establish a clear and reproducible methodology, I

¹ Note: I use the term “carceral institutions” here and through much of this paper to mean prisons, jails, and detention centers operated by state, federal, or local agencies (potentially privately-operated). This is not to be mistaken with the “carceral system,” which more generally refers to both the justice system (e.g., policing, sentencing, corrections, etc.) and the ways in which the influence of State activities and operations creates a cycle of system impact.

conduct this review through scraping Google Scholar webpages, then narrowing the review sample based on whether the relationship between violence in carceral settings and other factors was assessed within each paper. This review will begin with a brief, critical discussion of the theories that tend to dominate most of the literature and an introduction into crucial management theories with clear implications for understanding how correctional staff attitudes and behaviors may be crucial to account for in the context of carceral violence. Then, the discussion of the review methodology and findings will be discussed, concluding with the implications of the imbalance in approaches, disciplines, context, and factors included within the current body of research, as well as a call to incorporating public management and administration perspectives within the study of carceral violence. Therefore, this review serves as a brief introduction into the state of peer-reviewed evidence in this space, a critique of some of the common approaches to engaging with empirical work on carceral violence, especially as it relates to the interpretation of findings within the theoretical framework of importation theory, and a call to incorporate public management and administration perspectives and scholarship in the study of carceral violence.

How Theoretical Approaches & Methodological Decisions Shape Empirical Study of Carceral Violence

While the literature on carceral violence has evolved greatly over time², much of this work has been dominated by a handful of theoretical frameworks, largely importation and deprivation theory, with some, albeit more limited, incorporation of situational, strain, control, and management theories. Importation theory suggests that it is the individual-level factors associated with the incarcerated person – namely, their traits or situations prior to incarceration – that lead them to adjust to incarceration in a particular manner (Irwin & Cressey, 1962). Deprivation theory, on the other hand, claims that because of the way that prisons are structured and operated, prison culture is developed and influences resident behavior, fueling opposition against administration by the resident population (Sykes, 1956; Sykes, 1958). While scholars tend to operate in multiple frameworks, especially in recent literature, importation theory is often what dominates either explicitly or through selection of independent variables. Consider, as an example, the systematic review from Steiner and colleagues (2014), which focused on summarizing the extant evidence on “causes and correlates” of misconduct in prisons. In their paper, Steiner and colleagues describe the independent variables utilized within 306 models across 98 studies published from 1980 to 2013, finding 46 unique variables related to incarcerated individuals’ backgrounds, eight related to institutional routines and experiences of incarcerated individuals, and 20 related to prison characteristics. The fact that, aggregately speaking, previous studies on misconduct in carceral settings has utilized more than double the number of individual background predictors as either routines or prison characteristics is noteworthy and may be reflective of an overall dominance of importation theory. Though it may also be the case that the number of importation-related factors may simply out-number the number of management or other theory’s related variables, this is unlikely to be the case, given the vast layers of management’s impacts (e.g., frontline workers, relationships between frontline

² For a thorough discussion of how carceral violence literature evolved over time, see Wooldredge, (2020).

workers and supervisors, attitudes towards administration of both staff and incarcerated populations, local or state policy and political context, etc.) Additionally, 45% of the factors included within prison characteristics variables were simply aggregated demographics or other factors that reflected compositional characteristics of incarcerated populations. While these are valid to include, the fact that they made up almost half of the factors included in the prison characteristics variable highlights the limited acknowledgement of structural, managerial, and environmental factors that may be contributing to unsafe and violent conditions of confinement. Regardless of whether it is intentional and/or partly a function of what data researchers can access regarding carceral violence, addressing the ways in which future studies are not only formed by the results of previous studies but the manner in which previous studies were carried out or what factors previous scholars included in their models is critical.

Another key issue with the scholarship on carceral violence is how interpretation of factors related to individual's backgrounds tend to be inherently situated within importation theory. Among the myriad factors that have been studied, those that are quite consistently associated with violence include age, sentence length, criminal history, gang membership, previous history of incarceration, previous violence or misconduct, and lower socioeconomic status (Arbach-Lucioni et al., 2012; Cunningham & Sorensen, 2007; Drury & DeLisi, 2010; Gaes et al., 2002; Kuanliang et al., 2008; Steiner & Wooldredge, 2009). Rather than addressing the ways in which nearly all of these factors are impacted – or arguably for some, inherently caused by – systemic factors, previous studies tend to interpret relationships between these variables and violence as inherent to an individual. There is an argument to be made that in fact, many of the factors that importation theory has relied upon to substantiate its claims could perhaps be better framed as deprivation, strain, or other theories that produce systemic inequality within the system and/or prior to system contact, such as the unequal representation in the justice system and health inequity, which are themselves contributing to violence in carceral settings. Empirical literature tends to suggest that each theory has its own merit (Arbach-Lucioni et al., 2012; Paterline & Petersen, 1999; Sorensen et al., 1998; Windzio, 2006). Thus, even if scholars wish to continue situating their work within importation theory, the issue of cautious and careful interpretation is still paramount. For example, some previous work has interpreted findings of increased misconduct associated with greater crowding as support for importation theory, given the location of the crowding was clustered within high-security housing (Gaes & Camp, 2009). However, the authors also state that their "...analyses further suggest that the observed effects of crowding are largely due to the opening and closing of correctional facilities, which created large variation in the crowding among the remaining facilities." It may perhaps be better to reframe these results as potentially supporting importation theory, especially given that those who are classified as being "higher risk" are more likely to be placed into high-security housing and more likely to have been previously incarcerated, and therefore, it is unclear as to whether this is due to personal factors, their experience of the system and other factors, or both (Gaes & Camp, 2009). In other words, these are individuals who have been previously exposed to the justice system, its management practices, and the deprivation experienced in carceral conditions, and thus, without controlling for these factors, interpretation of estimates of individual factors' influence on carceral violence in descriptive study – which dominates most of the literature (Wooldredge, 2020) – is precarious at best.

In other words, the models that much of the carceral violence literature relies upon may suffer considerably from omitted variable bias. Consider for example several of the previously discussed, consistently associated factors with carceral violence, all of which having a generally consistent, positive relationship with carceral violence: criminal history, gang membership, previous history of incarceration, previous violence or misconduct, and lower socioeconomic status. A robust body of empirical literature has made clear that there are significant racial disparities in justice system contact, involvement, and severity of exposure within the United States, particularly for those that identify or are identified as Black (DeVylder et al., 2021; Edwards et al., 2019; Johnson et al., 2018), Native American (Edwards et al., 2019), and Latinx (Johnson, 2006). Focusing specifically on disparities between Black and White individuals, there is clear and consistent evidence that the carceral system disproportionately exposes Black communities to police encounters (Petrocelli, Piquero, & Smith, 2003; Sewell et al., 2016), longer sentences (Johnson, 2006), and incarceration (Omori & Petersen, 2020; Pettit & Western, 2004). In conjunction with the evidence that suggests that the gap in wealth between Black and White individuals in the United States has been found to be driven in large part by slavery (Derenoncourt et al., 2022) and the fact that economic inequality is associated with the development of gangs (Barrett et al., 2013; Ortiz, 2021; Williams, 2015), this suggests that studies including race (and particularly, an indicator for being identified as/identifying as Black) as a variable in their model of carceral violence without inclusion of each of these specific factors will overstate the strength of the relationship between race or identification as being Black with carceral violence, given the positive correlation between each of these factors and violence. In fact, several studies included in this review have addressed the fact that associations between race and violence tend to no longer remain after inclusion of these and other factors (Wooldredge & Steiner, 2014). Put more frankly, if we choose not to or are limited in our ability to construct more informative models of carceral violence, then failing to interpret results in a thoughtful and critical manner may allow racist, classist, sexist, and/or homophobic narratives to persist in the study of carceral violence, especially given the fact that these narratives were quite explicit in early work.

Several thoughtful scholars have already acknowledged and highlighted the need for considerable shifts from academic norms in regards to how scholars are conducting and engaging with literature on violence in carceral settings. These critiques have also been particularly prominent for research on gang-related violence; critical scholars have astutely addressed the lack of attention paid to the structural and systemic contributions that give rise to the need for gangs, including profound and persistent economic inequality and structural racism, as well as their role in resisting against violence at the hands of state actors (Barrett et al., 2013; Ortiz, 2021; Williams, 2015). Even more broadly outside of the context of gangs, extant evidence suggests a strong or perhaps even causal relationship between economic inequality and violent crime (Fajnzylber, et al., 2002; Kelly, 2000). Thus, building informative and accurate models of carceral violence requires factors that address the systemic, institutional, and structural issues that contribute to violence, or at the very least, extremely cautious interpretation in the case of their absence.

A Primer to Street-Level Bureaucracy & The Importance of Management Factors

To understand the importance of incorporating public management factors in particular into the study of carceral violence, it is first critical to understand one of the most proximal and relevant theories in public management as it pertains to those who have immense influence over individuals' day-to-day experiences of incarceration: frontline correctional staff. In public management literature, these frontline staff would be referred to as street-level bureaucrats (SLBs), or "...public service workers who interact directly with [individuals]³ in the course of their jobs, and who have substantial discretion in the execution of their work," (Lipsky, 1980). A wealth of innovative scholarship has demonstrated that the way in which SLBs do their job has profound implications for public sector outcomes. For example, extant evidence has found statistically and practically significant relationships between SLB behavior and the likelihood of future take-up of services (Barnes & Henly, 2018), SLB incorporation in collaboration and public sector innovation (Livingstone, 2021), bureaucratic representation on dimensions of race and gender in public safety agencies and severity of exposure to state-sanctioned violence (Headley & Wright, 2020; Wright & Headley, 2020), and that investment in the well-being of SLB can impact retention and attitudes towards those they serve (Linos et al., 2021; Harney et al., n.d.).

In terms of the SLBs that are most relevant to the issue of carceral violence, those who have direct interaction with and hold the greatest power over individuals' experience of incarceration is correctional officers⁴. Correctional officers are tasked with maintaining the security of the institution through escorting individuals throughout the institution, maintaining order, and establishing security in institutional programming and other activities. Access to necessities relies almost entirely upon correctional staff, as they are responsible for escorting individuals to accessing the following non-exhaustive set of necessities: 1) their medications (in some carceral contexts); 2) non-tablet based video calls or phone calls; 3) in-person visits; and 4) a variety of different programming activities. As SLBs, correctional officers possess discretion, and therefore have a direct ability to prohibit incarcerated individuals access to crucial resources, discrepantly enforce rules, or fail to respond to requests or concerns from incarcerated individuals (including direct threats to incarcerated individuals' personal safety). Scholarship on correctional officer behavior is burgeoning, and early evidence suggests that officers are considerably demoralized and burnt out (Brower, 2013; Lindquist & Whitehead, 1986; Lerman et al., 2021; Morgan, 2009; Spinaris et al., 2012) and that the depersonalization aspect of burnout (i.e., distancing oneself from others) is related to officers dehumanization of incarcerated populations (Stinglhamber et al., 2022).

Specifically, in regards to the literature on how correctional officers' perceptions, beliefs, and actions impact the lives of those they are responsible for ensuring the safety of is quite nascent. The literature that does exist suggests that: 1) correctional officer's attitudes towards rehabilitation are associated with the environment within which they work (including whether

³ The original quotation included "citizens" rather than individuals, and thus, this change was made to provide a more appropriate and inclusive definition of who SLBs interact with.

⁴ There are many terms that are used that pertain to sworn staff working in carceral settings, (e.g., deputy, [jail/prison] officer or guard, etc.), though "correctional officer" will be the term utilized here and throughout the paper.

they were exposed to violence inside of prison), as well as the extent to which incarcerated individuals are involved in rehabilitative programming (Lerman & Harney, 2019); 2) procedurally-just officers tend to adopt a more rehabilitative orientation, and incarcerated individuals tend to report that interactions are more positive with officers that are perceived to be procedurally-just (Abdel-Salam et al., 2023; Peterman et al., 2020); and 3) correctional officers vary in how they utilize the discretion they are granted, including within the context of deciding whether to issue disciplinary write-ups (Gilbert, 1997; Haggerty & Bucerius, 2020; Liebling, 2000; Sparks et al., 1996). Framing the issue of access another way, there is potential that, in the case where officer well-being is fostered, effective training on responding humanely to incarcerated population's needs, and Framed another way, there is potential that officers could also be a link to improving the conditions of confinement. Given the robust evidence basis suggesting the potential impact that SLBs may have on the well-being of those they serve, the failure to fully embrace a public management perspective in the study of carceral violence is a significant barrier to identifying promising solutions to reduce its incidence and foster safer communities. Discretion could serve potentially as a way to bring greater humanity to the work (e.g., deciding not to pursue disciplinary write-ups for trivial infractions,) or conversely, as a way of behaving in an excessively harsh or discriminatory manner (e.g., failing to escort an individual to their visit or otherwise serve as a barrier to accessing crucial resources.)

Review Methodology

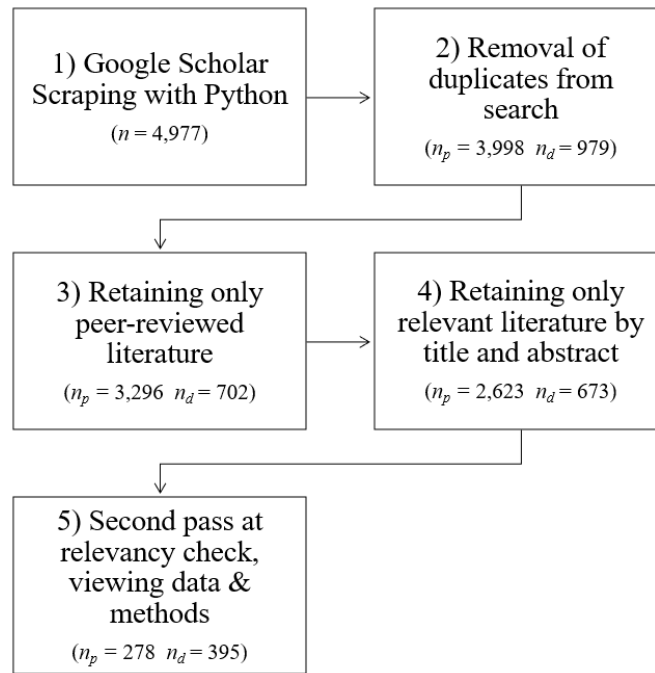
In the pursuit of establishing a clear, efficient, and effective review methodology, I utilized Python to scrape Google Scholar pages on the institutional violence literature for all results, published in the English language, since 1970. Though the state of mass incarceration, prison and jail policy and the state of reform, and many other factors have varied considerably since then, this decade is considered to be the onset of the era of mass incarceration (Delaney et al., 2018), and thus 1970 was identified as the publication year minimum. A set of five searches was conducted, from which results were scraped, using the following term combinations: 1) “prison|jail violence|misconduct”; 2) “prison AND violence”; 3) “jail AND violence”; 4) “prison AND misconduct”; and 5) “jail AND misconduct”.

The scraping process was replicated from Dmitriy Zub's code published online, specifically utilizing SerpAPI to scrape through multiple pages of organic Google Scholar search results (Zub, 2021). Appendix 1-A provides the base code utilized for this project (e.g., see Zub's post for more detailed instructions, including the set-up of an API key and other necessary steps.) This included both for the purpose of replicating the process utilized for this review (noting that the resulting dataset may change based on the date scraping occurred, specifically on December 14, 2022 with no other changes made to the current code), as well as for transparency such that others can use this process more broadly for their own work.

The results acquired 4,977 articles across all five searches in total, which after removal of duplicates, yielded 3,998 unique articles. For the purposes of this review, only peer-reviewed articles are included. Thus, result types of books, book reviews, non-peer-reviewed articles, and citations were excluded (n = 702), leaving 3,296 articles remaining. Then, articles that were determined to be irrelevant or not applicable to the review topic based on their abstract and title were removed (n = 2,623). In other words, if there were articles that were not assessing the

relationship between one or more factors and institutional violence or misconduct, they were removed. Studies that look at violence to and from staff and incarcerated individuals and vice versa were included, however the only combination of this violence that would not be included was on staff-to-staff violence, which is important, though not within the scope of the current review.

Figure 1.1: Flowchart of Review Article Selection Methodology & Resulting Studies Included



Other studies that were not included in the review include those that focus on evaluating the impact of violence prevention programs but were not able to measure violence, measured only violent recidivism or other violence after release from prison⁵, studies that look at misconduct or infractions that do not explicitly state that misconduct included violence⁶, as well as studies that focus specifically on self-harm, self-injury, or suicidality⁷, as these are quite distinct from physical violence committed upon others. While identified as a critical area of research, studies that focused explicitly on violence, components of the carceral system, and

⁵ However, studies that retrospectively ask formerly incarcerated individuals about their experiences of violence in prison were included.

⁶ Even cases of “serious misconduct” may include no mention of violence, so it is possible that violence was not measured, thus unless it was explicitly noted as a component of misconduct/serious misconduct, the study was not included. For example, one study states that their “...serious misconduct scale includes: drug violation, alcohol violation, weapon possession, possession of stolen property, and escape or attempted escape,” (Semenza & Grosholz, 2019).

⁷ While all three are grouped together here as being distinct from physical violence against others, each of these forms of violence against oneself are quite different from each other and should not be conflated (i.e., while both self-harm and suicidality inflict harm upon oneself, the intention of each act is quite distinct) (Centre for Suicide Prevention, 2016).

related factors prior to incarceration (e.g., school-to-prison pipeline) were not included within the scope of this review.

The final step of the review methodology involved parsing through 673 articles to ensure that the content and focus of the study was relevant to the scope of the review, doing a deeper dive on the data and methods section particularly (e.g., ensuring that variables measured in the study included both violence in carceral institutions and the factors related to it.) This yielded the final review size of 278 articles.

Review Findings

The complete review dataset was compiled manually by characterizing the to identify the following main elements: 1) level of data; 2) type of data analyzed within the study; 3) geographic location; 4) journal type; 5) carceral setting type; and 6) incorporation of environmental, management, or contextual factors, as well as specific indications of whether staff-specific factors were included and factors that can speak to relationships or interactions between state agents and the communities impacted by the system (e.g., namely officer to incarcerated individual interactions).

Table 1 below includes the frequency and percentage of different article characteristics for those satisfying the review's inclusion criteria (n = 278). Largely, studies that met the criteria for inclusion within this review relied on individual-level data (91.76%). In terms of the types of data utilized, the majority studies used either or both administrative data (nearly 60%) and/or survey data (over 50%), with only 6.45% of studies utilizing interviews with incarcerated individuals and/or staff to assess factors related to the experience of or engagement in violence in carceral settings. Vastly, these studies were also conducted using data from the United States (83.51%), were published in criminology journals (82.08%), and in terms of carceral setting, focused on violence in prisons (91.76%). Lastly, in regards to the factors included within these studies, a slight majority (50.90%) included factors related to management, environment, and context, with only slightly more than a quarter including staff-specific factors (26.16%) and a mere 14.34% including factors related to the interactions/relationships between staff and incarcerated individuals. While the types of factors related to the interactions or relationships varies across studies, each of the unique types of factors can be appropriately summarized as including one or more of the following variables related to: 1) officer response to violence in the institution; 2) mistreatment from officers; 3) perceptions of officers as it relates to rule enforcement, performance, propensity to help incarcerated population, culture, legitimacy, and/or propensity to be procedurally-just; 4) relationship quality; and 5) staff-to-resident victimization, assaults, sexual violence, or other forms of violence.

Implications

There are several potentially profound implications of the state of research on carceral violence. First, in regards to the typical level of data and type of data utilized within studies included in this review, much of the literature on the factors that drive institutional violence focuses on individual-level characteristics, often explicitly situating itself within the theoretical framework of importation theory or interpreting results of individual characteristics in the context of important theory.

Table 1.1: Characteristics of Peer-Reviewed Articles Satisfying Inclusion Criteria for Review (n = 278)

Variable	Level	Frequency	Percentage
Level of Data*	Individual	256	91.76%
	Facility/Unit	9	3.23%
	Institution or Higher	62	22.22%
Type of Data*	Administrative	164	58.78%
	Survey (includes psychiatric assessments)	143	51.25%
	Interview	18	6.45%
	Meta-analysis or other	8	2.87%
Geographic Location*	US	233	83.51%
	Outside of US	53	19.00%
Journal Type	Criminal Justice	229	82.08%
	Law, Law and Psychology/Psychiatry	20	7.17%
	Psychology/Psychiatry	14	5.02%
	Public Health or Occupational Health	5	1.79%
	Public Policy, Public Management	2	0.72%
	Other ⁸	9	3.23%
Carceral Setting*	Prison	257	92.11%
	Jail or Juvenile Facility	25	9.00%
Incorporates management, environmental, and/or contextual factors	Yes	142	50.90%
	No	137	49.10%
Incorporates staff-specific factors	Yes	73	26.16%
	No	206	73.84%
Incorporates staff to incarcerated individual interactions, relationships, or perceptions	Yes	40	14.34%
	No	239	85.66%

*Note: Percentages may not sum to 100% as studies can report several levels of data, types of data, geographic locations, and/or carceral settings.

Only 16.8% of the studies included within this review that included individual-level data also had facility or institutional-level data, which is critical to note, as scholars have highlighted importance of utilizing multi-level models, particularly within the context of understanding violence in carceral settings and appropriately accounting for variation coming from individual-level factors (Wooldredge & Steiner, 2009). Even in instances where only individual-level data is available, aggregations of institutional-level measures, given relative completeness of available individual-level data can also be useful, though of course this does not solve the issue

⁸ Includes journals that do not fall into the other above categories, including those that are general social science journals and/or interdisciplinary journals (e.g., *The Social Science Journal*, *International Journal of Culture and Mental Health*, etc.)

of omitted variable bias. Additionally, it would be a considerable oversight not to acknowledge the difficulties that researchers will encounter when attempting to appropriately access institutional data of any kind, including robust facility-level data within institutions.

Additionally, these majority characteristics of the current state of empirical literature on violence in carceral settings may reflect a profound lack of empirical diversity in the geographic context. While this is of course limited by the fact that peer-reviewed studies included in this review were specifically in English, given the profound differences in political context, historical and current approaches to and uses of incarceration, and other critical factors, this imbalance highlights the potential for over-reliance on results from the American context and over-exposure to the factors and approaches that American scholars (and/or those who utilize data on American carceral institutions.) To make these potential issues more salient, consider the variation across countries in nationwide risk of incarceration for its citizens.

Figure 1.2: Comparison of Incarceration Rates across Countries Represented in Review

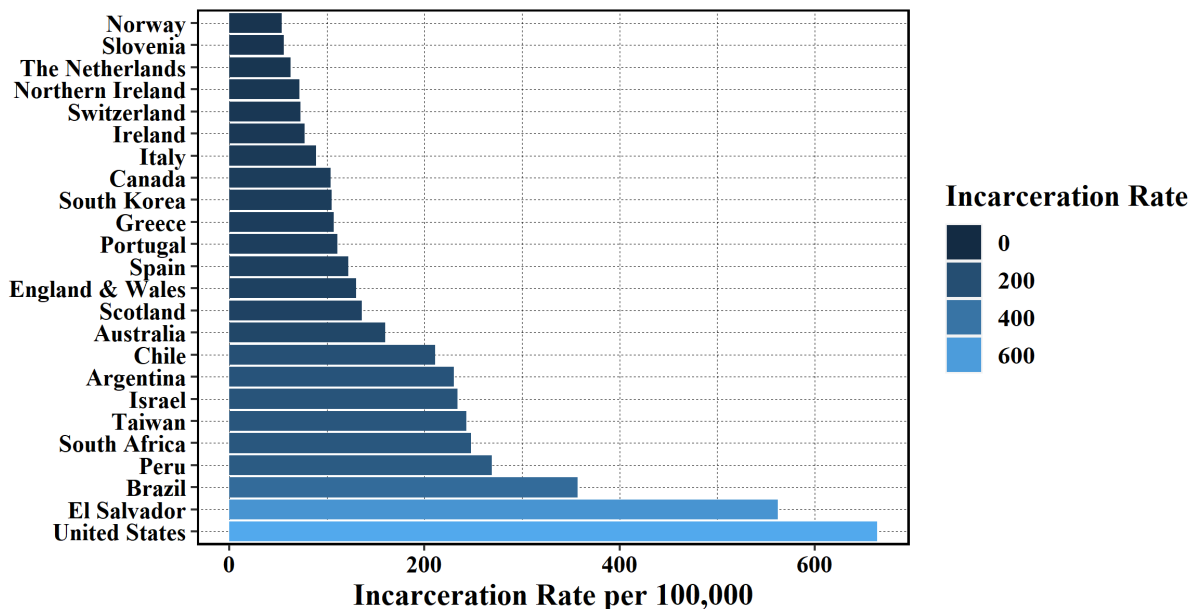


Figure 1.2 displays the incarceration rates of each country that was represented within this review. The incarceration of the United States is the highest at 664 per 100,000 with the next highest being El Salvador at 562 per 100,000, with half of the 24 countries having incarceration rates below 200 per 100,000 people. Given the considerably greater severity in sentencing – especially for drug and property crimes (Lynch & Pridemore, 2011) – and that crime rates in the United States do not make up for the differences in incarceration rates between countries (Hartney, 2006), having much of the empirical literature dominated by the American justice system context signal a clear concern as to the external validity of this body of literature, and thereby, the proposed solutions proposed for carceral violence.

In terms of the types of journals within which these peer-reviewed articles are published, over 80% were published in criminology or criminal justice journals. While this is of course unsurprising given the focus is on violence in carceral institutions, this highlights the potential

for imposition of specific disciplinary norms on empirical approaches that may limit the methodological approaches and other important modeling considerations. Relatedly, because disciplines tend to be quite siloed, absent some impetus for an interdisciplinary approach, the visibility of the problem of violence in carceral settings and the scope of the potential solutions is likely to be considerably more limited. While subject matter expertise is critical, ensuring that disciplinary norms do not overshadow the importance of adopting a flexible and robust methodological toolbox to appropriately model carceral violence, as well as incorporating literature and perspectives from other fields is crucial to developing a deeper and more reliable evidence basis of the factors related to carceral violence that can increase our ability to identify data-driven solutions.

Additionally, the fact that over 90% of the literature on violence in carceral settings comes from the context of prisons is unsurprising, but troublesome. Stays in prison are of course considerably longer, on average, relative to stays in jails or detention centers, so it is understandable that prisons tend to dominate the space of carceral violence research (National Conference of State Legislatures, 2021). However, given that literature heavily (and often exclusively) relies upon individual-level data at a given point time (i.e., much of the empirical literature is not repeated measures or panel data), these issues are unlikely to be a considerable contributor to the severe imbalance. What is likely to be far more consequential is the differences in access, where state prison systems are more likely to have data managed in one central location (or at the very least, managed with relative consistency across institutions throughout each state or locality). At least in the American context, acquiring jail- or detention center-based incident data would likely require data use or other legal agreements from each county or agency within the state, rather than with a state- or federally-run department. Again, while it is understandable that more comprehensive analysis of administrative data of jail-based or detention center-based violence is more than likely not logistically feasible, this profound imbalance presents concerns about the extent to which policy implications will generalize to jails. While about 91% of the literature in this review, specific to the United States came from the context of prisons, approximately one-third of those who are incarcerated in America are in jails⁹ (Sawyer & Wagner, 2023).

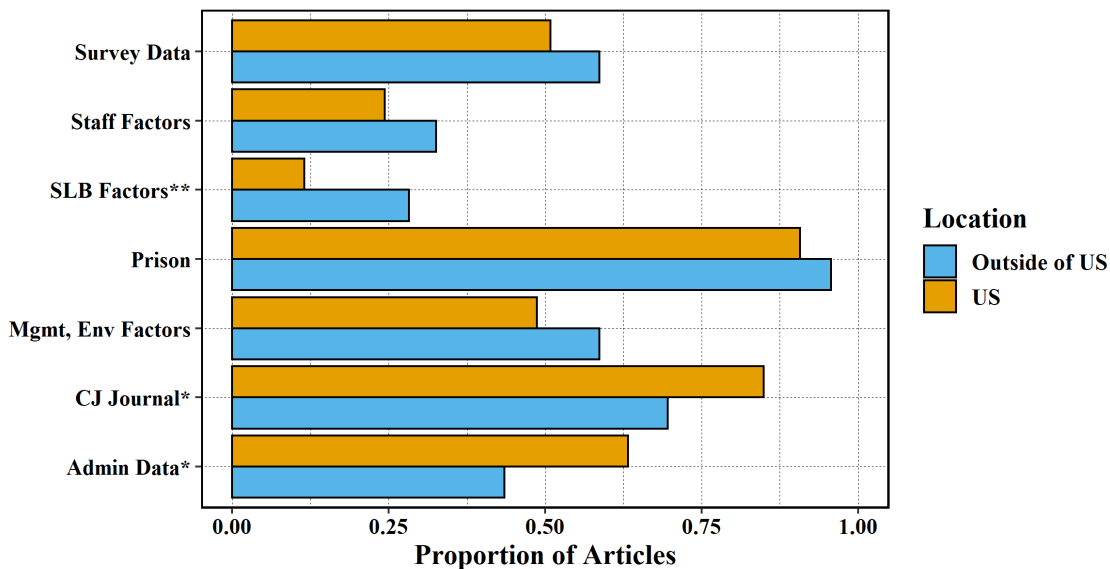
This review also highlights how rarely the public management perspective is incorporated into studies of carceral violence. Given that only a little over a quarter of articles included any kind of staff-specific factor, this considerably harms the ability of this literature to thoughtfully inform policy implications and operational decisions on how to manage carceral institutions to reduce the incidence of violence. Especially considering that estimates of staff-on-incarcerated individual violence ranges from 83 to 321 per 1,000 incarcerated individuals (Wolff et al., 2007), this is a profoundly unsettling finding.

Looking at these factors a bit more deeply, there are several differences and patterns worth noting here. Figure 1.3 below displays the proportion of articles satisfying the eligibility criteria for this review by category of data types included, carceral setting, types of variables included, and type of journal where the article is published by the geographic location of the data included (i.e., either within the United States or anywhere outside of the United States.) Three

⁹ Approximately 80% of those who incarcerated in America's jails have not actually been convicted and are therefore presumed to be innocent (Sawyer & Wagner, 2023).

practically and statistically significant differences are noted. First, articles published on violence in carceral settings within the context of the United States were significantly more likely to utilize administrative data, relative to studies on violence in carceral settings outside of the United States. There are likely several reasons for this, not least of which being data availability and sharing practices and norms (Alter & Vardigan, 2015). Additionally, articles published using data from the US were significantly more likely to be published in a criminal justice or criminology journal, relative to those utilizing data from outside the US. This is particularly interesting, as this may potentially relate to the profound differences in the way the United States makes use of incarceration, relative to other countries, and who is “allowed” to be an authority on, have responsibility to understand, or to view the problem of carceral violence as a community public health problem. Lastly, and perhaps most profoundly, studies conducted on violence in carceral institutions outside of the United States were significantly more likely to include factors related to interactions with and relationships between staff (primarily correctional officers) and incarcerated individuals in their model of factors potentially associated with violence in carceral settings. Again, this is likely a function of many different factors, but what is incredibly critical to highlight is how indicative this is of the profound discrepancy in the embrace of the public management perspective between the United States and other nations (Kickert, 2007).

Figure 1.3: US and Outside of US Comparison



Conclusion

It is the hope that the results of this review can demonstrate a critical point: that to the extent that this body of evidence drives policy-making and proposed solutions to reducing the incidence of violence in carceral settings, we are profoundly limited by the decisions we have made in how to study carceral violence, what factors or perspectives we do or not give attention to, and the power we have given to interpreting findings with a concreteness that is unwarranted. If we are to establish an evidence basis that can be relied upon for developing solutions that can truly mitigate violence in carceral contexts, it will be critical that we broaden our geographical and

disciplinary diversity of the context within which this is studied, the carceral context within which we collect and analyze data, and crucially, incorporate factors related to the interactions between staff – those who are granted state authority to exercise violence – and incarcerated individuals under their care. Put another way, the utmost recommendation given the results of this review is for the field of criminology and criminal justice to fully embrace a management perspective, an interdisciplinary approach, and a critical eye on the interpretation of factors in the study of carceral violence.

Of course, as with all research, there are limitations to this review. First, the studies included within the review were specifically those that were peer-reviewed. This introduces several potentially important types of empirical products that may be informative but were not included within the scope of the review, such as books, unpublished manuscripts, and especially, reports or white papers. To the extent that the approach, context, and incorporation of different types of factors may vary within empirical work in these other avenues is unknown and is worth exploring; however, this does not negate the crucial point that peer-reviewed empirical literature will likely drive much of the direction of future empirical work. Additionally, this review only included studies that were available on Google Scholar, and extant evidence suggests that systematic literature reviews are perhaps better suited in the context of using multiple literature databases (Haddaway et al., 2015). Thus, to the extent that Google Scholar missed articles on the topic of carceral violence, results of the state of evidence may change.

Finally, a few important points are worth noting about the importance of how research is done on carceral violence and also issues pertaining to justice-impacted populations more generally. One point this review highlights is that who is doing this research appears to make a difference (e.g., considerable variation in utilization of management perspectives between contexts in and outside of the United States). Thus, within the study of carceral violence and within research on the system more broadly, highlighting and leaning into the work from system-impacted scholars is of critical importance. Especially when it comes to fostering a critical eye and thoughtful interpretation to results, system-impacted scholars will have some of the most in-depth institutional details that scholars who are not system-impacted will not possess, which can profoundly change the way one understands the data which they are working with. While thoughtful collaborations with a government partner can help establish institutional knowledge as well, having perspectives of both staff and incarcerated individuals is critical to fostering the most complete picture of institutional knowledge and history.

Appendix 1-A: Base Code

Note: Markdown text is noted by “##” and text in black. Code is bold and in blue text. Text that is underlined and in orange is documentation added here for clarity.

Important note: Because this code was run with SerpAPI, it will NOT run on its own unless you have an active SerpAPI account that has searches still available (note this is per-page so it adds up quickly!)

Import libraries

```
from serpapi import GoogleSearch
from urllib.parse import urlsplit, parse_qs
import os, json
import pandas as pd
from bs4 import BeautifulSoup
```

Start scraping

Search Term 1: prison|jail violence|misconduct

The code below was used for each unique search (i.e., this code was run five separate times, were parameter 'q' was changed to swap out the relevant search term.) Duplicates were also extracted after compiling all results together.

Need to pay for API key in order to run this!

<https://requests.readthedocs.io/en/latest/user/quickstart/#passing-parameters-in-urls>

```
params = {
    # https://docs.python.org/3/library/os.html
    'api_key': "2ed7282fbfac1db322dbc7c2092763ef71f22a23a04d51b0b8148c1a6b8e1383",
```

serpapi api key

```
'engine': 'google_scholar', # serpapi parsing engine
'sort_by': 'relevance',
'q': 'prison|jail violence|misconduct', ## search query
'h1': 'en', # language
'start': 0, # first page
'as_ylo': 1970,
'num': 10000
```

```
}
```

```
search = GoogleSearch(params) ## where data extracts on the backend
```

```
organic_results_data = []
```

```
while True:
```

```
    results = search.get_dict() # JSON -> Python dict
```

```

print(f'Currently extracting page #{results["serpapi_pagination"]["current"]..}')
for result in results['organic_results']:
    position = result['position']
    title = result['title']
    publication_info_summary = result['publication_info']['summary']
    result_id = result['result_id']
    link = result.get('link')
    result_type = result.get('type')
    snippet = result.get('snippet')
    try:
        file_title = result['resources'][0]['title']
    except: file_title = None
    try:
        file_link = result['resources'][0]['link']
    except: file_link = None
    try:
        file_format = result['resources'][0]['file_format']
    except: file_format = None
    try:
        cited_by_count = int(result['inline_links']['cited_by']['total'])
    except: cited_by_count = None
    cited_by_id = result.get('inline_links', {}).get('cited_by', {}).get('cites_id', {})
    cited_by_link = result.get('inline_links', {}).get('cited_by', {}).get('link', {})
    try:
        total_versions = int(result['inline_links']['versions']['total'])
    except: total_versions = None
    all_versions_link = result.get('inline_links', {}).get('versions', {}).get('link', {})
    all_versions_id = result.get('inline_links', {}).get('versions', {}).get('cluster_id', {})

organic_results_data.append({
    'page_number': results['serpapi_pagination']['current'],
    'position': position + 1,
    'result_type': result_type,
    'title': title,
    'link': link,
    'result_id': result_id,
    'publication_info_summary': publication_info_summary,
    'snippet': snippet,
    'cited_by_count': cited_by_count,
    'cited_by_link': cited_by_link,
    'cited_by_id': cited_by_id,
    'total_versions': total_versions,
    'all_versions_link': all_versions_link,

```

```
        'all_versions_id': all_versions_id,
        'file_format': file_format,
        'file_title': file_title,
        'file_link': file_link,
    })
    if 'next' in results.get('serpapi_pagination', {}):

search.params_dict.update(dict(parse_qsl(urlsplit(results['serpapi_pagination']['next']).query)))
    else:
        break
return organic_results_data
print(json.dumps(serpapi_scrape_google_scholar_organic_results(), indent=2,
ensure_ascii=False))

version1=pd.json_normalize(organic_results_data)
```

Chapter Transition 1-2

Chapter 1 discussed the lack of attention paid to public management perspectives in the empirical literature on factors related to violence in the carceral context, explicitly calling for a shift in how scholars in this space collect and utilize available data to better understand what role institutional management and officer behavior plays in creating safer environments. Carceral violence deeply impacts the well-being of incarcerated people, as well as the staff that work in correctional institutions. Violence, and the perceived threat of violence, is one of the more considerable job demands that correctional officers face. Chapter 2 explores how officers cope with institutional violence and other job demands, and how their use of various coping mechanisms are associated with their intention to quit their job (i.e., officer decision-making).

Chapter 2: Clarifying the Role of Officer Coping on Turnover in Corrections

Jessie Harney

UC Berkeley Goldman School of Public Policy

Amy E. Lerman

UC Berkeley Goldman School of Public Policy

Introduction

Evidence documenting the deleterious effects of incarceration on inmate well-being is strong and clear. Incarceration has a profound, negative influence on the health of incarcerated individuals (Goff et al., 2007; Haney, 2003; Liebling et al., 2005). More specifically, the experience of incarceration – including exposure to violence, disruption of social networks, and painful monotony – can lead to enduring effects on mental health (e.g., Haney, 2003; Massoglia, 2008a; Massoglia, 2008b; Novisky & Peralta, 2020; Sykes, 2007; Turney et al., 2012).

We know far less about the impacts of the correctional environment on officer physical and mental health (Brower, 2013). Understanding the occupational health of correctional officers is vital for at least two reasons. First is their substantial presence in the American workforce. Data from the Bureau of Labor Statistics suggests that as of 2020, there were approximately 405,870 correctional officers and jailers employed in the United States. As a point of comparison, in the same year there were roughly 654,900 police officers. A second reason to better understand the well-being of correctional officers is their elevated risk of exposure to violence in the workplace. Correctional officers face some of the highest rates of workplace violence of any occupation in the United States, second only to police officers (Finn, 2000). Emerging evidence suggests that this can take a sizable toll; work-related stress is associated with harm to wellbeing amongst correctional officers (Trounson et al., 2019), including higher risk of post-traumatic stress disorder (Kunst et al., 2009). Yet despite their high risk for work-related mental health problems, studies of correctional officers have so far been limited. In particular, we know little about the psychological coping mechanisms officers employ to deal with workplace stress.

Our purpose in this inquiry is to further the understanding of how officers adapt to deal with work-related stressors, and whether these coping mechanisms influence officers' desire to stay in the field of corrections. This outcome is especially important given the enduring problem of officer turnover. High rates of officer turnover impose substantial costs to departments — funds that could otherwise be allocated to support for programming, re-entry support, and other needs (Finn, 2000). This includes the cost of onboarding new employees, as well the loss of institutional knowledge and experience that can strain the ability of correctional systems to maintain institutional safety.

Coping Mechanisms and the Stress Process Paradigm

Individuals utilize a variety of psychological strategies to cope with prolonged stress. Broadly categorized, these include problem-focused, emotion-focused, and avoidant coping (Holahan et al., 2005; Lazarus & Folkman, 1984). Problem-focused coping encompasses a set of strategies aimed at “managing or altering the problem causing the distress,” (Lazarus & Folkman, 1984, pg. 150). Examples of problem-focused coping include behaviors such as thinking through ways to address stress, talking it out with others, and weighing the costs and benefits of different options to reduce the impact of the stressor (Gould et al., 2013). In contrast, emotion-focused coping is described as the “[regulation of] emotional responses to the problem” (Lazarus & Folkman, 1984, pg. 150). Emotion-focused coping (EC) can be either positive or negative. Positive EC engages self-compassion, including altering thought processes to reframe and reprocess stressful situations, while negative EC is typically characterized by being critical of oneself or ruminating over the difficulties of the situation (Gould et al., 2013; Stanislawski, 2019). This type of negative coping often co-occurs with strategies that fall into the third broad category, avoidant coping. Avoidant coping involves behaviors or thought patterns that facilitate

denial or minimization of stressors, such as evading feelings or avoiding certain situations (Holahan et al., 2005). Avoidant coping can also include substance use, which serve to blunt the feelings associated with stressful or traumatic experiences.

Extant literature suggests that the types of coping mechanisms an individual utilizes can profoundly influence their overall health (Folkman et al., 1986; Zaleski et al., 1998). In particular, unhealthy coping strategies can exacerbate the detrimental effects of stress. Even relatively passive forms of avoidant coping, such as denial and evasion, can be associated with worse mental health outcomes. One study found that among trauma-exposed refugees, disengagement (i.e., distancing oneself from the stressor) was associated with greater PTSD symptom severity (Hooberman et al., 2010). Amongst police officers, repressed anger has been shown to completely mediate the relationship between the stressors of police work and health outcomes (Can & Hendy, 2014).

Negative emotion-focused coping can similarly shape health-related outcomes. Li and colleagues studied burnout amongst nurses in China to understand the influence of core self-evaluation, which includes traits such as self-efficacy, on burnout. They found that core self-evaluation was positively associated with “active” or problem-focused coping ($\rho = 0.31$) and negatively associated with avoidant coping ($\rho = -0.25$), including alcohol abuse. Moreover, nurses with lower core self-evaluation tended to score higher for cynicism, defined as “...a negative, callous or excessively detached response to various aspects of the job.” Conversely, those who engaged in problem-focused (or active) coping, utilizing techniques to alter the ways they thought about or reacted to stressors, had lower cynicism scores (Li et al., 2014).

More broadly, and in contrast to negative EC and avoidant coping, the adoption of problem-focused coping strategies can have a protective effect against mental health distress. One especially common problem-focused coping mechanism for dealing with work-related stress involves reaching out for social support (Beh & Loo, 2012). This can include talking over problems with friends or family members, as well as trying to build relationships with supervisors. In fact, extant studies find that individuals coping with trauma who have limited access to social support are at increased risk for developing PTSD (Brewin et al., 2000; Ozer et al., 2003). Likewise, perceived support from institutional actors can affect the experience of workplace stressors (Barnes et al., 2013; Kelley et al., 2014). In a study of the military, organizational support was found to be negatively related to PTSD (Barnes et al., 2013). Another study found that the more an individual felt supported by their organization, the less stigma they felt in seeking out resources to help manage stress (Kelley et al., 2014).

Correctional Officers & The Stress Process Paradigm

While our understanding of coping mechanism utilization specific to correctional officers is limited, some studies suggest that officers frequently make use of negative coping mechanisms that lessen their ability to maintain healthy social ties. For instance, many correctional officers adopt a “working personality” in response to work-related stress, becoming more isolated from others and cynical about the world (Brower, 2013; Rogers, 2001). This coping strategy might be useful for handling day-to-day situations at work, but can be detrimental to officer well-being in the longer term (Liebling et al., 2005). Avoidant coping is associated with a variety of negative mental health outcomes; when correctional officers experience workplace stressors, including exposure to violence, they are more likely to develop negative psychological outcomes such as severe depression, disordered sleep, and suicidal ideation (James et al., 2017; Morgan, 2009; Ross, 2013; Stack & Tsoudis, 1997). Avoidant coping can also present as alcohol abuse among

law enforcement, especially those who experience trauma (Leino et al., 2011). One study finds that nearly 30 percent of officers engaged in binge drinking (defined as consuming six or more drinks on one occasion) either sometimes or often (Lerman et al., 2021).¹⁰

The Stress Process Paradigm (SPP) provides a useful theoretical framework for identifying the potential importance of coping strategies (Pearlin, 1989; Pearlin et al., 1981; Thoits, 2010). The SPP theorizes that stressors – including specific events or continual stressful experiences throughout one’s life – cumulatively impact health outcomes. Importantly, however, the effects of stress are context-dependent and can be mediated through various coping mechanisms and other resources. In other words, the effects of a stressor depend largely on the context and available resources, such as proximity to other stressful events, the magnitude and frequency of the stressor, and also factors like coping strategies and institutional supports (Pearlin et al., 1981).

In previous studies, the SPP framework has been utilized to explain how criminal justice contact, including being stopped by police, charged with a crime, or being incarcerated, can fuel long-lasting disparities in social outcomes. Sugie and Turney (2017) summarize this perspective, stating that: “a primary stressor such as criminal justice contact can lead to secondary stressors, or reverberating chronic strains, in other domains of life (e.g., employment or relationships)” (pg. 720). Three aspects of this framework are especially relevant: 1) the way that stress proliferates, producing secondary stressors, 2) the way that both primary and secondary stressors contribute to health inequalities; and 3) the importance of context in conditioning stress responses and coping.

Correctional officers are confronted with many primary stressors in the workplace, including substantial risk of exposure to violence. This can lead to secondary stressors, such as heightened anxiety and post-traumatic stress disorder (Lerman et al., 2021). In turn, this might reduce the likelihood that officers reach out to others for help managing stress or feel confident they can manage stress effectively (i.e., problem-focused or positive EC), and increase the likelihood that officers turn to less healthy ways of coping (i.e., negative EC or avoidant). For example, PTSD has been found to be highly comorbid with both alcohol abuse and avoidance (Debell et al., 2013). The way officers attempt to cope with these stressors are also conditioned by correctional norms and culture (e.g., whether talking openly about problems with co-workers is deemed socially acceptable), as well as by the availability of institutional supports, including access to trauma-informed programs or therapy (Lerman et al., 2021).

A handful of studies have attempted to model these types of associations between work-related stress, coping mechanisms, and workplace outcomes for correctional officers. However, most rely on very small samples. For example, Trounson, Pfeifer, and Skues (2019) measure workplace adversity and psychological well-being, as well as workplace outcomes such as absenteeism, presenteeism, and job dissatisfaction among 174 correctional officers. The authors employ a structural equation model to assess whether coping mechanisms moderate the influence of workplace adversity, specifically through (negative) emotional/avoidant or (positive) interpersonal/solution-focused coping. Their findings indicate that workplace adversity increases psychological distress, which contributes to a higher likelihood of negative workplace outcomes. Interpersonal/solution-focused coping, but not emotional/avoidant coping, had a significant indirect impact on psychological and workplace outcomes (Trounson et al., 2019).

Burnout has also been empirically linked to coping mechanisms for correctional officers. An online survey of 208 correctional officers working in Alberta found that burnout was

¹⁰ Although not a directly comparable measure, approximately 17% of US adults report binge drinking about four times in a month (CDC, 2019).

positively associated with maladaptive coping mechanisms, such as venting and behavioral disengagement, and negatively associated with problem-solving coping (Gould et al., 2013). Another study, focused specifically on avoidant coping through alcohol use, employed an online survey of 1,370 correctional officers (Shepherd et al., 2019). Using a form of path analysis, the authors demonstrate a positive relationship between the emotional demands of work and burnout as measured by the Oldenburg Burnout Inventory (Demerouti & Bakker, 2008). Emotional demands also appeared to have an indirect effect on the frequency and quantity of alcohol use, operating on the pathway through burnout (Shepherd et al., 2019).

Burnout is especially important because of its potential to increase turnover of staff. Turnover has long been a prevalent issue in government (Shim et al., 2017), and correctional departments are no exception. Yearly turnover rates vary across departments—previous studies estimate a low of 12% (Wells et al., 2016) or as high as 45% (McShane et al., 1991)—but rates often fall in the range of about 20-25% (Lambert, 2001; Lambert & Hogan, 2009; Patenaude, 2001; Wright, 1994). Comparatively, yearly turnover rates tend to be lower amongst workers in other high-stress occupations, such as teaching - 8% (Kukla-Acevedo, 2009); nursing – 18% (NSI, 2021), and policing – 11% (Wareham et al., 2015).

These high turnover rates can be extremely costly to correctional organizations. Previous research suggests that the cost of turnover per employee ranges from one to two years of both salary and benefits (Ramlall, 2004). In a study of correctional officer turnover in Georgia, for example, the monthly rate of turnover ranged from approximately 1.0% to 1.8%, with a cumulative 18.0% of officers leaving their post in 2003. This was estimated to cost over \$27,000,000 in 2007, a sum that would be more than \$38,000,000 in 2021 (Udechukwu et al., 2007). Greater turnover in corrections can also mean increased pressures on the officers who remain, requiring the imposition of mandatory overtime in extreme cases. While some officers may welcome additional overtime to supplement their income, increased and involuntary hours at work can add to already high levels of exhaustion, stress, and work-life imbalance.

A Model of Correctional Officer Coping

In this paper, we estimate a model of correctional officer stress, coping strategies, and organizational outcomes using the framework of the Stress Process Paradigm. As the SPP suggests, we posit that exposure to violence as a primary stressor will lead to secondary stressors, such as symptoms of post-traumatic stress disorder (PTSD). In addition, both PTSD and violence are likely to catalyze a range of coping mechanisms. This includes problem-focused coping (i.e., social supports), negative emotion-focused coping (i.e., cynicism), and avoidant coping (i.e., alcohol abuse). In this model, we also address the effect of stressors on officers' intention or desire to leave corrections, and whether stress impacts turnover indirectly via the pathway through officer coping.

Within our theoretical framework, we hypothesize that exposure to violence and symptoms of PTSD have a reciprocal relationship. In line with the SPP, greater exposure to violence increases symptoms of PTSD (Fontana & Rosenheck, 2003; Hoge et al., 2004; Thomas et al., 2010; Wieclaw et al., 2006), but PTSD might also increase subsequent exposure to violence. For instance, common residual symptoms of trauma include heightened emotions like anger and aggression (Orth & Wieland, 2006). As a result, increased severity of trauma might plausibly result in officers who are less capable of controlling an aggressive response when presented with a subsequent threat.

We propose two coping strategies that are also reciprocal with PTSD: avoidant coping (i.e. alcohol abuse) and problem-focused coping (i.e., having someone to talk to). PTSD and alcohol abuse are highly comorbid (Fetzner et al., 2011) and individuals with PTSD often report utilizing alcohol to cope with post-trauma symptoms (U.S. Department of Veterans Affairs, 2019), but alcohol abuse may actually worsen the experience of PTSD (Foundations Recovery Network, 2020). Conversely, social support is key to recovering from PTSD. Ironically, however, the experience of PTSD can be isolating, especially if someone does not feel that they have a safe resource to reach out to or someone who will understand their experience (Charuvastra & Cloitre, 2008).¹¹

We also suspect that problem-focused coping (i.e., peer support and perceived supervisory support) are related to officers' desire to leave corrections. Previous research suggests a negative relationship between supervisory support and turnover intention (Gillet et al., 2013; Maertz et al., 2007) and a positive relationship with organizational commitment (Johnson, 2015). In fact, having socially supportive conversations with supervisors is positively associated with socially supportive conversations with coworkers (Beehr et al., 2003). Not surprisingly, supervisory support also indirectly impacts job satisfaction on the pathway through supervisory support (Kula, 2017) and can moderate the effects of violence on negative mental health outcomes (Lerman et al., 2021).

Our final hypotheses are related to negative emotion-focused coping. In particular, we suspect that cynicism interacts with other coping strategies and directly impacts officers' desire to leave corrections. Specifically, we suspect avoidant coping strategies like alcohol abuse are associated with emotions like anger and hostility (Bunde & Suls, 2006; Epstein & McCrady, 2002; McCrady & Epstein, 1995). Conversely, we expect that problem-focused strategies like connecting with co-workers to talk through problems makes officers less likely to incur secondary effects of trauma on the job (Finn, 2000).

Finally, in addition to coping strategies we also control for the ways that financial security might influence an officer's intention to leave the field. Occupational literature has found a consistent association between financial security and emotional strain (Brief & Atieh, 1987) and a significant, negative correlation between financial security and burnout (Munyon et al., 2020). Even better established is the empirical link between financial security and workers' desire to leave their profession. Although job transitions have costs outside of the potential change in income (e.g., search and opportunity costs), financial security is still likely to be a key consideration in retention (Allen & Meyer, 1990; McCall, 1970).

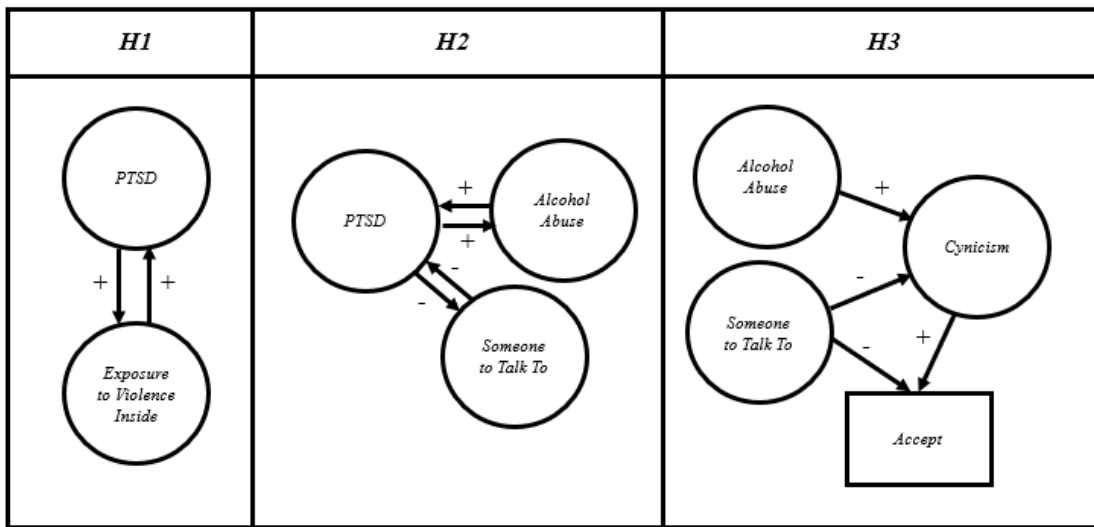
To summarize, our model builds on the Stress Process Paradigm to outline a potential framework for understanding how correctional officers cope with occupational stress, and how coping strategies are associated with outcomes like turnover intention. Our primary hypotheses (see Figure 2.1) include the following:

1. Greater exposure to violence at work is associated with i) greater severity of PTSD symptoms, and the relationship between exposure to violence at work and PTSD is ii) reciprocal.

¹¹ In order to substantively warrant inclusion of reciprocal effects in a cross-sectional design, the following must be true: first, the model is in a steady state and second, reciprocal effects must essentially be simultaneous and therefore better modeled in a single timepoint versus longitudinal data (Wong & Law, 1999). Unfortunately, there are no methods that will allow us to justify the steady state assumption from a statistical standpoint (Kaplan, Harik, and Hotchkiss, 2001). Overall, however, we have no reason to suspect that the nature of these relationships would change over time, which justifies conceptualizing this process as being in a steady state for modeling purposes.

2. PTSD symptoms are associated with increased (i) avoidant coping (alcohol abuse) and (ii) decreased problem-focused coping (social connectedness). Again, (iii) both of these relationships are reciprocal.
3. Avoidant coping mechanisms are positively associated with i) negative EC (i.e., cynicism) and ii) officers' desire to leave the field of corrections.
4. Problem-focused coping is negatively associated with i) negative EC and ii) desire to leave corrections.
5. Perceived support from supervisors is positively associated with problem-focused coping.
6. Experiencing financial stress is associated with an increased desire to leave the field of corrections.

Figure 2.1: Visual Representation of Model Hypotheses



Data

Our analysis utilizes survey data from the California Correctional Officer Survey (CCOS), which we conducted from March to May of 2017. The survey was fielded to all correctional and parole officers working in the state of California, with a response rate of approximately 42%. The final sample size was 8,334 correctional officer respondents and includes participants from every state prison. Due to missing data, and once we exclude personnel who are not correctional officers (e.g., parole officers), our analytical sample size is roughly 5,500 officers (67.5% of the sample that has some response recorded).

In order to ensure confidentiality, surveys were mailed to each officer at their home address along with pre-paid return envelopes. Officers were also provided the option to complete the survey online or on a mobile device. As shown in Table 2.1, the sample is largely male (82.4%), White (46.3%) and/or Hispanic/Latinx (34.9%), Republican (42.4%) and married (73.0%). Most sample respondents were assigned to high security levels (69.2%), and the average tenure was 13 years.

Table 2.1: Descriptive Statistics of the CCOS 2017 Sample

Variable	Level	Frequency	Percentage	Missing %
Gender	Male	5,088	82.40%	
	Female	1,087	17.60%	25.91%
Race, Ethnicity	Asian or Asian-American	276	4.58%	
	Black or African-American	581	9.63%	
	Hispanic/Latinx	2,103	34.86%	27.62%
	White/Caucasian	2,794	46.32%	
	Native Hawaiian or Pacific Islander	142	2.35%	
	Other	487	8.07%	
Political Party	Republican	2,558	42.42%	
	Independent	865	14.34%	
	Democrat	1,150	19.07%	27.65%
	Other party	105	1.74%	
	No party	1,351	22.40%	
Education Level	GED or High School degree	597	9.72%	
	Some college (no degree)	2,715	44.20%	26.29%
	Associate's degree	1,353	22.03%	
	Bachelor's degree or higher	1,478	24.06%	
Marital Status	Never married	736	12.11%	
	Widowed	56	0.92%	
	Divorced	746	12.27%	27.06%
	Separated	101	1.66%	
	Married or domestic partnership	4,440	73.04%	
Veteran Status	Yes	1,606	26.15%	26.31%
	No	4,535	73.85%	
Security Level	I	373	5.57%	19.70%
	II	1,692	25.28%	
	III	1,923	28.74%	
	IV	2,704	40.41%	
Variable		Mean	Std. Dev.	Missing %
Age		47.55	11.46	29.00%
CDCR Tenure		13.16	8.24	52.53%

Our key survey measures are as follows (Appendix 2-A includes the specific question text and possible responses for each item). Exposure to Violence is measured by four binary survey questions, adapted from the Trauma History Questionnaire (THQ) (Green, 1996), which ask whether the officer has experienced various types of violence while working inside of prison: 1) having been seriously injured; 2) fearing serious injury or being killed; 3) seeing or handling dead bodies; and 4) seeing someone be seriously injured or killed. The Cronbach's alpha for these items is .67.

Post-Traumatic Stress (PTSD) is measured by two survey items, both on a seven-point Likert scale, which are a subset of the PTSD Checklist - Civilian Version (PCL-C). These items address officers' experience of being bothered by repeated, disturbing memories of stressful events and feeling upset when reminded of such events. Both items are reverse coded such that greater values indicate greater PTSD symptom severity. While there are only two measures included in the PTSD factor, it has a strong Cronbach's alpha of 0.90. Avoidant coping focuses on alcohol abuse and is measured by three, four-point Likert-scale items adapted from the Alcohol Use Disorders Identification Test (AUDIT).¹² All questions are reverse coded such that greater values indicate greater alcohol abuse symptom severity. The Cronbach's alpha reliability statistic for these items was 0.73.

Negative EC is measured using three, seven-point Likert-scale items measuring the extent to which officers feel they have become harsher and angrier since starting work in corrections, as well as their level of agreement that they would be a better spouse, partner, or parent if they did not work in corrections. These items aim to capture the adaptive "working personality" adopted by officers in order to cope with correctional work (e.g., Brower, 2013; Liebling, 2008). All items were reverse-coded so that higher scores on this factor indicate greater cynicism, and the resulting Cronbach's alpha was 0.80. Problem-focused coping is measured using three survey items. A seven-point Likert scale (reverse coded) addresses the extent to which an officer feels there is someone they can talk to about problems in the workplace. A second scale sums the number of resources an officer has for talking about problems in the workplace, and a third sums resources for talking about concerns specifically related to health or wellness. The associated Cronbach's alpha is 0.70 for this factor.

Financial Security is measured using three, seven-point Likert scale items with an associated Cronbach's alpha of 0.72. Higher values on each item indicate greater financial security. Supervisory Support is measured using a seven-point Likert scale capturing the extent to which officers feel their supervisor cares about the feelings of subordinates. Turnover Intention is measured with a seven-point Likert scale measuring the extent to which officers agree they would take a job outside of corrections if they had an offer with similar salary and benefits.

Methods

We utilized techniques within the structural equation modeling family of methods in Stata 16 (StataCorp, 2019) to assess relationships between variables and whether our proposed application of the Stress Process Paradigm is appropriately fit to the data. Structural equation modeling incorporates a number of different methods, including confirmatory factor analysis, mediation analysis, and path analysis and can address analytical inquiries related to measurement and the relationship between factors within a system (Kline, 2015). Following best practices (Anderson & Gerbing, 1988), we constructed a model via the two-step approach.¹³ First, we generated a measurement model with all latent variables allowed to covary (i.e., no inclusion of single-headed arrow pathways specifying the direction of the relationship).¹⁴ Additionally, in line

¹² The original response scale for these questions in the AUDIT questionnaire was a five-point scale, with possible responses of "Never", "Less than monthly", "Monthly", "Weekly", "Daily or almost daily" (Babor & Grant, 1989).

¹³ We also conducted a confirmatory factor analysis (CFA) using all of our indicators. The CFA model retained nine factors, eight of which appeared to be meaningful (i.e., the ninth having quite low factor loadings). Given these results, we proceeded with our model as hypothesized.

¹⁴ Note that single-indicator variables, *Supervisory Support* and *Turnover Intention*, were also allowed to covary.

with standard practice, the reference variable method was used, selecting one indicator from each factor to be equal to one (Kline, 2015).

While there is debate about the use of correlated errors, we have included them within our measurement (and subsequent structural) model, as they were a priori-specified to be related based on their proximal measurement and theory. Hermida's (2015) seminal paper addressing correlated errors in structural models details that much of the justification for including correlated errors in previous studies was purely for improving model fit. Importantly, our inclusion of error correlations was based on theory or the presence of a feedback loop (Klein, 2015). Given generally positive fit results and significant pattern coefficients, this model can then be utilized for the structural model, completing the second step in the two-step approach. In this step, we test both direct and indirect effects of model factors.

Results

Table 2.2 reports means and standard deviations for each variable in the model. As the Table shows, the utilization of different coping mechanisms varied, but all were endorsed by substantial segments of officers. While more than a quarter (28.4%) of individuals in the analytical sample indicated that they drank six or more drinks often or sometimes in the last year, the other two alcohol abuse items were less commonly endorsed. Likewise, almost 70% agreed that they had someone to talk to about workplace problems, with a smaller majority indicating they had at least one source to talk to specifically about workplace and health problems. Indicators of cynicism also appeared to be quite common; of the analytical sample, 39.5% agreed they would be a better spouse, partner, or parent if they did not work in corrections; 53.2% agreed they have become harsher or less trusting since they started working in corrections; and 39.1% agreed they have had a harder time controlling their anger since they started correctional work. Coping mechanism utilization also varied by officer demographics and occupational characteristics. Specifically, males tended to report more alcohol abuse, but also reported greater availability of supportive resources (i.e., having someone to talk to). Relative to whites, minority officers reported less alcohol abuse, as well as greater agreement that they had someone to talk to about workplace problems. Exposure to violence, unsurprisingly, was associated with both higher rates of alcohol abuse and less social support.

On almost all measures of fit, the structural equation model performed well (see Table 2.3); however, the Likelihood Ratio Test (LRT) was significant, both for the standard and Satorra-Bentler scaled chi-square LRT. While this is a limitation of the model, χ^2 values tend to be somewhat sensitive for larger models (Cheung & Rensvold, 2002; Meade et al., 2008). On all other measures of fit, the model performs quite well. The Root Mean Squared Error of Approximation (RMSEA or $\hat{\epsilon}$) or "badness-of-fit statistic" 95% confidence interval suggests that this model is well within an acceptable range.¹⁵

Table 2.3 also includes the Comparative Fit (CFI) and Tucker-Lewis (TLI) Indices, both the standard and Satorra-Bentler adjusted measures, as well as the Standardized Root Mean Squared Residual (SRMR). The CFI and TLI both range from zero to one, with values closer to one indicating better fit, while the SRMR is another "badness-of-fit" index, with values closer to zero indicating better fit. As suggested by the structural equation modeling literature, the CFI/TLI and SRMR should be interpreted in conjunction; specifically, the CFI should be greater than or equal to 0.95 and the SRMR should be less than or equal to 0.08 (Hu & Bentler, 1999). This model meets these benchmarks (see Table 3). Additionally, significance of all pattern

¹⁵ Note that the RMSEA tends to inflict more strict penalties upon smaller models (Nevitt & Hancock, 2001).

coefficients in the first step measurement model provides evidence of the convergent validity of model indicators (Anderson & Gerbing, 1988). With these acceptable fit results and significant pattern coefficients, we proceed with creating a structural model.

Table 2.2: Means and Standard Deviations of Observed Variables

Factor, If Applicable	Observed Variable	Mean	SD	Skew.	Kurt.	Scale	Scaled Mean	Scaled SD
Exposure to Violence Inside (ETV_In)	Inj_In	0.203	0.402	1.479	3.186	0-1	0.203	0.402
	Fear_In	0.563	0.499	-0.108	1.012	0-1	0.563	0.499
	DB_In	0.663	0.473	-0.687	1.473	0-1	0.663	0.473
	Seen_In	0.763	0.425	-1.235	2.526	0-1	0.763	0.425
PTSD	Rep_Mem	1.179	1.211	0.811	2.702	0-4	0.295	0.303
	Upset_R	1.134	1.205	0.863	2.778	0-4	0.284	0.301
Someone to Talk To (Talk_To)	Wrk_Prob	3.626	1.809	-0.622	2.331	0-6	0.604	0.302
	WP_Srcs	1.574	1.542	0.955	3.671	0-8	0.197	0.193
	WB_Srcs	2.156	1.417	1.136	4.365	0-8	0.269	0.177
Alcohol Abuse (Alc_Ab)	6+Drinks	0.954	1.011	0.687	2.269	0-3	0.318	0.337
	Fail_Norm	0.217	0.543	2.810	11.261	0-3	0.072	0.181
	No_Mem	0.244	0.587	2.665	10.121	0-3	0.081	0.200
Cynicism	Better	3.956	1.907	-0.054	1.894	1-7	0.493	0.318
	Harsh	4.363	1.995	-0.295	1.807	1-7	0.560	0.332
	Anger	3.782	1.893	0.080	1.840	1-7	0.464	0.315
Single Indicator	Sup_Cares	4.504	1.779	-0.295	1.973	1-7	0.584	0.296
Financial	JGBF	3.397	1.316	-0.300	1.975	1-5	0.400	0.219
Security	Not_Last	3.265	1.299	-0.225	1.969	1-5	0.377	0.217
(Fin_Sec)	Unexp	2.839	1.192	0.133	2.214	1-5	0.306	0.199
Single Indicator	Accept	5.202	1.852	-0.813	2.543	1-7	0.700	0.309

Note: All scales are integer-valued only. Skew = Skewness; Kurt = Kurtosis. Scaled Mean & Standard Deviation indicate represent the mean and standard deviation (respectively) of the zero-to-one scaled version of each variable (note for all exposure to violence variables, these will be the same as the original mean and standard deviation).

We constructed a non-recursive structural model with correlated errors (Cole et al., 2007), reference coding to ensure an identified model with Satorra-Bentler standard errors. Model estimation of direct effects is also reported in Table 2.4. Notably, all direct effects are significant and we find evidence in support of each our five hypotheses. First, we see that greater to exposure to violence has a significant, positive impact on PTSD symptom severity and we see evidence of a feedback loop as predicted by Hypothesis 1. The positive pattern coefficient for PTSD to Exposure to Violence is significant, suggesting that greater exposure to violence while working inside prison is associated with greater symptom severity.

Similarly, and in line with Hypothesis 2, the model also finds support for feedback loops between PTSD and two coping mechanisms: Avoidant and Problem-focused Coping. The directionality of these reciprocal effects is in line with predictions: the pattern coefficient on the PTSD to Problem-focused Coping pathway was significant and negative, indicating that greater PTSD symptom severity was associated with lower social connectedness. The pattern coefficient on the pathway back to PTSD was also significant and negative, in line with our hypothesis that PTSD can be isolating. Higher prevalence of PTSD symptoms was also associated with more Avoidant Coping, and vice versa, in line with previous literature (Prigerson et al., 2002).

Table 2.3: Measurement Model Fit Statistics

Fit Statistic		Value	CI or p-value
Likelihood Ratio			
Model vs. Saturated	χ^2_{146}	1,256.40	< 0.0001
Baseline vs. Saturated	χ^2_{190}	34,086.40	< 0.0001
Satorra-Bentler			
Model vs. Saturated	χ^2_{143}	1,215.99	
Baseline vs. Saturated	χ^2_{190}	32,481.73	
Population Error			
Root Mean Squared Error of Approximation (RMSEA)		0.037	(0.035, 0.039)
Probability RMSEA < 0.05		1.00	
Satorra-Bentler			
RMSEA (Satorra-Bentler)		0.036	
Baseline Comparison			
Comparative Fit Index (CFI)		0.967	
Tucker-Lewis Index (TLI)		0.958	
Satorra-Bentler			
Satorra-Bentler Comparative Fit Index (SB-CFI)		0.967	
Satorra-Bentler Tucker-Lewis Index (SB-TLI)		0.957	
Size of Residuals			
Standardized Root Mean Squared Residual (SRMSR)		0.027	

Focusing specifically on the impact of coping mechanisms, we find both Avoidant Coping and Problem-focused Coping had significant pattern coefficients on the pathway to Negative EC, as predicted by Hypothesis 3. In turn, Negative EC significantly and positively impacted Turnover Intention (i.e., greater cynicism is associated with a stronger desire to leave corrections). Specifically, Problem-focused Coping was significantly, negatively associated with Negative EC, and Avoidant Coping was positively associated with Negative EC. Additionally, as expected given extant literature (e.g., Tetrick et al., 2000), Problem-focused Coping had a significant, direct impact on Turnover Intention, showing the positive impact of social support on intention to quit. Findings also supported Hypothesis 4: supervisory support had a significant, negative impact on turnover intention, such that greater supervisory support was negatively associated with an officer’s likelihood of accepting a job offer outside of corrections. Lastly, financial stress was significantly and positively associated with turnover intention, supporting Hypothesis 5.

Additionally, all indirect effects in the model were significant. This is unsurprising, given our theoretical framework. The impact of a traumatic experience – in this case, exposure to violence – appears to have a direct impact on PTSD and, through this pathway, can precipitate alcohol use (i.e., promoting Avoidant Coping). Avoidant Coping also had a negative impact on Problem-focused Coping, suggesting that coping styles are not utilized independently of one another, but can be closely linked. Lastly, these effects also include the significant indirect

influence of Avoidant Coping and Problem-focused Coping on intention to quit.¹⁶ In other words, these coping styles had an impact on officers' desire to leave corrections on the pathway through Negative EC.

Focusing on the standardized coefficients, we see that the largest relative contribution to the average for each factor corresponds well with model hypotheses. Unsurprisingly, exposure to violence had the largest standardized coefficient for its direct effect on PTSD. Importantly, while PTSD had the strongest relative contribution to Problem-focused Coping (-0.46), supervisory support was not far behind at 0.34. For direct effects on intention to quit, Negative EC had the largest coefficient in terms of absolute value, suggesting the significant contribution of cynicism to officers' intention to leave corrections.

Conclusion

In this paper, we use structural equation modeling and original survey data to examine the use of coping mechanisms among a large sample of California correctional officers. Our results help clarify the correctional stress process – including the impact of exposure to violence on the development of post-trauma symptoms, the influence of violence and trauma on the utilization of specific coping mechanisms, and ultimately the impact of stress on the likelihood that officers stay within the field of corrections. In line with the Stress Process Paradigm, we find that exposure to a traumatic incident is positively associated with post-traumatic stress symptoms, but also that exposure to violence and PTSD symptoms directly and substantially impact coping styles. Specifically, greater PTSD symptom severity means a lower likelihood of engaging in Problem-focused Coping (i.e., talking with others about work-related problems) and a higher likelihood of turning to Avoidant Coping (i.e., alcohol abuse).

The adoption of these coping mechanisms then impacts officers' desire to leave corrections, primarily through their impact on Negative Emotional-Coping (e.g., cynicism). Specifically, the effect of alcohol abuse appears to operate fully through its impact on perpetuating cynicism, while having someone to talk to both lowers cynicism and directly reduces the desire to leave corrections. As proposed by the Stress Process Paradigm, this highlights the importance of context and resources in shaping the consequences of stressors. Within the correctional environment, traumatic events are associated with post-traumatic stress symptoms, which tend to coincide with adoption of Avoidant Coping. However, when an officer can engage in Problem-focused Coping, this seems to reduce the experience of stress. There are of course limitations to our inquiry. First and foremost, structural equation modeling relies heavily on the analysts' ability to properly specify the model. Thus, using theory to guide model building is essential. While our model is informed by available empirical evidence and rooted in extant theory, the topic of mental health in the correctional workplace is only recently a burgeoning field of study. In the future, as more data are collected that can speak to specific impacts of violence, mental health, and coping on correctional officers' intentions to stay in the field, we can begin to refine our model specification.

¹⁶ Indirect results for problem-focused coping and avoidant coping on desire to leave corrections: Problem-focused coping (Estimate = -0.315, SE = 0.026, *p*-value < 0.001); Avoidant coping (Estimate = 2.664; SE = 0.288, *p*-value < 0.001).

Table 2.4: Overall Model Results (Direct Effects)

Factor or Variable	Measure or Indicator	Std. Coeff.	UnStd. Coeff.	UnStd. Z	UnStd. p-value	UnStd. 95% Confidence Interval (LB and UB)	
Accept	Sup_Cares	-0.097	-0.101	-7.41	< 0.001*	-0.127	-0.074
	Talk_To	-0.082	-0.102	-4.90	< 0.001*	-0.143	-0.061
	Cynicism	0.381	0.470	24.85	< 0.001*	0.433	0.507
	Fin_Sec	-0.040	-0.082	-2.93	0.003*	-0.137	-0.027
Sup_Cares	ETV_In	-0.827	-7.889	-6.31	< 0.001*	-10.341	-5.437
PTSD	ETV_In	0.400	2.326	15.04	< 0.001*	2.023	2.629
	Talk_To	-0.169	-0.123	-3.79	< 0.001*	-0.186	-0.059
	Alc_Ab	0.092	0.146	4.49	< 0.001*	0.082	0.209
	Fin_Sec	-0.172	-0.205	-16.03	< 0.001*	-0.230	-0.180
ETV_In	PTSD	0.342	0.059	9.36	< 0.001*	0.046	0.071
Talk_To	Sup_Cares	0.342	0.287	17.02	< 0.001*	0.254	0.320
	PTSD	-0.455	-0.626	-9.50	< 0.001*	-0.755	-0.497
Alc_Ab	PTSD	0.456	0.289	10.88	< 0.001*	0.237	0.341
Cynicism	Talk_To	0.039	-0.329	-7.02	< 0.001*	-0.421	-0.237
	Alc_Ab	0.212	5.264	10.44	< 0.001*	4.275	6.252
JGBF	Fin_Sec	0.691	1.000	--	--	--	--
Not_Last	Fin_Sec	0.922	1.316	20.59	< 0.001*	1.191	1.442
Unexp	Fin_Sec	0.519	0.681	16.97	< 0.001*	0.602	0.759
Rep_Mem	PTSD	0.896	1.000	--	--	--	--
Upset_R	PTSD	0.905	1.005	77.07	< 0.001*	0.979	1.030
Better	Cynicism	0.788	1.000	--	--	--	--
Harsh	Cynicism	0.779	1.035	59.03	< 0.001*	1.000	1.069
Anger	Cynicism	0.701	0.883	51.92	< 0.001*	0.850	0.916
Inj_In	ETV_In	0.464	1.000	--	--	--	--
Fear_In	ETV_In	0.630	1.688	21.89	< 0.001*	1.537	1.840
DB_In	ETV_In	0.433	1.098	19.52	< 0.001*	0.988	1.209
Seen_In	ETV_In	0.434	0.989	17.38	< 0.001*	0.878	1.101
Wrk_Prob	Talk_To	0.823	1.000	--	--	--	--
WP_Srcs	Talk_To	0.873	0.904	31.15	< 0.001*	0.847	0.960
WB_Srcs	Talk_To	0.320	0.304	10.19	< 0.001*	0.246	0.363
6+Drinks	Alc_Ab	0.679	1.000	--	--	--	--
Fail_Norm	Alc_Ab	0.747	0.590	18.31	< 0.001*	0.527	0.654
No_Mem	Alc_Ab	0.766	0.656	18.59	< 0.001*	0.586	0.725
cov(Not_Last, Unexp)		0.105	-0.116	-3.00	0.003*	-0.192	-0.040
cov(Fear_In, Seen_In)		0.018	0.014	4.82	< 0.001*	0.008	0.019
cov(Sup_Cares, ETV_In)		0.064	0.212	5.61	< 0.001*	0.138	0.287
cov(Fear_In, DB_In)		0.016	0.0555	19.01	< 0.001*	0.050	0.061
cov(e.Wrk_Prob, WP_Srcs)		0.287	-0.317	-2.03	0.043*	-0.623	-0.010
cov(Fail_Norm, No_Mem)		0.059	0.019	2.10	0.036*	0.001	0.037
cov(PTSD, ETV_In)		0.027	-0.031	-8.51	< 0.001*	-0.038	-0.024
cov(PTSD, Talk_To)		0.035	0.575	8.95	< 0.001*	0.449	0.701
cov(PTSD, Alc_Ab)		0.025	-0.122	-8.18	< 0.001*	-0.151	-0.093
cov(Alc_Ab, Cynicism)		0.013	-2.050	-9.98	< 0.001*	-2.453	-1.647

Additionally, our analytical sample size was determined by available data. Our results might vary to the extent that responses to some questions are not missing at random. We did not employ any imputation methods to address missing data, so we are working with approximately two-thirds of the overall sample. We may therefore be underestimating the impact of correctional

officers' experience of mental health symptoms and/or exposure to violence, or have introduced bias into our estimates of structural relationships. Additionally, we did not have objective measures of exposure to violence to utilize for this study. Future studies could benefit from administrative data on violence and other factors to help validate or refine the model.

On-going research efforts should continue to study the correctional environment and prison workforce to build upon, revise, and further clarify the cognitive processes presented here. Future empirical work would ideally utilize exogenous variation in context and resources to help advance this line of inquiry. For example, a randomized controlled trial of mental health programs for correctional officers could be useful for understanding how changes to the quality or availability of mental health supports can influence coping and turnover. Separately, exogenous variation might also be leveraged from pre-existing data where outside shocks have been experienced, such as in prisons with sporadic upticks in exposure to violence.

Finally, future work could expand the model presented here to include other outcomes that might result from the stress process we have described. In particular, this could focus on officers' professional orientations and behavior when interacting with incarcerated individuals (Lerman & Harney, 2019). To the extent correctional institutions can facilitate the adoption of coping mechanisms that minimize (rather than exacerbate) the psychological burdens of working in corrections, they might profoundly impact the way the correctional workforce cares for those confined to prison.

Nevertheless, our results provide a useful framework, one that is likely close to the truth based on fit, and one that can inform the way policymakers, correctional leadership, and other stakeholders make decisions about how best to support their correctional staff. In particular, our findings highlight specific pain points in the correctional stress process that prison administrators might target for intervention. Starting from the end of our stress process, health and wellness initiatives could focus on Negative EC and its impact on the desire to leave corrections. Cynicism likely impacts officers across a variety of domains—not only in their interactions with coworkers and incarcerated individuals, but also family members and friends. Thus, providing family-based interventions may be a promising way to counteract Negative EC and promote Problem-focused Coping. Moreover, these interventions might be efficacious for addressing symptoms of trauma more broadly (Cukor et al., 2009). Given the significant indirect effect of PTSD on officers' desire to leave corrections, this could prove impactful for reducing turnover.¹⁷

Taking a step further into the model, the opportunity for officers to build their social support systems may be particularly powerful in the prison context. The more the correctional institution can encourage Problem-focused Coping, such as by increasing access to therapists or others who can support officers in dealing with post-trauma symptoms, the more willing officers may be to stay in corrections. Another promising intervention could be a peer support program (Hundt et al., 2015; Pfeiffer et al., 2011),¹⁸ which can provide an alternative for officers seeking support, but who are concerned about having a therapy appointment that might appear in their medical records.¹⁹

¹⁷ Indirect test results (indirect effect of PTSD on desire to leave corrections): Estimate=1.313, SE=0.079, *p*-value < 0.001.

¹⁸ The meta-analysis focused primarily on symptoms of depression. While we did not explicitly include depression in our model, depression and PTSD are highly comorbid (O'Donnell et al., 2004).

¹⁹ Mental health treatment is the most reliable intervention for PTSD and stress-related mental health disorders (Lenz et al., 2014; Seidler & Wagner, 2006). Thus, providing access to these services—and ensuring officers feel safe enough to make use of them—is vital to mitigating the escalation of trauma symptom severity and its impact on officer coping. This will require improving correctional culture and trust, which is of course no easy task.

In addition, our model shows a direct impact of supervisory support on the likelihood officers utilize Problem-focused Coping. Supervisors can lead by example, showing vulnerability by discussing their own struggles, expressing support for the use of mental health resources, and providing personal support to the employees who report to them. As part of departmental policy, supervisors could engage in specific training targeting their own mental health, as well as targeted mental health crisis intervention training (Mental Health First Aid, 2020). For the greatest effect, this training should also be designed to address the needs and concerns of corrections workers specifically. Having a supervisor who can show meaningful leadership, not simply manage day-to-day workplace activities, is likely to build a broader supportive and collaborative environment, which appears key to employee retention.

Finally, we find that financial security is an important factor in whether officers desire to stay in corrections, but it does not fully explain intentions to leave the field for other employment. The 2018 median base pay for correctional officers in California was approximately \$75,000, a figure that is high relative to both correctional officers in other states and to workers in jobs with similar occupational entry requirements (Transparent California, 2021). Yet while pay raises are often the primary (and sometimes even the sole) focus of labor negotiations, our results suggest that this alone will not be sufficient to help combat the turnover problem in corrections. Instead, additional support services are needed to retain and protect employees.

Understanding how officers cope with the stresses of their job, and how this impacts their desire to stay in the field, is important. At the same time, the primary onus cannot be on individual officers to manage the intense stress associated with prolonged exposure to workplace violence. Future research would benefit from exploring whether and how improving the correctional work environment might help reduce institutional violence and its correlates. Ultimately, understanding how to reduce violence in prison is crucial to improving outcomes for officers, for incarcerated individuals, and for the correctional system as a whole.

Appendix 2-A: Survey Item Question Text

Factor/Indicator (Model Abbreviation)	Question Prompt	Indicator Abbreviation: Question Text	Response Options
Accept	To what extent do you agree or disagree with the following statements?	Accept⁺ : If I received an offer for a job outside of corrections with a similar salary and benefits, I would immediately accept it.	7-Point Agreement Likert
Alcohol Abuse (Alc_Ab)	Please describe how often any of the following has occurred over the last year	6+Drinks⁺ : I had six or more drinks on one occasion. Fail_Norm⁺ : I failed to do what was normally expected from me because of drinking. No_Mem⁺ : I was unable to remember what happened the night before because I had been drinking	Often, Sometimes, Rarely Never
Cynicism (Cynicism)	To what extent do you agree or disagree with the following statements?	Better⁺ : I would be a better parent, spouse, or partner if I did not work in corrections. Harsh⁺ : I have become harsher or less trusting towards friends or family members since I took this job Anger⁺ : I have a harder time controlling my anger since I started working in corrections.	7-Point Agreement Likert
Exposure to Violence Inside (ETV_In)	At any time in your life, have you been in a situation in which...	Inj_In : At any time in your life, have you been in a situation in which you were seriously injured? Fear_Inj : When you were in a situation in which you <u>feared</u> you might be killed or seriously injured? Please mark all that apply. DB_In : When you were in a situation in which you were seriously injured? Please mark all that apply. Seen_In : When you were in a situation in which you were seriously injured? Please mark all that apply.	Binary indicator for endorsed: After I started working for CDCR, while working inside the prison
Financial Security (Fin_Sec)	How well does each of the following statements describe you or your situation?	JGBF : I am just getting by financially. Not_Last : I am concerned that the money I have or will save won't last. Unexp⁺ : I am confident that I could handle an unexpected expense.	5-Point Likert from Describes me completely to Does not describe me at all
Supervisor Cares (Sup_Cares)	To what extent do you agree or disagree with the following statements:	Sup_Cares : My direct supervisors shows very little interest in feelings of subordinates.	7-Point Likert Agreement

PTSD	Please read each one carefully, and indicate how much you have been bothered by that problem in the last month.	Rep_Mem ⁺ : Repeated, disturbing memories, thoughts, or images of a stressful experience from the past. Upset ⁺ : Feeling very upset when something reminded you of a stressful experience from the past.	A great deal, A lot, A moderate amount, A little, Not at all
Someone to Talk To (Talk_To)	To what extent do you agree or disagree with the following statement: Sum of endorsed	Wrk_Prob ⁺ : When I have a problem at work, there is someone I can talk to who will really help me solve it. WP_Srcs : When you have a problem at work, who do you feel you can talk to who will really help you solve it? Please mark all that apply. WB_Srcs : If you were to have concerns specifically about your personal health and well-being, who might you consider talking to in order to get help? Please mark all that apply.	7-Point Agreement Likert A co-worker, A supervisor, A prison administrator, A family member or friend, A member of the clergy, A union rep or someone from CCPOA, A counselor or therapist, A doctor or medical professional, Other

+ Indicates a reverse-coded item. Agreement scales from “Strongly Agree” to “Strongly Disagree.”

Appendix 2-B: Covariance Residuals

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
JGBF	.0																
Not_Last	.0	.0															
Unexp	.0	.0	.0														
Accept	.0	-.1	.1	.0													
Rep_Mem	.0	.0	.0	.0	.0												
Upset_R	.0	.0	.0	.0	.0	.0											
Better	.0	-.1	.0	.3	-.1	-.1	.0										
Harsh	.0	.0	.1	-.1	.0	.0	.1	.0									
Anger	.0	.0	.0	-.1	.1	.1	-.1	.0	.0								
Inj_In	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0							
Fear_In	.0	-.1	.0	.0	.0	.0	.0	.0	.0	.0	.0						
Sup_Cares	.1	.2	.0	.0	.0	.0	-.1	-.1	.0	.0	.0	.0					
DB_In	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0				
Seen_In	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0			
Wrk_Prob	.0	.1	.1	-.1	-.1	-.1	-.2	-.2	-.2	.0	.0	.2	.0	.0	.0		
WP_Srcs	.0	.0	.0	.1	.1	.1	.1	.1	.1	.0	.0	-.1	.0	.0	.0	.0	
WB_Srcs	.0	.0	.0	.0	.1	.0	.1	.0	.1	.0	.0	.0	.0	.0	-.3	.2	.0
6+Drinks	.0	-.1	.0	.1	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	-.1
Fail_Norm	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0
No_Mem	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

*Columns 18-20 dropped to accommodate margin requirements for dissertation upload, but were all 0.0 values.

Chapter Transition 2-3

Chapter 2 modeled the relationship between exposure to violence and mental health, the impact of occupational stress on the development and utilization of coping mechanisms, and whether differential coping mechanism utilization impacts officers' levels of cynicism and desire to leave corrections. These results are suggestive of a clear association between job demands, such as exposure to or threat of institutional violence, and worsened well-being, along with the importance of how one copes being associated with the intention of quitting one's job. Critically, these results suggest that problem-focused coping, including the perception that an officer has people at work they feel they can talk to about problems (e.g., perceived social support, a crucial a job resource), potentially helping buffer against the negative impacts of job demands, as expected by the job demands-resources model. Another crucial job resource is autonomy. Autonomy in corrections is a particularly interesting topic given that the hierarchical nature of corrections tends to discourage officers from feeling empowered to implement policy in the way that best fits the intention rather than the explicit dictates of a policy. However, as street-level bureaucrats, correctional officers are in fact policymakers and are granted considerable discretionary power, regardless of whether they feel empowered to or safe in utilizing this power. Chapter 3 explores how correctional hierarchy influences officer decision-making through varying their perceived level of autonomy, discussing the implications these decisions have on the well-being of not only staff within the institution, but of the incarcerated individuals under their care.

Chapter 3: “They’re More Institutionalized Than Us:” The Role of Hierarchy in Correctional Officer Decision-Making

Jessie Harney

UC Berkeley Goldman School of Public Policy

Karalyn Lacey

Harvard Kennedy School

Introduction

Government agencies have long relied upon organizational hierarchy for helping facilitate service delivery. Evidence suggests that hierarchy can help ensure that the implementation of policy by frontline workers is in line with the goals set by organizational leadership (Milward & Provan, 1998; Williamson, 1973). One type of bureaucratic agency that depends heavily on organizational hierarchy is corrections. While hierarchy's intentional presence in the development and current operation of American correctional institutions is well-known (Gilbert, 1997), there exists limited literature on the ways in which hierarchy influences correctional officer behavior, and thus in-turn, the well-being of incarcerated individuals²⁰ under their care. Additionally, understanding the influence of hierarchy on bureaucracies during emergencies is critical, and though some high-level, descriptive work exists (Waugh & Streib, 2006; Wise, 2006), there is still need for empirical evidence that helps understand the influence of hierarchy in times of crises on frontline worker decision-making. While literature has identified the profound impacts of COVID-19 on the health of individuals residing in America's prisons (COVID Prison Project, 2022) and the considerable environmental constraints that hindered effective control of viral outbreaks (Duarte et al., 2022), the influence of hierarchy on correctional operation during the pandemic has yet to be understood. Given the critical role of frontline workers in delivering services, understanding the influence of hierarchy on frontline decision-making during an emergency may provide a route for identifying potential solutions – both immediate and long-term – that help bolster government response to crises, particularly within the correctional system.

In this paper, we examine the influence of hierarchy in correctional agencies during the COVID-19 pandemic, focusing especially on how hierarchy affected correctional officer decision-making and the subsequent impact on incarcerated individuals under their care. We briefly acknowledge the wealth of formative and multi-disciplinary literature on hierarchy, power, and related concepts, and dive more deeply into the literature on hierarchy specific to the context of governmental institutions and bureaucracy within this paper. Drawing from 50 semi-structured interviews with staff and incarcerated people within California Department of Corrections (CDCR) prisons, we find that hierarchy: 1) influenced both policy-making and implementation, such that executive policies were often unable to account for the wide range of institutional²¹ contexts and circumstances corrections officers faced on the ground and resulted in rigid implementation of ill-fit policies; and 2) decreased the perceived discretion and authority of officers, thus shaping officer decision-making. Taken together, this meant that officers who perceived themselves to hold less authority were more likely to abide by the explicit dictates of a policy, rather than act in line with its intent, leading to decision-making that often was unable to yield desired outcomes, thereby harming incarcerated people.

²⁰ We use the terms “incarcerated individuals” or “incarcerated people/persons” to refer to individuals who we interviewed that were currently incarcerated within prison, in line with guides developed from system-impacted scholars who suggest terms such as these for referring to individuals humanely (Berkeley Underground Scholars n.d.).

²¹ The word “institution” is used synonymously with “prison”. The term “facilities” denotes separate housing complexes within a prison, which may be semi-autonomous, depending on design and services are available. The term “unit” or “housing unit” will also be used, which dictates the specific location where an individual is housed, within a specific facility at a given institution.

Defining and Understanding Hierarchy

Hierarchy has been deeply studied across myriad academic disciplines, particularly in psychology, sociology, and public administration and management; however, scholars have previously noted that definitions of hierarchy are often not explicitly stated in much of the literature on hierarchy (MaGee & Galinsky, 2008). For example, MaGee and Galinsky define social hierarchy as "...an implicit or explicit rank order of individual or groups with respect to a valued social dimension," and distinguish between both formal and informal hierarchy (2008). These distinctions are critical to make, especially in government organizations, as focusing on hierarchy, purely defined as the formal mechanisms that create and maintain organizational structure, can mask the systemic and informal mechanisms through which individual experiences of their organization, their level of authority, and their interactions with those they work with or with the communities they serve may vary in critical ways. A great deal of work has well-documented the importance of using an expanded definition of hierarchy, such as the wealth of evidence demonstrating that mechanisms of white supremacy and systemic racism uphold and enforce hierarchies that produce disparities in power, agency, safety, and well-being (Berger et al., 1977; Iheduru-Anderson, 2021; Magee & Galinsky, 2008; Okuyan & Vollhardt, 2022; Ridgeway et al., 1998; Wingfield & Chavez, 2020).

Given the nature of our inquiry, we lend particular weight to the literature on hierarchy in the context of organizations, especially governmental institutions. A large body of literature examines the origins and role of organizational hierarchies in this context (Albrow, 1970; DiMaggio & Powell, 1983; Greenwood et al., 2017; March & Olsen, 2010; Mintzberg, 1979; Scott, 2013; Weber, 1958). We define hierarchy as the informal and formal structures and processes that position individuals or groups within an organization and dictate the level of power those individuals or groups hold, relative to others in that organization. Often, definitions of hierarchy are not explicitly stated or are somewhat narrowly defined in extant literature, with the exception of some works (e.g., the thorough review on social hierarchy from Magee and Galinsky, 2008 which previously defined both formal and informal hierarchies).²² Though motivations for maintaining hierarchy vary, one of the core components of hierarchy's intention is consistent: establishing coherent structures which "... result in appropriate delegation of authority, with clear lines of accountability established for actions taken," (Dias & Vaughn, 2006). Seminal work from Downs (1967) suggests that hierarchy exists in part to address the principal-agent problem, which is the dilemma of ensuring that delegation of resources or responsibilities are utilized or carried out in a way that aligns with the intention of the delegator. The struggle to align top-down goals with frontline worker behavior and delivery of services in government agencies is a classic principal-agent problem (Milward & Provan, 1998; Simon, 1948; Waterman & Meier, 1998).

Organizational hierarchies are one way bureaucratic agencies have attempted to solve this problem. Hierarchies allow principals to properly monitor agents' behavior in a cost-effective manner (Miller, 2005; Milward & Provan, 1998). At the same time, hierarchies serve to reinforce one of the key components of the principal-agent problem: information asymmetry (Waterman & Meier, 1998). In the context of the principal-agent problem, information asymmetry exists because agents (in this case, frontline workers) have substantially more knowledge about the needs, context, and demands of the job than principals. This allows principals to be less responsive to agents and the circumstances agents may face (Waterman & Meier, 1998). Thus, given principals will tend to be risk averse, they are likely to prioritize cost-effective monitoring

of agent behavior (Miller, 2005), suggesting that hierarchy may serve as a mechanism that further entrenches the scarcity of information available to principals. Information asymmetry can be particularly problematic in emergency contexts (Neal & Phillips, 1995). In fact, literature on emergency management suggests that opening lines of communication, encouraging collaboration within agencies, and allowing for greater flexibility to adapt – none of which are characteristic of hierarchical, command and control models – is key to supporting effective emergency response (Waugh & Streib, 2006; Wise, 2006).

The influence of hierarchy is of particular importance to justice administration, given its prominence in both the origin of corrections and its current operation. Modern correctional culture emerged in the spirit of militaristic, command and control operation, where authority is centralized and delegated to top-level officials, who disseminate policy and establish order through the ranks (Alberts & Hayes, 2006). Typically, command and control models fall squarely in the right-wing approach to the administration of justice (Balko, 2013). However, liberal movements have also advocated for hierarchy within corrections to constrain discretion within the justice system, largely in an effort to ameliorate racially biased decision-making (Murakawa, 2014). Given this overwhelming impetus to constrain correctional officer discretion, theory suggests that correctional agencies tend to “...over rely on formal structures such as hierarchy” (Gilbert, 1997, pg. 58) to hold greater control over officer decision-making.

Correctional Officer Decision-Making

Assessing the influence of hierarchy on officer decision-making requires understanding how discretion is granted to officers and how they apply it. Lipsky (1980) and Gilbert (1997) outlined models of bounded discretionary behavior that offer a framework for understanding correctional officer use of discretion. As street level bureaucrats (SLBs), correctional officers (COs) are granted considerable discretion (Lipsky, 1980). While there is variation in the extent to which officers apply it, one aspect of their work where discretion is commonly utilized is in their decisions about whether incarcerated individuals receive disciplinary write-ups and for which perceived infractions (Haggerty & Bucerius, 2020). Though the types of incidents that could initiate officers to issue write-ups are, in theory, dictated by formal policy, even if an officer intended to ubiquitously enforce rules in every instance of an infraction, this is not feasible given their limited time and resources (Lipsky, 1980). Importantly, officers often perceive to hold far less discretion than they possess, in part because of the strict, paramilitary structure that has helped enforce correctional hierarchy and disincentivizes them from using their autonomy (Gilbert, 1997). Empirical work documents the influence of various aspects of paramilitary, correctional culture and the prison environment on both the well-being of officers, as well as their attitudes towards their work (Finn, 2000; Lerman & Harney, 2019). Additionally, part of the perception of limited discretion may also be informed by the language which dictates their discretionary power; while not an all-encompassing measure of discretion, the CDCR Department Operations Manual explicitly grants discretion for officers in relatively few circumstances, including cases of managing documentation of incarcerated people, deciding whether to take a lunch break, and using force (CDCR, 2022). Thus, if officers are simultaneously granted discretion but discouraged from applying it, how do officers decide when and how to use discretion and how does this influence the well-being of incarcerated people under their care?

Limited empirical work exists to answer this question (Gilbert, 1997; Haggerty & Bucerius, 2020; Liebling, 2000; Sparks et al., 1996), though all current literature highlights the necessity of discretion given full enforcement of rules is in fact, not possible. Haggerty and Bucerius explore officer use of discretion in case of write-ups in an expansive qualitative

inquiry, finding that officers vary considerably in their enforcement, but tend to take into account the subsequent impact a write-up may have on their ability to maintain control of the population, the enforcement practices of other officers, and the perspective of their supervisors (2020). Our paper contributes to this evidence base by exploring: 1) how hierarchy operates within a correctional agency in a time of emergency; 2) the extent to which correctional hierarchy influences correctional officer decision-making and use of discretion; and 3) how these decisions or applications of discretion impact the well-being of incarcerated people under their care.

Data & Methods

We collected data through individual and group interviews conducted with staff and incarcerated people within CDCR on behalf of the California Correctional Health Care Services (CCHCS), which is overseen jointly by CDCR and a federal court-appointed receiver. The purpose of this initiative was to understand the impact of COVID-19 on incarcerated people and staff, and thus, multiple teams collaborated to support the initiative, including those with expertise in public health. The qualitative team, which included this paper's authors, was contracted to provide expertise in behavioral science and to interview staff and incarcerated people. Our purpose was two-fold: 1) to document the experiences of staff and incarcerated people so they were not forgotten throughout history; and 2) help the department improve upon its emergency planning procedures.

Participants & Data Collection

From March to August 2021, we visited eight prisons across California and spoke with nearly 200 people in individual and group interviews with both staff and incarcerated people. Each interview²³ lasted between fifteen minutes and two hours, depending on the availability of participants. We chose not to record conversations, instead taking all notes by hand. While handwritten field notes are at greater risk for data loss, compared to audio recordings (Tessier, 2012), we did this for the purpose of reducing concerns over confidentiality breach, which is of particular concern when conducting research within carceral settings (Patenuade, 2004). All notes were transcribed after each site visit. Interviewees were selected via purposive sampling. Leadership at each site coordinated much of the sampling process, helping us schedule meetings with staff and incarcerated individuals. In most cases, we were able to speak with at least one member of the custody, medical, and mental health teams, as well as at least one Incarcerated Individual Advisory Council (IIAC). IIACs are composed of incarcerated individuals who are elected to serve as representatives of their community. Some institutions have multiple IIACs (e.g., one for each facility within the institution), while others may have one IIAC for the whole institution. A small number of interviewees were selected via snowball sampling when some interviewees voluntarily connected us with others. Table 3.1 below reports prison- and interview-level information. Because some interviews were brief, spontaneous, or were conducted such that individuals could enter and leave the conversation as they saw fit, we do not have precise numbers of participants nor complete demographic information on all participants. Appendix 3-B provides further detail on the interview process. Of course, collecting data from those

²³ All interviewees were informed about our team's purpose: namely to document their experiences, concerns, and recommendations related to the pandemic. We informed participants that the information they provided would help inform the recommendations made to the receiver's office. We asked permission to take notes during the interview, and let participants know that they can skip any questions that they did not wish to answer. Participants could also state if they wished to share information aggregately at the department-level, rather than at the prison- or group-level (e.g., type of staff member or incarcerated person, etc.)

incarcerated within correctional institutions or working in these institutions while we are onsite is important to take note of when interpreting what we found within the context that participant experiences were shared.

Prior to starting the coding process, we read through each set of notes to develop our initial set of codes inductively. Then, we coded each line of the transcribed notes with codes developed from the initial set or others that emerged throughout the process. Codes were developed by topic, speaker, and tone. This process allowed us to systematically identify major themes arising across institutions and participants. Our four-person coding team met on a weekly basis over several months to discuss progress, update codes, and resolve questions about how to code specific statements. This allowed us to ensure consistency across coders. Then, we developed categories for each of the codes to identify overarching themes. Our final set of themes is expansive (see Appendix 3-A for the full list of codes and subcodes.) In this paper, we focus especially on findings related to staff decision-making and behavior in the context of managing COVID-19.

Table 3.1: Prison- and Interview-Level Sample Characteristics

Factor	Level	Sample Size (Percentage)
Prisons	Men’s prisons	6 (75.0%)
	Women’s prisons	2 (25.0%)
Participants per Interview	One	9 (18.00%)
	Two or more	41 (82.00%)
Participant Group Composition	Custody staff only	10 (20.00%)
	Medical staff only	5 (10.00%)
	Mental health staff only	6 (12.00%)
	Other or mixed teams group interview	13 (26.00%)
	Incarcerated Individual Advisory Council (IIAC)	13 (26.00%)
	Incarcerated individuals (non-members of IIAC)	3 (6.00%)
Institutional Leadership Participants Engaged	No	29 (58.00%)
	Yes	21 (42.00%)

Findings

We first present the evidence of hierarchy’s presence and function during COVID-19. Subsequently, we discuss the ways in which hierarchy influenced officer decision-making and the well-being of incarcerated individuals under their care. Finally, we detail instances in which officers deviated from correctional hierarchy, highlighting the factors that appeared to be

associated with a propensity to disrupt hierarchy, and how this influenced outcomes for both officers and incarcerated people under their care.

Description of Correctional Hierarchy

At the top of correctional hierarchies sits the department's executive leadership, namely department headquarters (see Figure 3.1). In traditional hierarchical structure, the executive leadership oversees institutional leadership at the 34²⁴ adult prisons within CDCR. Within each institution exists similar hierarchical structures across and within correctional teams. Influence, power, and lines of communication thus flow from executive leadership to institutional leadership and then through the ranks of custodial officers who are responsible for direct interactions with incarcerated populations.

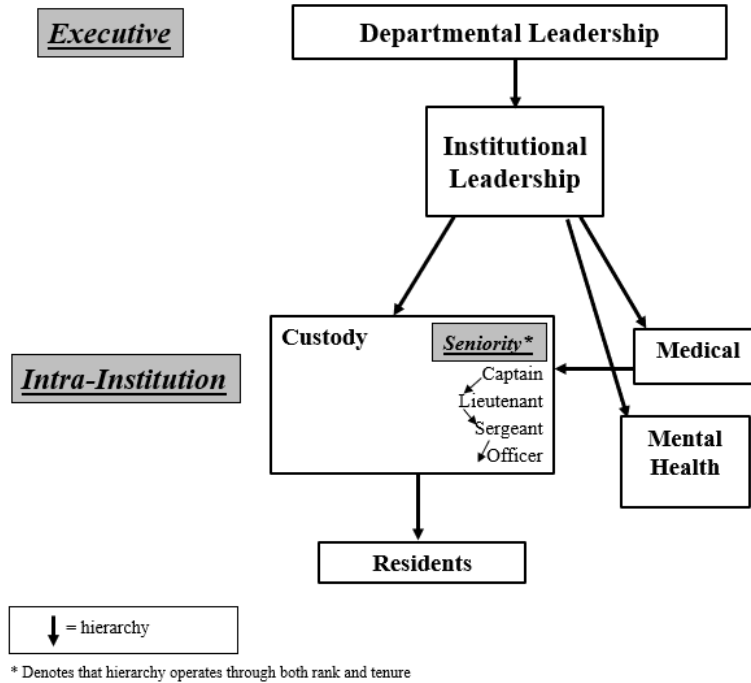
During the COVID-19 pandemic, policies were largely set by departmental leadership, including both headquarters and leadership within CCHCS, and passed down through the correctional hierarchies. Thus, the custodial staff were the ones tasked with executing these policies. It is crucial to acknowledge that developing comprehensive and effective COVID-19 policies was far from a straightforward endeavor, complicated by information availability and dissemination even at the highest levels of the hierarchy. Public health guidance was not always accessible, especially early in the pandemic, and once evidence began to accumulate, information was rapidly disseminated and updated (Holzer & Newbold, 2020). As a result, policies were (necessarily) updating rapidly. As an example, from April 20 to May 20, 2020, there were at least 21 updates to department's infection control policy (CCHCS, 2022).

While executive leadership were subjected to a lack of information and constantly changing public health guidance, these issues were exacerbated at the lower levels of the correctional hierarchy—because of the hierarchical structure itself. The information asymmetry that is a common feature of all hierarchies left executives with a dearth of evidence on how policies would be implemented on the frontlines and the various contextual constraints institutions faced. Both staff and incarcerated individuals were quick to identify this information asymmetry problem as the source of frustration with policies (Staff n = 25, 73.5%; Incarcerated People n = 16, 100%).

Several interviewees characterized the response from headquarters as being “radio silence,” while others voiced frustration over the fact that executives were “...making decisions on staffing ...that don't work the yard.” Overall, the information asymmetry between executive leadership and COs left the former less responsive to the latter. More generally, one IIAC member aptly stated about the outcome of policy-making that, “[The department] tried and failed because they were not considering the impact it would have on their staff.” This lack of information possessed by the principal left the agents wanting in regards to the specificity of policy. As one member of institutional leadership aptly stated about their difficulty with implementing policy, “the ‘how’ was absent.”

²⁴ Note that at the time this paper was written, there were 34 adult institutions within the purview of CDCR's Division of Adult Institutions (DAI); however, at the time the paper was written, there were also several prisons that were slated to close. Thus, this number will likely be outdated post-publication.

Figure 3.1: Diagram of Correctional Hierarchy



Interviewees shared several examples of policies where this information asymmetry caused staff considerable challenges in implementation, most profoundly in the context of movement policies. Movement policies dictate how and when incarcerated individuals were rehoused after testing positive for COVID-19. These policies changed frequently, especially during the early days of the pandemic, and were often not able to account for the on-the-ground realities. For example, one iteration required that incarcerated individuals be moved within two hours of testing positive, which dictates that those who are incarcerated should: 1) be informed of their test result by an authorized medical professional; 2) be escorted by a custody officer to their new housing unit; and 3) have their belongings packed up and moved to their new housing unit. Overwhelmingly, staff and incarcerated individuals shared their frustrations with this policy, with staff suggesting that two hours was not enough time to accomplish all of this, or at least do so effectively. As a result, prison staff struggled implement this policy precisely as written. Other executive policies were noted by staff as conflicting with pre-existing policy or interpreted as such given contextual constraints, which led prison staff to forgo the fidelity of one policy's implementation over others. For instance, some movement policies confined incarcerated people to their housing units, with healthcare visits done inside these units. This both deviated from pre-pandemic operations and initiated concerns amongst incarcerated individuals about potential Health Insurance Portability and Accountability Act (HIPAA) violations, given that incarcerated people noted overhearing others' protected health information.

Hierarchy was also enforced through inter-team dynamics within institutions. Because COVID-19 was a public health emergency requiring medical expertise to enact a sufficient response, institutions' medical teams were granted greatest authority in decision-making. This was a considerable shift from the norm, where custody policy and procedure tends to be prioritized, with the institution's primary focus being to maintain security and control. Thus, during the pandemic, this shift often meant that when there was ambiguity in how to implement

policy, medical teams' opinions supplanted that of custody teams, sometimes to the chagrin of officers. In other words, information was a source of power that enforced hierarchy. This enforcement of hierarchy through informational power manifested in several ways, including through establishing power through the perception of certainty. As one IIAC member shared, "No one wanted to say they didn't know." Certainty, or at least the perception of it, was routinely protected as custody and medical teams attempted to retain credibility to maintain order. We also heard from staff and incarcerated people about considerable differences in regards to which team's knowledge was sought after or valued, with many staff describing the value of information, particularly in the form of policy (n = 29, 58.0%). For example, one captain shared that custody staff must be knowledgeable of all policies – both custodial and medical – but medical staff tended to only be versed in their own policies, highlighting hierarchy's influence through devaluing the information and expertise of custodial teams, given their policy was not perceived as worthy of medical teams' time or attention. Second, custodial teams were not granted access to the same information as medical teams, namely incarcerated individuals' protected health information, which meant that unless a clinician was present, incarcerated people were not routinely informed of their test result when escorted to a new housing unit. While this is of course an understandable legal obligation, it nevertheless highlights the disparate power granted to different correctional teams through the knowledge they possessed or created. Rather than encouraging cooperation during a critical emergency, hierarchy within the institution pit teams against one another through policy.

Hierarchy was also enforced within custody teams through seniority (i.e., rank and tenure) and played a critical role in officer well-being. According to staff, the role of hierarchy within custodial teams has long been influential. Higher-tenured officers traditionally receive priority in selecting their post, (e.g., long-tenured officers often selecting positions with lower stress and/or less contact with incarcerated individuals, such as positions in the watch tower.) COVID-19 also exacerbated the impact of hierarchy on officer behavior and well-being. For example, in an interview with two COs, one female with nearly 20 years of experience and one male with more than five years of experience, we heard that officers often did not feel supported in staying home when they were sick. The longer-tenured officer subsequently qualified their statement, sharing that this tended to be specific to early-career officers. Another pronounced example of the way in which hierarchy is reinforced through seniority was the way Incident Command Posts (ICPs) operated. ICPs were crucial units created within institutions and included representatives from both medical and custody teams. These units were responsible for operationalizing the institution's pandemic response, such as coordination of policy communications to managing movement of incarcerated people. Interviewees elicited a crucial point about the construction of these units, namely that who was selected into these positions mattered greatly. In fact, we tended to hear from custodial staff on the ICP that their rank was clearly associated with their ability to influence and contribute to ICP decision-making. In part this was true because medical staff tended to be at the level of Associate Warden, which widened the power imbalance, and custody contributions were minimized. Thus, even amongst a unit that appeared to be developed in part to encourage inter-team collaboration, the influence of hierarchy was still pervasive.

Hierarchy's Impact on Officer Decision-Making

We find that hierarchy primarily influenced officer decision-making by exacerbating pre-existing feelings of officer demoralization. This, in turn, had detrimental effects on the well-being of

incarcerated individuals. In all but one interview with custody staff (n = 9, 90%), officers expressed experiencing profound demoralization. This is due, in part, to the nature of their work—past research has found staggeringly high rates of burnout and PTSD among correctional officers (Ferdik & Smith, 2017; Lerman et al., 2021), though demoralization was further compounded by the COVID-19 pandemic. Officers described their coping style similar to the literature on “working personality” (Brower, 2013; Cheek & Miller, 1983) – experiencing numbness and distancing from their work and others. They described traumatic on-the-job experiences, as well as lack of time and space to process what they saw and felt (n = 3, 30.0%). One officer shared about when they heard that an incarcerated individual had hanged themselves as they were heading out on lunch break, stating: “It’s our new normal.” The pandemic also played a role in worsening well-being for officers – in fact, one union chapter president shared that they feared for officers, as they expect worsened mental health and increased suicide risk in the future.

The paramilitary, hierarchical structure of corrections reinforces this state of officer demoralization in part by reinforcing management structures that can negatively affect officers’ self-efficacy and self-esteem. One officer shared with us that management processes made them feel as though they were “... not trusted to make decisions.” This was especially profound in the context of COVID-19. For example, they shared that the proportion of tasks requiring paperwork have increased, and critically, this paperwork also requires a supervisor’s signature. Hierarchy made officers feel as though they could not deviate from policy, even for those who acknowledged that policy was often insufficient (n = 4, 40%). One long-tenured officer shared that even though policies often did not make sense and were not applicable to their unit or institution, they needed to abide by it, stating that “if there’s a policy, then we follow it.” Incarcerated people also commonly noted this attitude amongst officers (n = 7, 43.8%); in fact, it was amongst an IIAC where we heard that paramilitary structure dictates custodial staff interactions and was one of the biggest obstacles to effectively intervening when problems arose, as officers are trained to obey supervisors (i.e., operate within the confines of strict, hierarchical influence.) As one of these IIAC members aptly suggested: “...they’re more institutionalized than us.”

Hierarchy appeared to be enforced through the way information was shared. Many interviews with incarcerated people (n = 13, 81.3%) discussed the dearth of information, and crucially, the considerable distrust in the information that was shared with them, whether it was about the virus, the vaccine, or simply what the pandemic policies were. The frustration surrounding communication and lack of clarity around COVID-19 policies was ubiquitous; in all interviews with incarcerated individuals, they shared that there was considerable variation in the way COVID-related policies were implemented and communicated. This caused many incarcerated people to feel that they needed to attempt to hold staff accountable to written policy because that was the only tool at their disposal to try to keep themselves safe. This highlights the role of policy as a component of hierarchy itself, through both the power that officers have to withhold information from incarcerated individuals, but also the higher authority of policy that supersedes that of officers. Notably, this variation in policy implementation and communication is seemingly contradictory to the proposition that hierarchy influenced officers to hold to policy, even when it was ill-fit. However, given policies were rapidly updating and wanting in specificity, it is also true that clearly and accurately explaining policy – including both its intent and content – was difficult to achieve, when attempting to hold to policies as written. This may

be one way officers attempted to cope with increased workloads during the pandemic (Lipsky, 1980).

Given the fact that COVID-19 policies were often ill-fit to various institutional contexts, hierarchy's tendency to yield overly-narrow interpretation of policy often resulted in officers making decisions that did not successfully curb the spread of the pandemic, nor protect their or the wellbeing of incarcerated people. One of the most profound examples of this was implementation of COVID-related movement policies, which directly affected the well-being incarcerated people. In all but one interview (n = 15, 93.75%), incarcerated individuals shared how traumatizing the process of being moved was. When officers attempted to implement ill-fit movement policies as written, this process was even more traumatic for those who were incarcerated. This was especially the case with the two-hour movement policy (i.e., where incarcerated individuals were required to be rehoused within two hours of testing positive). Some officers, interpreting the policy as written, cut corners to ensure that incarcerated individuals were rehoused in two hours as dictated by the policy. The result for most of those who were incarcerated was a movement process fraught with turmoil: with almost no warning, an officer would show up and inform them that they must leave immediately. On top of movement's risk to personal safety, we heard frequently that officer's marked incarcerated individuals' belongings as trash or contraband, with several losing most or all their personal effects. In other words, the influence of hierarchy led officers to implement policy precisely as written (i.e., move incarcerated individuals within two hours), rather than follow the likely intention of the policy (i.e., safely and expediently transport incarcerated individuals and their belongings to help keep themselves and the rest of the facility safe).

Correctional hierarchy is also enforced through staff-to-incarcerated-population power differentials, which are foundational to the structure of America's current and historical correctional system. We found that hierarchy prominently affected staff-to-incarcerated-population interactions through officers' use of write-ups. Across our interviews with incarcerated individuals, many expressed their profound frustrations and concerns about write-ups during the pandemic (n = 7, 43.8%), such as being written up for not wearing masks (sometimes while the officer themselves was also not wearing a mask, a critical example of officers enforcing hierarchy through setting double standards). Unfortunately, write-ups were often used to attempt to establish compliance with COVID-19 protocols, though officers less beholden to the influence of hierarchy appeared to use their discretion to relax enforcement, which again may be a form of coping for officers (Lispky, 1980), though in some cases, appeared to be a demonstration of compassion for incarcerated people. For example, at one men's prison, we spoke with multiple IIACs in one interview, where one yard's IIAC shared their frustration with frequent and strict write-ups (e.g., 115s²⁵ - or write-ups that can add time to one's sentence – for not wearing a mask), while another yard's IIAC shared that some of their write-ups were overturned because a subset of officers advocated for them to higher-ups, suggesting that not all officers operated within the confines of correctional hierarchy.

Deviating from Hierarchy & its Influence on Decision-Making & Incarcerated Individuals' Well-Being

Despite the entrenchment of correctional hierarchy, we heard about notable cases of deviation from traditional lines of influence and power. Incarcerated individuals were quick to share when officers stepped in to support them, often disrupting the influence of hierarchy. Many

²⁵ Write-ups have profound impact on incarcerated people, especially 115s, which can add time to one's sentence. "Less serious" write-ups (128s) do not directly add time but can accumulate, reduce access to valuable programming, and especially impact individuals up for parole.

IIAC members across different institutions acknowledged that the overwhelming uncertainty that they faced was impacting staff too, explicitly stating that they did not wish to “throw people under the bus,” often highlighting examples of staff doing all they could, given the circumstances. Incarcerated people shared appreciation of staff’s care, from the lieutenant on their yard who they “watched go gray” because of all the stress of trying to do everything in their power to provide for them, to the officers who went to their supervisors to make sure incarcerated people had extra ice or masks. Three features tended to be consistently observed across many of the cases within which officers deviated from hierarchy, namely: 1) officer access to education or training; 2) strong relationships between custody officers with other staff on other correctional teams; and 3) a desire to achieve better outcomes for incarcerated individuals and staff. Of course, for the latter feature, it is incredibly important to highlight that it is far more likely we would have heard instances of positive example of deviating from hierarchy given both the method of data collection and the context within which we collected data. This is critical to note and will be discussed further within this section.

First, education and training was associated with custody staff deviating from the influence of hierarchy. For example, a captain at a men’s prison was a National Incident Management System instructor and thus was well-versed in emergency management. This captain shared that their emergency management expertise helped them to respond to the outbreak and make the decisions that they felt would best keep the population safe, including providing incarcerated individuals with additional cleaning supplies. Not only did this individual make sure that those who were incarcerated had sufficient access to cleaning supplies on their own shift, but also came in during first watch (earliest shift) to make sure these cleaning supplies were always available to the population—something we only heard from incarcerated people. Given there was guidance that dictated what incarcerated individuals could and could not have access to, this signified both deviation from standard procedure, as well as deviation from hierarchy, in that custody staff of this rank tend to have less direct contact with incarcerated individuals, instead delegating lower-ranked, direct reports to handle these interactions. Another example of education’s influence on hierarchy disruption came from an IIAC member who shared that an incarcerated individual on their yard became very ill and tried to communicate this with a nurse during rounds. The nurse bypassed it, saying they “were fine,” but after an officer – who had previously been trained as a nurse – heard of this, they stepped in, provided verbal pushback to the nurse, and made sure the individual was tested for COVID. Given medical’s elevated authority in decision-making, this officer’s advocacy was a clear deviation from the influence of correctional hierarchy.

Second, disruption of hierarchy tended to coincide with strong relationships between custody and healthcare teams, especially those between mental health and correctional teams. Though not altogether common, four mental health and custody staff noted having a strong relationship. Typically, incarcerated individuals on the yards where these custody staff worked and with whom we interacted also expressed greater access to care and a less tumultuous experience during the pandemic. This is not to say that those incarcerated individuals’ experiences were not still traumatic. However, healthier dynamics between correctional teams was clearly associated with a more cohesive and consistent approach to decision-making. For example, we heard from a mental health clinician at a men’s prison how incredibly vital it was to have good relationships with and know the officers who are working on the yards, because when those connections are made, it makes it much easier for them to reach out when an incarcerated individual may need some support, helping mental health teams do their job. Critically, we also

heard considerable positive feedback about this clinician from both custody staff and incarcerated individuals at this institution. There were other examples of these strong relationships, including the handful of yards at two institutions where we heard that mental health and custody teams had engaged in training together. Historically, the relationship had been strained, and thus, the training focused on teaching both teams the importance and complexity of each other's work. Both sources shared that custody and mental health teams really see one another's value and appreciate the work that the other does, expressing the sentiment that this fundamentally improves their ability to do their job.

In a yard where officers had been through this training, we heard one of the most profound examples of dedication to supporting incarcerated people. In our interview with the IIAC, they noted there was no "blue or green" on this yard – implying a breakdown of the "us vs. them" mentality – that officers and incarcerated individuals worked together to keep one another safe. Given how stark of a contrast this feedback was, we asked our escort for the day to connect us with officers on this yard. When we asked them how they cultivate this culture, they shared that they could not take credit, and that the incarcerated people, especially those within the IIAC, were simply great to work with. The officers shared that they sought proposals from the IIAC on what they needed and what they could advocate for on their behalf. Additionally, they shared how vital their relationship with the mental health team was and how much they rely upon their support. The actions of these officers were not those explicitly detailed by policy, but, as one incarcerated individual perfectly stated, the population truly benefited from officers that interpreted "...the spirit of the law instead of the letter of the law."

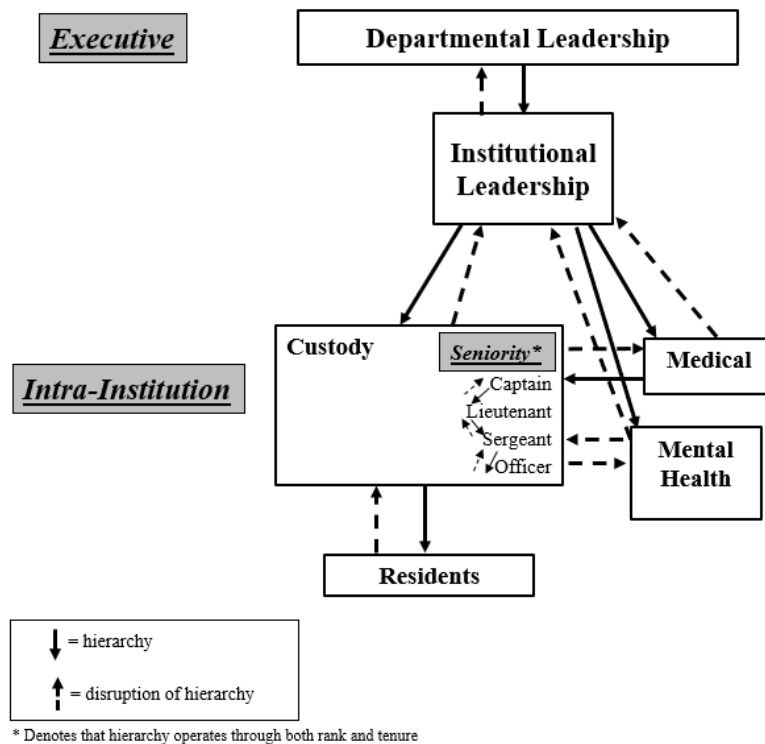
Again, it is imperative to acknowledge that, given the context and way we collected data, it is quite unlikely that we would hear considerable deviation from hierarchy in the case where it does not benefit incarcerated individuals, especially from staff (e.g., it is incredibly unlikely a staff member would self-incriminate and or incriminate a fellow staff member within their institution.) Crucially, to understand the potential neutral to negative impacts of hierarchy disruption on incarcerated populations, we should be listening to incarcerated populations' experience. However, this is also of course complicated by the fact that researchers or others who are not incarcerated asking incarcerated people directly about their experience of being maltreated by officers or other correctional staff in a carceral setting poses considerable risk to incarcerated populations, especially given the power dynamics, and thus is ethically unsound. In our interviews, we therefore did not ask incarcerated individuals (nor staff) directly about whether/how maltreatment occurred and thus only recorded such instances when they were voluntarily offered by interviewees. There were a few examples that emerged and thus are worth noting. One IIAC member shared that officers "...only jump rank when it helps them," implying that some officers may also be disrupting the influence of hierarchy only in cases where they find it likely that the result will allow them access to some direct benefit. Another instance shared by an IIAC was more startling, namely when one of their members shared that, upon introduction of body-worn cameras (which was imminent at the time), a lot of officers will be behaving differently, going on to suggest that officers are engaging with incarcerated individuals in a way that deviates from policy and causes harm to incarcerated people. These examples are of course incredibly critical to acknowledge and address within the institution and certainly highlight instances where deviation from hierarchy can cause harm to incarcerated people; however, they do not negate the experiences of incarcerated individuals who benefited from officer's disruption of hierarchy that increased their access to resources, supported their well-being, or treated them with humanity.

In response to these findings, we uplift proposed solutions, shared by staff and incarcerated individuals, to this dilemma. First, incarcerated participants were quick to suggest that officers need better training, highlighting that current training is “dehumanizing them,” and recommended that it be updated to focus more on de-escalation and crucial soft skills to bolster professional relationships between incarcerated individuals and staff. This could be quite critical: if true adoption of de-escalation and effective communication become the norm, this could help provide more leverage to hold officers that engage in inappropriate behavior and excessive and/or discriminatory force accountable. Crucially, both incarcerated people and staff also highlighted the innovative solution of participatory policy-making, (e.g., such as an incarcerated individual who shared that there’s not a “one-size-fits all policy” that works and the staff member who explicitly called for a more “horizontal management structure.”) Participatory policy-making (PPM) is a process by which development of policy is shaped by community-sourced feedback, which can encompass both frontline worker and service recipient voices. Empirical evidence suggests that PPM can boost civic engagement and investment from the community (Michels & DeGraaf, 2010) while also supporting better organizational performance (Amirkhanyan et al., 2019). A PPM process in corrections could rely upon the pre-existing IACs and construct elected staff councils with representatives of various rank and tenure across correctional teams, as elected members may perhaps be more responsive to their group’s interests (Miller, 2013). In the correctional context specifically, PPM possess a potential to ameliorate multiple of the key issues of hierarchy’s negative influence, namely reducing information asymmetry by involving staff and incarcerated individuals in the policy-making process, which could aid the policy development process, potentially resulting in policies that are better fit or perhaps more flexible in being adapted to different institutional contexts. Additionally, when implemented well, a PPM process could allow staff to have more opportunities to share their feedback, which could help empower staff, improve morale, help them be more invested in policy, and potentially allow them to feel more connected and understood by others within the institution. This is critical, given the timely work from public administration scholars suggest that belonging may in fact have been more critical to government workers during the COVID-19 pandemic, as compared to traditional hierarchical leadership (Allgood, Jensen, & Stritch, 2022). This also coincides with the wealth of extent evidence which suggests that boosting belonging and feelings of being understood by others is associated with greater self-efficacy (Bjorklund et al., 2020; Tellhed, Bäckström, & Björklund, 2017) and in particular, for correctional officers in a jail setting, may improve both their well-being as well as their interactions with incarcerated individuals under their care (Harney et al., n.d.). In other words, to the extent that a PPM process could be an avenue for increasing the extent to which staff feel they belong and are understood could result in not only more informed policy development, but also improved staff morale, well-being, and decision-making. Certainly not least of all, for incarcerated people, implementing a PPM process could be critical to fostering greater trust of the institution, the department, and its staff. Given the feedback from incarcerated individuals is truly valued and incorporated, this again not only serves to improve policy development itself, but also the extent to which incarcerated individuals perceive the institution to be invested in their well-being and commitment to supporting their re-entry, and ultimately, their experience of incarceration. Figure 3.2 provides an updated diagram of the proposed influence of hierarchy to incorporate the flow of information and agency via the disruption of hierarchy, in particular, what we propose as the potential avenues through which disruption of

hierarchy through stronger inter-team relationships, education, public service motivation, and community-driven solutions such as participatory policy-making could take form.

These proposed solutions represent a considerable shift from current correctional norms. For example, one officer had shared with us that “policies should leave as little gray areas as possible,” because when there are discrepancies in policy implementation, this can cause division amongst officers and undermines any trust built between incarcerated individuals and staff. However, it is important to acknowledge the context within which this statement was given, namely that officers, working in this highly hierarchical context, are not ubiquitously empowered to make decisions to fit their unit’s context and have been given limited to even no opportunity to reconsider what their job could look like under altered models of operation. Given safety and well-being are a communal goal, if officers were encouraged to consider their context, a policy is that is outcome-based rather than prescriptive is likely to address many of the policy implementation issues that arose during the pandemic.

Figure 3.2: Updated Diagram of Correctional Hierarchy



Conclusion

Using findings from 50 interviews conducted amongst incarcerated people and staff of CDCR prisons, we find that correctional hierarchy was pervasive and enforced through policy and various forms of power differentials within the institution. This research builds on prior literature on the influence of hierarchy in frontline worker decision-making, particularly in times of emergency. While the proven benefits of hierarchy are not to be dismissed, we highlight a clear example in which its influence during a time of emergency hindered the correctional bureaucracy from instituting a swift, collaborative, and effective response, leaving both staff and the incarcerated population worse-off. Specifically, information asymmetry resulted in insufficient executive policies and hierarchy’s influence led officers to interpret these policies in ways that

exacerbated demoralization, as well as power dynamics between staff and incarcerated individuals. Taken together, this negatively impacted the well-being of incarcerated people. Though some officers felt empowered to exercise discretion and deviate from policy, often to support incarcerated individuals under their care, this sense of empowerment was an exception, rather than the rule for frontline custody staff. We uplift participatory policy-making as the solution suggested by both staff and incarcerated people, which does not dismantle hierarchy itself, but rather provides opportunities for officers and incarcerated individuals to have a say in policymaking, and could be an avenue for granting officers the authority to develop positive, professional relationships with incarcerated persons on their yard, improving the well-being and experiences of both staff and incarcerated individuals alike.

Our findings contribute to existing theory on correctional officers as SLBs, providing evidence of the importance of correctional culture when considering the use of discretion amongst frontline workers within prison environments. As the main recipients of correctional policy, incarcerated individuals' experiences are critical to include when developing theories surrounding CO decision-making. Failing to capture the experiences of those who are directly affected by SLB decision-making may lead to inaccurate or incomplete accounts of the impact of correctional culture. Additionally, these findings also build upon evidence on the influence of bureaucratic hierarchy during times of crisis on frontline worker decision-making.

This research has three primary limitations. First, because the sampling process was largely determined by institutional leadership, the selection of participants could have been biased in ways to skew the resulting picture of the pandemic experience. Second, this research is limited to prisons in California, and thus, it future research should seek to compare the relative influence of hierarchy in other correctional systems – including state and federal within the U.S. and internationally - during the pandemic. Finally, we were not able to consistently collect demographic information nor precise numbers of all participants, given the manner in which we collected data. For example, in an interview that was combined with a “town hall” to share information about the vaccine, we were in a dorm-style unit where incarcerated individuals were free to enter and leave the conversation throughout, and thus, it was not feasible to collect complete participant-level information. It is critical for future research to explore how the pandemic experience varied by demographics of staff and incarcerated populations, as well as the ways in which the influence of hierarchy may vary based on correctional staff's perception of incarcerated individuals' identities and vice versa, including but not limited to their race and ethnicity, gender identity, and sexual orientation, among other identities. This is especially critical for many reasons, not least of which because the history and origin of the institution of incarceration in the United States is important to consider when interpreting its current structure and operation, which scholars have aptly suggested the need for abandoning the notion that organizations are race-neutral (Ray, 2019). Critical variation in policy implementation could be discriminatory and thus, it is of great importance to pursue a deeper understanding of how power and authority may be disparately utilized or distorted when engaging with incarcerated individuals and how this may fundamentally shape the trajectory and experience the individual has while incarcerated and post-release. Future research can and should explore the potential for layers of correctional hierarchy including structural issues of inequality that produce discriminatory interaction, power, and status across racial, ethnic, gender, and other groups and how these layers of hierarchy interact to impact the officer well-being, decision-making, and the lives and experiences of incarcerated people.

Appendix 3-A: Codes

Code	Subcode 1	Subcode 2	Subcode 3	Subcode 4	Subcode 5
Movement	Causes of	Consequences of	Movement, other		
Quarantine, Isolation					
Crowding					
Individual Preventative Measures	Handwashing	Cleaning practices and materials	Other		
Personal Protective Equipment	Masks				
Testing	Frequency	Hesitancy, Avoidance	Other		
Restricted movement	Consequences of	Restricted movement, other			
Culture*	Hierarchy	Resident to staff relationships	Relationships between staff types (e.g. custody to medical)	Relationships within staff type (e.g., custody, medical, etc.)	Dynamics of IAC communication (frequency, consistency, etc.)
HQ	Relationship with HQ	Experience of HQ policies			
Resident well-being	Physical health	Mental health (e.g., burnout, PTSD, anxiety, etc.)	Consequences of (poor) well-being	Peer-to-peer relations	General well-being/Other
Staff well-being	Physical health	Mental health (e.g., burnout, PTSD, anxiety, etc.)	Consequences of (poor) well-being	Peer-to-peer relations	General well-being/Other
Discipline	Residents	Staff	Discipline, Other		
Vaccination	Hesitancy	Experience	Institutional Progress with	Education	
Information-Sharing, Communication	Heterogeneous communication to staff	Heterogeneous communication to incarcerated population	COVID status/spread	Vaccine-related	
Outbreak Spread, Response, & Consequences*	Spread	Cohorting	Contact tracing, Symptom tracking	Resident attitudes/feelings related to outbreak	Staff attitudes/feelings related to outbreak
Policy	Clarify type in subcode, if applicable				
Uncertainty					
Staffing	Level of staff (shortage)				
COVID Illness	Personal experience of	Witnessing the illness of others	Witnessing death of others		
Advancing Technology	Body-worn cameras	Mounted cameras	Tablets	Software	Other

*Includes subcode 6 of “other”

Appendix 3-B: Further Clarification on the Interview Processes

Access & Interview Process Details

For both understanding the amount and breadth of data collection, as well as the power dynamics at play, it is important to highlight our position as contractors of CCHCS and the federal receiver's office. Because of our position, we had far greater access than we would have had otherwise, which allowed us to engage in many interviews and very in-depth conversation. At the same time, our privilege also likely influenced the way individuals engaged with us. For example, at one institution, custody staff thought we were auditors, and we were later informed that a union representative instructed officers not to speak with us. Though this was not the case, given the level of access we had and the staff's thoroughly informed expectations regarding the motivation of external parties, this was an understandable assumption.

It is important to acknowledge the fact that individuals may have felt more or less comfortable speaking with us depending on various factors. One such example is an incarcerated individual's sentence (i.e., incarcerated people who were close to parole could be concerned about speaking out in a way that may, if traced back to them, harm their possibility for release.) This example also further serves to reinforce our decision to take notes, rather than record interviews, to reduce risk of confidentiality breach. Many staff also thought we were auditors, prior to us engaging in conversation. For example, at one institution, officers were told not to speak with us by a custody staff member, as that individual was under the assumption that we were auditing their behavior. However, in most cases, we were either able to dispel this inaccurate (but understandable) assumption quickly, or for some, it did not arise.

We also want to note that that sharing information back with incarcerated individuals and staff was also complicated by both: 1) the fact that we were contracted to develop a report of the impact of COVID-19 on CDCR prisons, and thus were understandably not able to share any documents with individual institutions prior to the release of the report; and 2) once the contract ended, we were no longer granted access to the prisons to be able to share this information (this is especially critical increasing the possibility of being able to share findings directly with staff and particularly for incarcerated people). Thus, this paper is motivated by the need to shed light on the experiences of both staff and incarcerated persons, as well as the issues that arose during the pandemic and identify critical areas where frontline workers can be supported both in their own well-being, as well as in their capacity to effectively engage with system-involved communities under their care.

Positionality Statement

This paper and its implications are the result of collecting, coding, and synthesizing qualitative data gathered through interviews on site visits to eight correctional institutions in California. Both authors were on the qualitative research team as part of a subcontract to support the federal receiver's initiative to understand the impact of COVID-19 on the lives of those who live in or work for a prison within the California Department of Corrections and Rehabilitation (CDCR). Both authors identify as White women who have not been previously incarcerated nor employed by a correctional or other justice system institution. Given both our personal backgrounds and our roles as subcontractors, we acknowledge the privileged positions we hold and the influence of our privilege on interpretation of results. Our purpose is to share the stories, insight, and wisdom of the residents and staff we spoke with to make sure their experiences are not forgotten in history and can inform the future of justice administration.

Chapter Transition 3-4

Chapter 3 explored how correctional hierarchy influences officer decision-making through varying perceived levels of autonomy, specifically suggesting that in some instances in which the influence of hierarchy is reduced, autonomy amongst officers may be fostered. Though not universal, this study suggests that in some cases when officers experience greater autonomy, this may improve their ability to make decisions that best support the well-being of their unit or facility, and therefore, may improve the conditions of confinement for incarcerated people. Conversely, when officers feel limited by policy, this may prohibit them from making decisions that are well-fit to their unit or facility context, and thus, this may have negative implications for the well-being of incarcerated populations under their care. Thus, Chapter 3 further highlights the importance of job resources, such as autonomy, just as Chapter 2 suggested the importance of perceived social support – another key job resource – in improving outcomes. The final section of this dissertation – Chapter 4 – explicitly aims to boost job resources, namely perceived social support, through a peer-focused wellness intervention aimed. Intervening to reduce job demands is important, though difficult, and thus, we focus on fostering job resources. Through a field experiment amongst officers working in a Sheriff Department, we test whether perceived social support can improve well-being, attitudes, and officer decision-making.

Chapter 4: Shifting Correctional Officer Mindsets through a Peer Support Field Experiment

Jessie Harney

UC Berkeley Goldman School of Public Policy

Elizabeth Linos

Harvard University, John F. Kennedy School of Government

Heidi Wallace

Harvard University, John F. Kennedy School of Government

Zach McDade

City and County of Denver

Kim Desmond

City of San Diego

Introduction

The issue of employee mental health and well-being has increasingly received public attention given its negative association with individual-level outcomes, such as worsened health (e.g., disordered sleep and heart disease) and mistakes on-the-job, as well as organizational-level outcomes including turnover, absenteeism, and performance (Bakker & Demerouti, 2017; Bakker, Demeouti, & Euwema, 2005; Demerouti et al., 2001; Garman, Corrigan, & Morris, 2002; Salvagioni et al., 2017; Shanafelt et al., 2010; Shirom, 2010). This problem has only been exacerbated throughout the COVID-19 pandemic and may be especially dangerous for both employees, especially frontline workers, and the communities they serve (Sciepora & Linos, 2022; Linos et al., 2021). Indeed, many government agencies are making reducing burnout and improving mental health at work a named strategic priority (e.g., Katz, 2022), and so too is the workforce. In fact, in a recent report from the U.S. Surgeon General, they estimated that 81% of workers are looking for organizations that explicitly support worker mental health and well-being (Office of the Surgeon General, 2022). In parallel, there is a growing industry and interest in employee wellness programs or wellness-related interventions in the workplace, with over half of US workplaces now offering “employee wellness” programs (CDC, 2019).

Given the relative importance of the issue in both practitioner and academic communities, and its likely impact on organizations, the very limited empirical evidence on how to improve employee well-being is surprisingly mixed (Jones, Moliter, & Reif, 2019; Hart et al., 2019) and often dependent on smaller sample sizes or individual-level participation (West et al., 2016; Ahola et al., 2017). Importantly, the range of interventions that have been considered in the wellness space range from highly individual-level interventions such as mindfulness, personal fitness, and journaling (Klasnja & Pratt, 2012; Parks and Steelman, 2008; Williams et al., 2001), to more peer or social-level interventions such as social support, health coaching, and Balint groups (Bakker & Demerouti, 2007; Demerouti et al., 2001; Linos et al., 2022; Nie et al., 2015; Osilla et al., 2012; Van Roy, Vanheule, & Inslegers, 2015; Yazdankhahfard, Haghani, & Omid, 2019). Previous evidence has not differentiated the relative role of social versus individual support and is limited in its ability to speak to any causal link between an investment in the workforce and an improvement in service delivery outcomes.

This study aims to disentangle and rigorously test different components of well-being interventions by focusing on a notoriously challenging public sector work environment: corrections. Correctional officers are subjected to the second highest level of exposure to violence on-the-job, second only to police officers (Finn, 2000). Extant literature has estimated that approximately a third of officers experience severe emotional exhaustion (Lindquist and Whitehead, 1986), 27% experience PTSD (Spinaris et al., 2012), and approximately 11% have experienced suicidal ideation (Lerman et al., 2021). Previous empirical work suggests that the prevalence of PTSD symptoms amongst correctional officers is on-par with that of veterans (Stadnyk, 2004). Moreover, because they are street-level bureaucrats (SLBs), correctional officer well-being can have direct health and safety consequences not only for individual employees, but also for the incarcerated people they serve. As such, we consider the impact of our interventions both on the individual-level employees and any spillover effects on beliefs and behavior related to the incarcerated population.

In a large-scale RCT in a mid-sized Sheriff's Department, we block-randomized employees to either receive an individual-focused wellness intervention or a treatment group peer-focused wellness intervention. Over a period of eight weeks, the individual-focused wellness group was sent weekly wellness prompts via email that provided advice or

opportunities to reflect on one's own well-being and nudged participants to write about their own experiences in an online journal that only they had access to. During the same period, the peer-focused wellness group was also sent wellness prompts via email, but these nudged participants to share their experiences in writing with fellow officers. Specifically, the peer-focused wellness group received a short written reflection from another officer in their inbox and were nudged to share their own advice and experience through an internally-hosted anonymous online platform, which only the peer-focused wellness group had access to. Our main outcomes were based on survey results that were collected six-months post-intervention (October 2021), as well as administrative data collected through November 2021.

Our research is an expansion of a previous peer support intervention (Linos et al., 2021) and contributes to the social support and burnout literature in two ways. First, we utilize an active control group, which while ethically warranted, was also critical to appropriately testing the peer-specific component of the intervention, rather than access to wellness-oriented messages more broadly. This is crucial given the nature of standard, message-based wellness interventions, which tend to rely upon prompts similar in nature to those we utilized within our active control group. Secondly, and perhaps even more critically, our study measures the impact of the treatment not only on well-being, but also on outcomes related to job performance, and most meaningfully, their behavior towards individuals that they are in direct contact with and are tasked with caring for. Especially within the field of corrections, this has been seldom explored, and scholars have called for further inquiry (Carter, 2020). In other words, we measure the impact of how the potential for improvement in mental well-being of public servants in the correctional field may indirectly benefit the well-being of individuals under their care.

Our primary research questions are, first, can we manipulate perceived peer support in ways that improve well-being for otherwise unconnected individuals? Secondly, given we can manipulate perceived peer support, does this have any impact on officer well-being and/or the way they carry out their work, mainly related to the way they interact with incarcerated individuals?

Theory and Previous Literature

The literature on wellbeing at work spans decades, with a vast literature documenting the nature and predictors of workplace burnout, engagement, and overall job satisfaction. At a conceptual level, the Job Demands-Resources (JDR) model (Demerouti et al., 2001; Bakker, Demerouti, & Schaufeli, 2003) provides a flexible framework within which we can understand the influence of job stressors on public servant wellbeing and mental health. Specifically, the JDR model disentangles the aspects of public service that contribute to strain (i.e., job demands), and the factors that support public servants in doing their job (i.e., job resources). High job demands (e.g., considerable caseloads, high rates of exposure to violence, risk of or regular engagement with emotionally challenging tasks, etc.) require sustained mental, physical or emotional effort and are positively associated with experiencing burnout (Borg & Riding, 1991; Demerouti et al., 2001; Demerouti et al., 2002; Karasek, 1979; Lee & Ashforth, 1996). Greater job resources, on the other hand, can potentially serve as a "buffer" against this strain (Demerouti et al., 2001), and the accumulation of resources over time allows individuals to build this "buffer," such that the resources we amass today do not immediately translate into better well-being tomorrow, but can help improve the way we respond to stressful events in the future (Linos et al., 2021). More recent additions to the model have also incorporated personal resources. Specifically, personal resources like resilience have been theorized to be mediators and moderators between job

demands/resources and well-being or workplace outcomes (Demerouti, Bakker, & Xanthopoulou, 2019).

One of the “most well-known” job resources that has been empirically associated with improved wellbeing is social support (Bakker & Demerouti, 2006). In correlational research, social support has been associated with burnout (Baruch-Feldman et al., 2002; Kim et al., 2018; Lizano & Mor Barak, 2012; Moynihan & Pandey, 2007) and job satisfaction (Hamaideh, 2011; Harris, Winkowski, & Engdahl, 2011), as well as predictors of those outcomes such as belonging and feeling understood (Skaalvik & Skaalvik, 2019; Wells et al., 2022). The theory of change linking social support to such outcomes is less well documented. Previous work suggests that the perception of support from peers may shift the way individuals interpret and respond to stress. For example, social comparison theory suggests that well-being is influenced by how we perceive others (Buunk & Schaufeli, 2018; Kavaklı & Ünal, 2021), and especially so when confronted with uncertainty about how to feel or act (Buunk et al., 1991; Molleman et al., 1986). When individuals feel as though they belong amongst a particular group, this is associated with greater self-efficacy (Bjorklund et al., 2020) and vice versa (Tellhed, Bäckström, & Björklund, 2017). Critically, evidence suggests that self-efficacy is related to burnout and subcomponents of burnout, including depersonalization (Friedman, 2003). More recent causal evidence suggests that manipulating peer support does causally shift feelings of being understood and values, and ultimately burnout (Linos et al., 2021), but this research compares peer support to a control group that receives no support. We build on this evidence to test whether peer support can causally impact wellbeing over and above individual-level support which also purports to have similar effects.

Indeed, there is a growing parallel literature on the potential impact of workplace wellness programs that have become increasingly common (Caloyeras et al., 2014; Pronk, 2014), given rising costs of healthcare (Papanicolas, Woskie, & Jha, 2018) and the purported benefits of boosting employee engagement and productivity through improved worker well-being. While some wellness programs or activities incorporate peer engagement, such as wellness challenges amongst peers that intend to boost physical activities, the majority of these programs focus on individual-level support or rely on individual onus for engagement in wellness activities, such as mindfulness, personal fitness, and journaling (Klasnja & Pratt, 2012; Parks & Steelman, 2008; Williams et al., 2001). Correlational work identifies some of the factors associated with participation in wellness programs (Heltemes et al., 2019), which provides greater insight into the selection effects at play, and critically, the barriers to participation (Person et al., 2010). Of the correlational literature that exists, there is some work that suggests that investments in well-being may translate into increased productivity (Gubler, Larkin, & Pierce, 2017), and while selection bias tends to be acknowledged, it is not fully incorporated as a limitation when taking into account moderate or considerable estimates of return on investment, which is a considerable oversight (Baicker, Cutler, & Song, 2010). Critically, causal studies of the health and employee productivity effects of workplace wellness programs tend to yield considerably less optimistic results, with one randomized controlled trial finding benefits to exercise and weight management, as measured by survey data (Song & Baicker, 2019) and another finding null effects (Jones, Moliter, & Reif, 2019; Song & Baicker, 2019). Regardless of their efficacy, these programs have been criticized for a variety of reasons, including discriminatory framing, disparate barriers to participation, and even potentially shifting costs to from higher- to lower-income workers (Ey et al., 2013; Horwitz, Kelly, & DiNardo, 2013). Despite these critical concerns and the limited evidence to support their effectiveness (De La Torre & Goetzel, 2016),

these programs are widely utilized, and the employee wellness industry is quite prominent within the United States (Oppenheim, 2019), and thus, programs such as these often serve as the status quo for what organizations utilize in an attempt to boost employee well-being.

We posit that peer-support interventions will be more effective than individual-level support programs at improving employee well-being for two potential reasons. First, we expect that those who are at risk of burnout or low employee engagement may be more willing to participate in peer-support programs (either actively or passively), compared to individual-level programs. As such, while individual-level wellness may be effective for those who choose to participate, at scale (in an intent-to-treat framework), peer support may be more effective. Second, we expect that social support offers a stronger buffer than a typical status quo wellness program against adversity in a frontline worker environment.

The Setting

Correctional officers encounter considerable job demands within the carceral settings in which they work, not least of which being exposure to violence on-the-job, which may elevate the risk for burnout (Ferdik & Smith, 2017). Relative to other occupations, this rate of violence exposure is higher than most others (Finn, 2000), and officers also face many other significant job demands, including considerable role ambiguity (Lambert et al., 2005), conflicts with or limited support from management and their institution more generally (Mitchell et al., 2000), and emotionally-challenging situations (Tracy, 2005). While only limited empirical work has documented the link between increased job demands and worsened well-being amongst correctional officers (Boudoukha et al., 2010; Boudoukha et al., 2013; Kunst et al., 2009; Lerman et al., 2021), extant evidence demonstrates that officers are at an elevated risk for mental health issues, including burnout (Schaufeli & Peeters, 2000), PTSD (Fusco et al., 2021; Spinaris et al., 2012), alcohol or substance abuse (Tartaglino & Safran, 1997), disordered sleep (James, Todak, & Best, 2017), and suicide (Stack and Tsoudis, 1997) amongst other concerns. The empirical link between worsened mental health and greater intention to quit one's job has been replicated within the correctional officer population (Harney & Lerman, 2021); however, limited empirical evidence exists to document the extent to which supporting officer well-being can translate into improved service delivery within correctional justice administration, particularly for the way officers interact with incarcerated individuals.

Thus, to test whether we can bolster the well-being of frontline workers in the criminal justice system and whether improvements in well-being help address long-standing turnover problem in corrections (Udechukwu, 2009) and improve service delivery, we partnered with a mid-sized city Sheriff Department to pilot a co-designed peer support program, which aimed to improve well-being through fostering feelings of perceived peer support. This intervention was well-informed by the aforementioned theoretical and empirical literature on well-being and social support, as well as the evidence from psychology and trauma studies that suggest that social support is one of the strongest predictors of recovery from PTSD (Brewin et al., 2000). The program involved sending wellness-focused messages to both sworn and civilian employees at the same time each week – Thursday afternoons – for eight weeks²⁶, from February 25th through April 15th. Employees were randomly assigned to receive either individually-focused wellness messages (control) or peer-focused wellness messages (treatment). Example messages

²⁶ Note that only those who had a valid departmental email address were able to be sent these emails (i.e., one group of contracted employees who did not have a departmental email address were not part of the program.)

are provided in Appendix 4-A. Both groups had the opportunity to respond to wellness-focused prompts provided in the messages, where the treatment group could anonymously share their feedback via a Google Form, while the control group could respond in an online journaling site with an individual account, to which we did not have access. Only those assigned to the treatment group had the ability to read others' anonymous responses that were shared on the common platform, and there was no ability to comment on the responses (as opposed to how social media-based social support sites may function.)

Data

Overall, the demographics of employees overall were fairly comparable with those who also responded to the endline survey. Additionally, the survey sample had considerably greater representation from White employees (56.67% of the survey sample, compared to 43.95% of the administrative data) and somewhat less representation from Black employees (10.42% of the survey sample, compared to 15.05% of the administrative data). In terms of location, there was a considerably smaller percentage of survey participants from the city's Health Center, and somewhat more sworn staff representation.

Relative to other frontline workers, we find that the officers in our sample were more burnt out than even other public servants in occupations with high job demands. Compared to both the average level of burnout of both nurses (emotional exhaustion = 3.32, professional efficacy = 4.71, cynicism = 2.58) and social workers (emotional exhaustion = 2.68, professional efficacy = 4.62, cynicism = 2.17), our sample of jail officers had relatively higher levels of emotional exhaustion (3.58) and professional efficacy (4.31) and considerably higher levels of cynicism (3.47) (Greenglass et al., 2001; Wang et al., 2019).

Intervention Design

The data we acquired included both administrative data and surveys²⁷, the latter of which were collected in February, April/May (immediately post-intervention), and September/October (approximately five to six months post-intervention) of 2021. A more detailed description of the intervention and data collection processes is included in Appendix 4-A. We received our full set of follow-up administrative data in December 2021, including both turnover data and incident data. Our surveys measured a variety of outcomes which can be broadly categorized into outcomes related to well-being and outcomes with implications for service delivery. Primary well-being outcomes included burnout, belonging within the context of the department, self-efficacy, feelings of being understood, and job happiness. Outcomes related with potential influence on service delivery included employee perceptions of the individuals they serve (i.e., individuals incarcerated in the jail or detention center), deservingness of government resources, and perceptions about why individuals end up in jail. For our follow-up administrative data, we were able to get the initial variables - demographic information, tenure, overtime hours, performance review scores, and disciplinary actions - along with additional variables, including turnover date and type of turnover (e.g., resignations, retirement, dismissals, etc.) and incident

²⁷ We are always open to discuss the data we acquired; however, in compliance with our IRB protocol and data use agreement with our collaborator, we will not be publicly releasing individual-level data that were utilized in the evaluation of this social support intervention. We have uploaded our protocol, but for further transparency, we identify our human subjects approval, with our protocol identifier as follows: University of California, Berkeley Committee for the Protection of Human Subjects (CPHS) ID #2020-08-13528. Our pre-analysis plan is available on OSF: <https://osf.io/7e8zp/>

involvement data, specifically incident-level data on the type of incident, level of force used, whether the responding officer was injured, whether the incarcerated individual was injured, and how many officers (and which officers) were involved. It is important to note that the incident data we acquired do not have the ability to distinguish between who was actively responding to the incident, who was witnessing but perhaps did not physically engage with neither officers nor incarcerated individuals, who was writing the report, etc. Therefore, we interpret incident involvement broadly to mean engaging with the incident response process, which while limited in our ability to understand direct impacts of active response to incidents in the jail or detention center, are results are nevertheless of importance given the propensity for exposure to secondary trauma in correctional settings (Rhineberger-Dunn, Mack, & Baker, 2016).

Model

Our intervention was implemented through a randomized controlled trial in which we focused on (and are limited to) estimating the intention-to-treat (ITT) effect, specifically testing the impact of access to the peer support intervention on well-being and service delivery. Thus, we use ordinary least squares regression with heteroskedasticity (HC3) adjusted standard errors to test our primary survey outcome models as follows:

$$y_{mi} = \alpha + \beta_1 t_i + \gamma' x_i + \delta_j + \beta_0 y_{0i} + \eta_0 1_A (y_{01} = \emptyset) + \varepsilon_i$$

where m indicates the outcome of interest, $m \in \{0, \dots, m\}$, i the unit (i.e., employee survey participant), and y is the outcome value. Our average treatment effect (ATE) is recovered through with our treatment indicator taking on a value of 1 when a participant is randomized to the peer support group and 0 otherwise. Covariates are also included in the model for greater precision, as well as fixed effects for work location at randomization. Finally, in the cases where we also obtained a baseline measure of outcome, m , we include the baseline value in the model, or the mean-imputed value for those who did not take the baseline survey. An indicator variable for those who did not take the baseline survey is also included within this model. On the outcomes for which we did not obtain a baseline measurement, we simply include an indicator for whether or not the baseline survey was completed. Robustness checks (e.g., treatment indicator only models, non-supervisory, sworn officers only, those more likely to be engaged - i.e., those that took both the baseline and endline surveys, etc.) are included in Appendix 4-B.

For our turnover models, we utilize Cox proportional hazards models for three turnover-related outcomes, specifically: 1) all separations; 2) resignations; and 3) retirements. In the model table (reported within Appendix 4-C,) we also report the ordinary least squares with heteroskedasticity-robust standard errors (HC3) for the intention to quit survey outcome. For simplicity, we refer readers to the equation above for the intention to quit outcome and provide the below model to denote our model for the three administrative data turnover outcomes below:

$$h(t) = h_0(t) \exp(b_1 x_i + \delta_j)$$

where $h(t)$ is our nonparametric hazard function for time t , $h_0(t)$ is our baseline hazard, x_i is our covariate matrix and δ_j our location fixed effect. Finally, our incident data models are as follows, with the level of analysis being at the person-week level:

$$y_{miw} = \alpha + \beta_1 t_i + \gamma' x_i + \delta_j + \beta_0 y_{0i} + \varepsilon_i$$

where the subscripts and notation are quite similar to the survey outcome models, with the exception of each outcome now including the time subscript for week, w , with each outcome taking on two possible, non-null values; specifically, a 1 if the individual, i , is involved in an incident of that type for week, w and 0 otherwise, given person i is employed at week w . Standard errors are similarly robust to heteroskedasticity (HC3), though in these models, are also clustered on person (i.e., this level of incident data contains 712 employee clusters.)

Results

At the time of randomization, we ensured balance amongst observables of employees assigned to the treatment and control groups. In addition to the ethical motivations to ensure that individuals had access to some form of wellness resource throughout the trial, part of the motivation to have an active control group was to help reduce the threat of differential attrition. Thankfully, we found that survey response rates did not vary significantly between the treatment and control groups at any time point. The response rates for the treatment and control groups were 26.2% and 25.6%, respectively ($p = 0.85$) for the baseline survey and 22.0% and 21.1%, respectively for the endline survey ($p = 0.76$). Note that for the endline survey, we offered a financial incentive for participants, specifically, the opportunity to enter a raffle to win one of three, \$100-gift cards. Overall, the treatment and control groups were balanced on observables for the endline survey. Table 4.1 below displays summary statistics by the treatment status. Demographics, tenure, and location appear to be relatively balanced between the treatment and control groups, with the slight imbalance for the percentage of command staff (i.e., managerial sworn staff.) Robustness checks on the primary survey outcomes for deputies (frontline officers) only are provided in Appendix 4-B. Given that no supervisory staff are involved in incidents during this time period (this is expected, given their job responsibilities), no deputy-specific incident models are reported.

Survey Outcomes

Amongst the subset of individuals that responded to the final follow-up survey, we found evidence of a significant impact of the treatment group on well-being. Access to the peer support group significantly increased feelings of being understood at the $\alpha = 0.05$ level and significantly increased job happiness and self-efficacy at the $\alpha = 0.10$ level. While directionally-speaking, all of the treatment effects on well-being were in the hypothesized direction, composite burnout and belonging were not significantly different between the treatment and control groups. Results from the main well-being models are reported in Table 4.2 below, with robustness checks and several supplementary models are included in Appendix 4-B, as well as individual-item models for the feeling understood index, given its theorized significance in the treatment mechanism (available in Appendix 4-D.)

Table 4.1: Summary Statistics & Balance Table

	All	Control	Treatment	p-value: T=C
Male	77.9%	78.1%	77.8%	0.93
Tenure < 2 years	11.0%	12.1%	9.8%	0.34
Age (SD)	40.77 (10.16)	40.56 (10.14)	40.98 (10.20)	0.58
Asian	4.2%	3.9%	4.5%	0.71
Black	16.6%	16.6%	16.6%	1.00
Hispanic/Latinx	29.6%	29.8%	29.5%	0.94
White	47.1%	46.9%	47.2%	0.94
Multiracial/other race	2.5%	2.8%	2.2%	0.63
Based at jail	23.7%	25.0%	22.5%	0.43
Based at detention center	51.1%	50.3%	52%	0.65
Based at other location	25.1%	24.7%	25.6%	0.80
Command staff	15.7%	18.3%	13.2%	0.06
Baseline burnout (SD)	2.92 (1.33)	2.84 (1.31)	2.99 (1.35)	0.43
Baseline self-efficacy (SD)	4.16 (0.76)	4.18 (0.71)	4.14 (0.80)	0.74
Baseline belonging (SD)	3.14 (0.82)	3.17 (0.79)	3.12 (0.85)	0.71
Completed baseline survey	26.0%	25.6%	26.4%	0.80
Completed endline survey	21.6%	21.1%	22.2%	0.72
Observations	712	356	356	

Notes: Summary statistics for sworn employees. Column 4 reports p-values from t-tests on the differences in means between the treatment and control groups.

Table 4.2 (Well-being Outcomes)

	Composite burnout	Belonging index	Self- efficacy index	Job happiness	Feeling understood index
Treatment	-0.015 (0.131)	0.017 (0.142)	0.269* (0.154)	0.344* (0.176)	0.397** (0.159)
<i>n</i>	154	153	152	127	149
R-squared	0.400	0.315	0.251	0.216	0.112
Control Mean	0.167	-0.107	-0.301	-0.378	-0.437

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Access to the peer support program also improved attitudinal outcomes with implications for service delivery, namely perceptions of incarcerated individuals. Directionally speaking, the peer support treatment shifted attitudes in the hypothesized direction, with less belief, on average, that incarcerated individuals under their care were reckless, that their job was not to help residents, and that reasons that contribute to individuals being incarcerated in jail is due to dispositional factors (e.g., morals). Conversely, access to the peer support program increased beliefs that incarcerated individuals were not dangerous and that reasons that contribute to individuals being incarcerated in jail is due to situational factors (e.g., lack of economic opportunity). In terms of statistical significance, only the outcome on incarcerated individuals sharing values and beliefs with officers was significant ($\alpha = 0.05$). Table 4.3 below displays the results of each model, specifically the treatment coefficient and robust standard error.

Table 4.3 (Attitudinal Outcomes with Service Delivery Implications)

	Residents are reckless	Residents are not dangerous	Residents share values	Job is not to help	Dispositional factors index	Situational factors index
Treatment	-0.036 (0.184)	0.260 (0.167)	0.334** (0.158)	- 0.296 (0.26 0)	-0.024 (0.091)	0.045 (0.069)
<i>n</i>	150	150	149	147	150	150
R-squared	0.090	0.056	0.090	0.239	0.092	0.059
Control Mean	3.45	1.66	1.68	3.38	3.19	2.32

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Importantly, we also found that the intervention improved service delivery, namely nonsignificant but meaningful increases in the retention probability of officers assigned to the peer support program and significant increases in the likelihood of getting involved in cases of incarcerated individuals attempting suicide. Figure 4.1 below displays the Survival Probability of the treatment and control groups throughout the study period. For turnover specifically, we conduct Cox proportional hazard models with the same controls utilized in our survey analyses.²⁸ Full tables of the Cox proportional hazard turnover models are included in Appendix 4-C, along with the ordinary least squares with heteroskedasticity-robust standard error model for the intention to quit survey outcome. While not statistically significant, this difference is still quite important practically speaking and suggests that the reduced turnover in the treatment group is likely to translate into meaningful cost savings to the organization.

For incident data specifically, we analyze weekly-level incident data, where our primary outcomes are the number of or presence of involvement (i.e., binary indicator of involvement during the given week,) in incidents where officers reported engaging physically with incarcerated individuals (e.g., incidents that involve escorting individuals up through control holds, pointing a firearm, use of Oleoresin capsicum (OC) spray, and physical striking, etc.) Individuals are included in the model for as many weeks as they are employed, with incident data available through December 27, 2021.

Table 4.4 is included below, which reports the treatment effects and significance across the involvement (i.e., binary indicator of involvement over each week) within each type of incident as measured by the Sheriff Department, along with an indicator for involvement in any type of incident in the week.

We do not find significant differences in the likelihood of involvement in incidents of any type, nor incidents of the above specified types between the treatment and control group. It is important to note that these data do not currently have an indicator to identify an individual who was directly involved in the incident, and thus, involvement is currently defined as direct or indirect involvement, including anything from witnessing to hands-on involvement to intervene in the incident.

Additionally, these and any future analyses are exploratory analyses, and thus, should be interpreted as such. When interpreting these results, it is important to consider whether it was peer support that meaningfully changed and thereby facilitated improvement in these outcomes. While the inclusion of an active control group was intentional for the purpose of addressing the impact of a peer-focused component in particular, our results lend further support to this claim that perceived peer support is the meaningful lever for well-being and attitudes towards communities that public servants are tasked with supporting. We found a significant increase in both officers' feelings of being understood and self-efficacy, which suggests that, in fact, access to shared connections and understanding is the primary mechanism behind the intervention's benefit. Critically, when we focus specifically on the sub-sample of jail officers who are not supervisors (i.e., frontline officers), we find that the treatment effects for feeling understood by others amongst this sub-sample are primarily driven by feeling significantly more understood by

²⁸ Controls include department-reported demographics (i.e., race/ethnicity, sex - specifically in these models, we include the binary indicator for male - age, a binary indicator for tenure less than two years, and job role, which can take on values of command staff - i.e., supervisors - and deputy sheriff/other). We also include location fixed effects, which represent the employee's assigned work location at randomization.

fellow jail officers, leadership within the organization, and family/friends, which provides greater certainty into intervention’s mechanism (see Appendix 4-D).

Figure 4.1 (Comparison of Cox Proportional Hazards Model-Predicted Survival Probability)

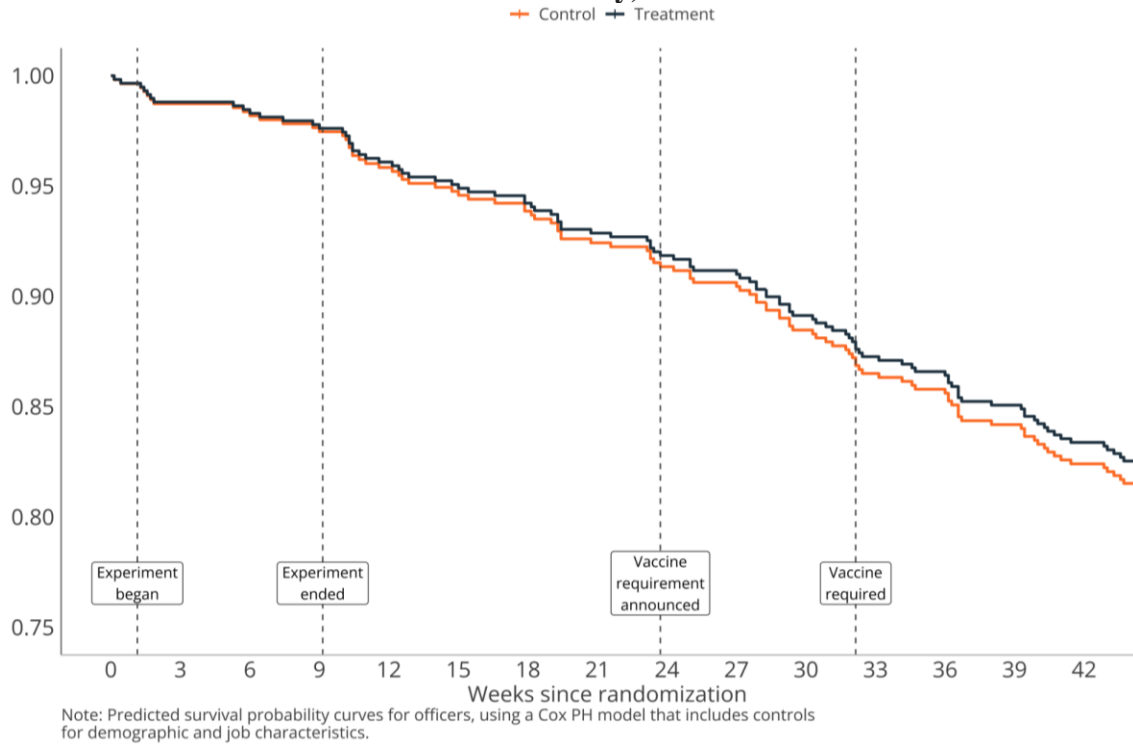


Table 4.4 (Incident Data Outcomes)

	Any incident	Use of force	Offense in custody	Attempted suicide	Injury, illness	Cell extraction
Treatment	0.004 (0.010)	0.007 (0.007)	-0.001 (0.007)	0.002 (0.002)	0.001 (0.006)	0.001 (0.001)
R-squared	0.676	0.283	0.346	0.041	0.190	0.016
Control mean	0.310	0.085	0.138	0.013	0.066	0.002
N Clusters (Officers)	712	712	712	712	712	712

* p < 0.1, ** p < 0.05, *** p < 0.01

Discussion

Our field experiment, one of the largest conducted on a peer support intervention such as this, highlights the critical importance of peer support: organization- or job-related barriers to well-being cannot be dealt with alone. Well-being, though often experienced on an individual level, is heavily influenced by systemic and social factors, and therefore, the solution to worsened well-being cannot be individual in nature (i.e., the burden to heal from system-based stressors cannot be placed on individual employees.) While our results are encouraging and suggest that even low-cost, low-touch interventions can not only meaningfully improve well-being of frontline correctional officers, but also their attitudes towards the incarcerated individuals they serve, there is still a substantial need for more research.

First, future research should expand upon our current study in several ways, including and perhaps especially addressing the limitations of this field experiment. We were limited from conducting a per-protocol analysis (i.e., estimating our local average treatment effect) given the fact that we could not measure who was engaging directly with the platform (i.e., we could not measure who responded to the anonymous platforms of any kind, nor who logged in to view these platforms.) Future iterations of this intervention should, to the extent possible and so long as confidentiality of participants is not jeopardized, attempt to measure strength of engagement with each component of the intervention itself. Additionally, given that our incident dataset could not distinguish between individuals who actively responded and those who perhaps witnessed or wrote the report only, we identify this as a limitation and a suggested next step for further research to identify impacts on each component of involvement in incidents in isolation. Critically, this intervention was conducted amongst officers who work in jails, rather than prisons, and this is important to consider when understanding both what the day-to-day job looks like, what the needs of the population are, and how long officers are interacting with the same individuals under their care. Future work should heavily prioritize attempting to replicate this study amongst correctional officers who work inside of prisons. Lastly, we acknowledge the critical importance of investigating both other types of social support, as well as the fact that peer support alone certainly is not a fix-all solution for improving the interactions between incarcerated individuals and correctional officers. Finally, we believe there is a need to understand the potential for differences in the likelihood of direct involvement in incidents, rather than all kinds of involvement, including indirect involvement. Given that the treatment improved well-being, it could be the case that supporting officers' wellness can strengthen their ability to do their job. Extant evidence suggests that there is a link between burnout amongst law enforcement and their propensity to engage in incidents with community members, and thus, identifying the impact of the treatment on direct involvement is warranted and important for understanding the ability of the treatment to meaningfully shift officer behavior (Burke and Mikkelsen 2005; Kop et al. 1999; Kop and Euwema 2001).

There is much more that can and should be done to improve both the well-being of officers working in carceral settings and the incarcerated individuals whose lives they have sworn to protect. Nevertheless, the results of our work imply that investments in the well-being of public servants improve their job satisfaction and suggest the possibility of improving the way in which frontline, government workers perceive those they are hired to serve, as measured through intervening solely upon the workers themselves. To the extent that this may impact direct interactions between frontline workers and those they serve, this be a potentially promising intervention to consider scaling up in the hopes of improving the administration of justice through direct investments in the workforce, fostering peering support through even low-cost,

light-touch interventions that rely upon critical resources public organizations already possess: their dedicated frontline staff.

Appendix 4-A: Intervention/Data Collection Details and Example Prompts

Further Intervention and Data Collection Details

First, we sent the baseline survey on February 3, 2021, which was open for three weeks. In mid-February, we acquired and utilized administrative data that included demographics, tenure, as well as performance review scores, disciplinary records, and hours of overtime from the previous year. We used these data to perform block-randomization²⁹ on February 17, 2021 into either the active control group or treatment group. The first week of emails was sent on February 25, 2021, at 2:00 p.m. PST/3:00 p.m. MST, with the last being sent on April 15, 2021. The midline survey was sent to all employees on April 29, 2021, and was also open for three weeks, like the baseline survey. Our endline survey was originally planned for October of 2021; however, because of a vaccination mandate for city employees that went into effect on September 30, 2021, we made the decision, with the support of our government partner, to move up our endline survey distribution date and were able to launch the endline survey on September 20, 2021.

Example Control Group (Individual Wellness) Prompt

A healthy body needs to have the companionship of a healthy mind. Having some time to collect our thoughts or to decompress from a hard day on the job helps us muster the strength of spirit to face our challenges.

This week, we would like you to take some time to write down what was difficult to deal with this week and how you will help yourself decompress.

You can write a note to yourself by clicking [here](#). No one at [org name] will have access to the notes that you write to yourself.

Example Treatment Group (Peer Wellness) Prompt

Last week, your colleagues shared a lot of great advice that would help someone who is just starting out, including this: (Shared story). You can access more stories from fellow deputies by clicking [here](#).

As deputies, we work the toughest beat there is. Think about a time when a fellow deputy helped you navigate an emotionally challenging situation at work. How would you offer support to someone in a similar situation?

You can share your advice anonymously with your fellow deputies by clicking [here](#)

²⁹ We blocked on sworn status (i.e., an indicator of whether the employee is a deputy or civilian staff member), whether the employee was identified as male or female in the administrative records, whether the employee was identified as White or another race in administrative records, and whether the employee had worked for the department for less than five years or five years or greater. Note that the administrative data reported the sex and race or ethnicity among other demographic factors. The options for race and ethnicity were Asian, Black or African American, Hispanic/Latino, Other, Two or More Races, and White. Note that these categories, as recorded in the administrative data, were non-overlapping, and therefore, employees are only identified as one of these racial or ethnic categories.

Appendix 4-B: Robustness Checks & Supplementary Models (Survey Outcomes)

In the tables below, outcome models may be represented in panels. Each panel is specified as follows (this information is also included in the table footnote for each table, where relevant:)

- **Panel A:** Repeated the main model (presented in body of paper) for easier comparison with supplementary models.
- **Panel B:** Supplementary model that only includes officers who completed both the baseline and endline surveys.
- **Panel C:** Supplementary model that includes only deputies, given there was some imbalance in command staff (managers) in assignment to treatment groups.

B1: Main and Supplementary Models (Primary Well-Being Outcomes)

	Composite burnout	Belonging index	Self-efficacy index	Job happiness	Feeling understood index
Panel A					
Treatment	-0.021 (0.183)	0.015 (0.126)	0.216* (0.124)	0.917* (0.473)	0.646** (0.263)
<i>n</i>	154	153	152	127	149
R-squared	0.400	0.315	0.251	0.216	0.112
Control Mean	3.587	2.808	3.806	3.735	4.095
Panel B					
Treatment	-0.273 (0.186)	0.041 (0.146)	-0.023 (0.176)	1.570** (0.617)	0.757** (0.350)
<i>n</i>	89	85	85	74	88
R-squared	0.705	0.578	0.386	0.278	0.142
Control Mean	3.716	2.832	4.037	3.396	4.504

Panel C

Treatment	-0.060 (0.219)	0.081 (0.152)	0.366** (0.154)	0.489 (0.512)	0.787** (0.323)
<i>n</i>	112	111	110	89	108
R-squared	0.320	0.269	0.288	0.274	0.148
Control Mean	3.616	2.749	3.789	4.039	3.908

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

+**Panel A:** Repeated the main model (presented in body of paper) for easier comparison with supplementary models; **Panel B:** Supplementary model that only includes officers who completed both the baseline and endline surveys; **Panel C:** Supplementary model that reports only deputies, given there was some imbalance in command staff (managers) in assignment to treatment groups.

Note: Table reports OLS coefficient estimates (robust SE in parentheses) for the following dependent variables. Column 1: The employee's composite burnout score, the mean of the three Maslach Burnout Inventory components, on a scale of 0-6, where 6 = highest burnout. Column 2: The mean across six items measuring feelings of belonging, on a scale of 1-5 where 5 = highest belonging. Column 3: The mean across two items measuring feelings of self-efficacy, on a scale of 1-5 where 5 = highest self-efficacy. Column 4: 'How would you rate your happiness with your job?' on a scale of 1-10 with 10 = happiest. Column 5: The mean across five items measuring the extent to which the employee feels understood by different groups, on a scale of 1-10 with 10 = feels most understood. In Panel A, the sample includes all sworn officers who responded to the endline survey. The model includes a control for the baseline level of the dependent variable (DV) if it was measured at baseline. Baseline levels are imputed with the mean if missing and a binary indicator equal to 1 if the baseline survey was not completed is included in the models. Models for which the DV was not measured at baseline include a binary indicator variable equal to 1 if the employee did not take the baseline survey. In Panel B, the sample includes only officers who responded to both the baseline and endline surveys, and the model includes a control for the baseline level of the dependent variable (DV) if it was collected. Panel C's sample is similar to Panel A but excludes managerial staff. All panels include controls for race/ethnicity, male, age, a binary indicator for tenure less than two years, and job role (command staff, deputy sheriff/other). Location fixed effects represent the employee's assigned work location at randomization.

B2: Main and Supplementary Models (Individual Burnout Subscales)

	Exhaustion	Professional efficacy	Cynicism	Composite burnout
Panel A				
Treatment	0.093 (0.235)	0.157 (0.192)	-0.012 (0.243)	-0.021 (0.183)
<i>n</i>	154	154	154	154
R-squared	0.346	0.283	0.383	0.400
Control Mean	4.639	3.993	4.128	3.587

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

+**Panel A:** Repeated the main model (presented in body of paper) for easier comparison with supplementary models.

Note: Table reports OLS coefficient estimates (robust SE in parentheses) for the following dependent variables. Column 1: The employee's average exhaustion score, the mean of five items on the Maslach Burnout Inventory, on a scale of 0-6, where 6 = highest exhaustion. Column 2: The employee's average professional efficacy score, the mean of six items on the Maslach Burnout Inventory, on a scale of 0-6, where 6 = highest professional efficacy. Column 3: The employee's average cynicism score, the mean of five items on the Maslach Burnout Inventory, on a scale of 0-6, where 6 = highest cynicism. Column 4: The employee's composite burnout score, the mean of the three Maslach Burnout Inventory components, on a scale of 0-6, where 6 = highest burnout. In Panel A, the sample includes all sworn officers who responded to the endline survey. The model includes a control for the baseline level of the dependent variable (DV) if it was measured at baseline. Baseline levels are imputed with the mean if missing and a binary indicator equal to 1 if the baseline survey was not completed is included in the models. Models for which the DV was not measured at baseline include a binary indicator variable equal to 1 if the employee did not take the baseline survey. In Panel B, the sample includes only officers who responded to both the baseline and endline surveys, and the model includes a control for the baseline level of the dependent variable (DV) if it was collected. Panel C's sample is similar to Panel A but excludes managerial staff. All panels include controls for race/ethnicity, male, age, a binary indicator for tenure less than two years, and job role (command staff, deputy sheriff/other). Location fixed effects represent the employee's assigned work location at randomization.

B3: Main and Supplementary Models (Beliefs About Incarcerated Individuals Outcomes)

	Feel respected	Residents reckless	Residents not dangerous	Residents share values	Beliefs about residents index
Panel A					
Treatment	0.119 (0.232)	-0.036 (0.184)	0.260 (0.167)	0.334** (0.158)	0.186 (0.134)
n	150	150	150	149	150
R-squared	0.135	0.090	0.056	0.090	0.086
Control Mean	3.081	3.450	1.655	1.678	2.242

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

+**Panel A:** Repeated the main model (presented in body of paper) for easier comparison with supplementary models; **Panel B:** Supplementary model that only includes officers who completed both the baseline and endline surveys; **Panel C:** Supplementary model that reports only deputies, given there was some imbalance in command staff (managers) in assignment to treatment groups.

Note: Table reports OLS coefficient estimates (robust SE in parentheses) for the following dependent variables. Column 1: 'I feel respected by residents,' on a scale of 1-5 where 5 = strongly disagree. Column 2: 'Residents are generally reckless,' on a scale of 1-5 where 5 = strongly agree. Column 3: 'Residents are not dangerous,' on a scale of 1-5 where 5 = strongly agree. Column 4: 'Residents share my values and beliefs,' on a scale of 1-5 where 5 = strongly agree. Column 6: The mean across four items measuring attitudes toward residents, on a scale of 1-5 where 5 = most positive. In Panel A, the sample includes all sworn officers who responded to the endline survey. The model includes a control for the baseline level of the dependent variable (DV) if it was measured at baseline. Baseline levels are imputed with the mean if missing and a binary indicator equal to 1 if the baseline survey was not completed is included in the models. Models for which the DV was not measured at baseline include a binary indicator variable equal to 1 if the employee did not take the baseline survey. In Panel B, the sample includes only officers who responded to both the baseline and endline surveys, and the model includes a control for the baseline level of the dependent variable (DV) if it was collected. Panel C's sample is similar to Panel A but excludes managerial staff. All panels include controls for race/ethnicity, male, age, a binary indicator for tenure less than two years, and job role (command staff, deputy sheriff/other). Location fixed effects represent the employee's assigned work location at randomization.

B4: Main and Supplementary Models (Officer Orientation towards Their Job Outcomes)

	Job isn't to help	Access training	Access treatment	Beliefs about access index
Panel A				
Treatment	-0.296 (0.260)	-0.095 (0.264)	0.055 (0.206)	0.067 (0.197)
n	147	147	147	147
R-squared	0.239	0.181	0.165	0.261
Control Mean	3.380	5.082	5.658	5.125

* p < 0.1, ** p < 0.05, *** p < 0.01

+**Panel A:** Repeated the main model (presented in body of paper) for easier comparison with supplementary models.

Note: Table reports OLS coefficient estimates (robust SE in parentheses) for the following dependent variables. Column 1: 'The job of a jail is to keep the public safe, not help residents,' on a scale of 1-7 where 7 = strongly agree. Column 2: 'Residents should have access to academic and vocational training,' on a scale of 1-7 where 7 = strongly agree. Column 3: 'Residents should have access to drug and alcohol treatment,' on a scale of 1-7 where 7 = strongly agree. Column 4: The mean across 3 items measuring beliefs about access to services and the purpose of jail, on a scale of 1-7 where 7 = highest endorsement of the rehabilitative purpose of jail. In Panel A, the sample includes all sworn officers who responded to the endline survey. The model includes a control for the baseline level of the dependent variable (DV) if it was measured at baseline. Baseline levels are imputed with the mean if missing and a binary indicator equal to 1 if the baseline survey was not completed is included in the models. Models for which the DV was not measured at baseline include a binary indicator variable equal to 1 if the employee did not take the baseline survey. In Panel B, the sample includes only officers who responded to both the baseline and endline surveys, and the model includes a control for the baseline level of the dependent variable (DV) if it was collected. Panel C's sample is similar to Panel A but excludes managerial staff. All panels include controls for race/ethnicity, male, age, a binary indicator for tenure less than two years, and job role (command staff, deputy sheriff/other). Location fixed effects represent the employee's assigned work location at randomization.

B5: Main and Supplementary Models (Beliefs About Reasons for Incarceration Outcomes)

	Lack of strong families and networks	Lack of economic opportunity	Bad luck	Bad pers. choice	Societal factors	Mental health challenges
Panel A						
Treatment	0.130 (0.106)	0.019 (0.131)	0.171 (0.107)	-0.044 (0.101)	-0.058 (0.119)	-0.056 (0.079)
n	150	149	149	150	149	150
R-squared	0.090	0.072	0.064	0.078	0.059	0.042
Control Mean	2.613	2.106	1.603	3.221	2.372	2.902

* p < 0.1, ** p < 0.05, *** p < 0.01

+**Panel A:** Repeated the main model (presented in body of paper) for easier comparison with supplementary model.

Note: Table reports OLS coefficient estimates (robust SE in parentheses) for the following dependent variables. For all models shown, the outcome questions began with, 'In your opinion, how much do these factors contribute to the reason the average resident is in jail?' and were measured on a scale of 1 (none) to 4 (all). Column 1: Lack of strong families and networks Column 2: Lack of economic opportunity Column 3: Bad luck Column 4: Bad personal choices Column 5: Societal factors Column 6: Mental health challenges Column 7: Bad moral decisions In Panel A, the sample includes all sworn officers who responded to the endline survey. The model includes a control for the baseline level of the dependent variable (DV) if it was measured at baseline. Baseline levels are imputed with the mean if missing and a binary indicator equal to 1 if the baseline survey was not completed is included in the models. Models for which the DV was not measured at baseline include a binary indicator variable equal to 1 if the employee did not take the baseline survey. In Panel B, the sample includes only officers who responded to both the baseline and endline surveys, and the model includes a control for the baseline level of the dependent variable (DV) if it was collected. Panel C's sample is similar to Panel A but excludes managerial staff. All panels include controls for race/ethnicity, male, age, a binary indicator for tenure less than two years, and job role (command staff, deputy sheriff/other). Location fixed effects represent the employee's assigned work location at randomization.

Appendix 4-C: Model Results for Administrative Data

C1: Turnover and Intention to Quit Models (Cox Proportional Hazard Models for Turnover, Ordinary Least Squares for Intention to Quit)

	Hazard Ratio: Separated (all reasons)	Hazard Ratio: Resigned	Hazard Ratio: Retired	Intention to Quit
Treatment	0.938 (0.187)	0.926 (0.221)	0.522 (0.283)	-0.061 (0.081)
n	712	712	712	148
Control Mean	0.148	0.103	0.036	0.499

* p < 0.1, ** p < 0.05, *** p < 0.01

+Table reports the Cox proportional hazard ratios in columns 1-3, and the OLS coefficient estimate in column 4 (with robust standard errors in parentheses). The dependent variable (DV) in column 1 is a binary variable equal to 1 if the employee separated from their job for any reason. The DV in column 2 is a binary variable equal to 1 if the employee resigned from their job, and the DV in column 3 is a binary indicator that equals 1 if the employee retired. The DV in column 4 the employee's response to the endline survey question: 'Are you considering leaving your job in the next year?' as a binary indicator where 1 = Yes. In columns 1-3, the sample includes all officers. In column 4, the sample includes officers who responded to the endline survey, with a control for the baseline level of intent to quit (missing baseline values were imputed with the mean and a binary indicator for missing values was included). All models include fixed effects for the employee's assigned work location at randomization as well as controls for demographic and job characteristics.

Appendix 4-D: Supplementary Models for Clarifying the Treatment Mechanism

D1: Main and Supplementary Models (Individual Feeling Understood Items)

	Fellow deputies	Civilian staff	Leadership	Family and Friends	City Residents
Treatment	0.729* (0.436)	0.450 (0.465)	0.760** (0.373)	0.854* (0.439)	0.215 (0.307)
n	151	151	151	151	149
R-squared	0.061	0.063	0.165	0.123	0.069
Control Mean	7.094	3.801	2.150	5.975	1.834
Treatment	0.561 (0.557)	0.999* (0.582)	1.036* (0.533)	0.784 (0.534)	0.407 (0.449)
n	88	88	88	88	88
R-squared	0.046	0.135	0.230	0.191	0.137
Control Mean	7.466	3.996	2.232	6.780	2.048
Treatment	0.911* (0.547)	0.367 (0.600)	0.943** (0.425)	0.974* (0.541)	0.315 (0.404)
n	110	110	110	110	108
R-squared	0.100	0.085	0.223	0.174	0.076
Control Mean	6.870	3.631	2.087	5.742	1.845

Appendix 4-E - Index Outcome Details

Below, we describe the survey outcomes that we collected, the inventories they were borrowed from, if applicable, and in which surveys that they were utilized.

Burnout - Maslach Burnout Inventory

We utilized the Maslach Burnout Inventory (MBI) to measure burnout. The MBI is a validated and reliable instrument that measures burnout, including three identified dimensions: exhaustion, professional efficacy, and cynicism (Maslach & Jackson, 1981). Specifically, we utilized the MBI General Survey, which, as its name implies, is targeted towards a more general population, rather than an occupational group (e.g., like the MBI for Human Services workers). The MBI General Survey has 16 questions, with five pertaining to the exhaustion subscale, six pertaining to the professional efficacy subscale, and five pertaining to the cynicism subscale. Inventory items ask participants how often they experience each of the feelings described in the 16 items on a seven-point scale from “Never” to “Every day”. The full MBI General Survey was used in each survey - baseline, midline, and endline. In terms of reliability, both the composite and dimensional components of burnout measurement reliability is quite strong, with the Cronbach’s alpha coefficients being 0.92 for the composite measure and 0.89, 0.78, and 0.94 for the cynicism, professional efficacy, and exhaustion dimensions, respectively.

Belonging

We also asked participants questions about how much they felt like they belonged within their organization. This measure of belonging included six questions on a five-point Likert scale, where participants indicated the extent to which they agreed with each statement. Some of the questions included in this index were borrowed from the Loneliness at Work questionnaire (Wright et al., 2006) (e.g., “There is someone at work I can talk to about my day to day problems if I need to,”) while others were developed specifically for the purpose of evaluating the impact of this peer support intervention. Examples of these items included: “When something bad happens at work, I feel that maybe I don’t belong here,” and “I feel like I belong at work.” All eight items were used in each survey - baseline, midline, and endline. This index appears to have strong reliability, with a Cronbach’s alpha coefficient of 0.81.

Self-Efficacy

A subset of questions from the General Self-Efficacy survey were included in the baseline, midline, and endline surveys (Schwarzer & Jerusalem, 1995). Four questions on self-efficacy were used in the baseline and midline surveys, though this section was shortened to two questions in the endline survey. Response options were on a five-point Likert scale, where participants indicated the extent to which they agreed with each statement. Examples of these items included: “I will be able to successfully overcome many challenges,” and “Even when things are tough, I can perform quite well.” While measurement literature typically suggests a minimum of three items for an index, the two self-efficacy questions in the endline survey still demonstrated adequate reliability, with a Cronbach’s alpha coefficient of 0.72.

Feeling Understood

Five questions were included about feeling understood ask participants to consider how much each groups of people understand the challenges they face at work every day, with each question

identifying a different group (i.e., fellow deputies/civilian staff, civilian staff or deputies - specifically whichever group they do not belong to, DSD leadership, family and friends, and city residents.) The feeling understood index was only measured in the endline survey, and each question is measured on a five-point Likert scale. In terms of internal consistency, this measure was somewhat lower than the standard for adequate reliability at 0.65. Thus, the individual item analyses for the feeling understood index are provided in Appendix D (along with the deputies-only/non-supervisory sworn staff analysis.)

Perceptions of Incarcerated Individuals

One of the sets of items that we measured that has implications for service delivery is the group of questions addressing officers' perceptions of incarcerated individuals. Each question is measured on a five-point Likert scale. Examples include: 1) "Inmates are not dangerous" and 2) "Inmates share my values and beliefs." Note that these questions use the word "inmate" to refer to an incarcerated individual because this is the term that is used within the institution. No index was created from these items, and therefore, no Cronbach's alpha is reported.

Reason for Incarceration

We also measured the extent to which officers believed that the reason for an individual's incarceration was due to a set of factors presented. Each question is measured on a four-point Likert scale. There were two indices created from this set of items, per previous literature, namely the dispositional and situational indices. The dispositional index reflects items that pertain to personal ("intrinsic") factors (e.g., "bad moral decisions"), while situational items address the systemic factors that contribute to incarceration (e.g., "lack of economic opportunity"). The dispositional index contains two items and has a Cronbach's alpha of 0.70, while the situational index was created from five items and has a Cronbach's alpha of 0.62. Thus, we also report the individual item models within Appendix D, given the subpar Cronbach's alpha for the situational index.

Appendix 4-F: Materials and Methods Statement

While our data will not be made publicly available, we are always open to discuss the data we acquired; however, in compliance with our IRB protocol and data use agreement with our collaborator, we will not be publicly releasing individual-level data that were utilized in the evaluation of this social support intervention. We have uploaded our protocol, but for further transparency, we identify our human subjects approval, with our protocol identifier as follows: University of California, Berkeley Committee for the Protection of Human Subjects (CPHS) ID #2020-08-13528.

Conclusion

This dissertation included four essays, each of which address an under-discussed and critical component in the study of the administration of justice, namely that of embracing a public management perspective in the study of correctional officer decision-making. Correctional officers play an incredibly crucial role in the implementation of public policy, though the stresses they face on the job, the resources they have available to them to implement correctional policy, and their perspectives on these policies are seldom taken under consideration (Lerman & Harney, 2019). This is a vast oversight if we are truly interested in understanding how to bolster, reform, or redesign the way we administer and achieve justice. Especially given the fact that correctional officers often come from similar socioeconomic backgrounds as the incarcerated populations they are hired to protect the safety of (Jurik, 1985), and that the criminal justice system disparately harms low-income communities, especially low-income communities of color (DeVylder et al., 2021; Edwards et al., 2019; Johnson, 2006; Johnson et al., 2018; Omori & Petersen, 2020; Petrocelli, Piquero, & Smith, 2003; Pettit & Western, 2004; Sewell et al., 2016), failing to invest in people – both correctional officers and incarcerated people alike – fails to address the systemic factors that contribute to crime and violence in the first place.

Collectively, each of these essays suggests the critical importance of embracing public management – from fostering deep and genuine recognition of the value of public servants, the capacity of government, and the power of frontline workers in developing positive relationships (or potentially repairing negative relationships) with those served by government. No matter how thoughtful a policymaker may be in their capacity to develop new, innovative, and promising justice system policies, if the perspectives and needs of those who are implementing those policies are not taken into consideration, then these policies may fail to achieve their projected outcomes. If we are to truly serve our communities – and serve them justly and equitably – then we must consider the constraints within which those implementing policies operate, empower them with resources to do the job we task them with, and uplift the solutions of those who are impacted, including street-level bureaucrats and the communities they serve.

References

- Abdel-Salam, S., Antonio, M. E., Bratina, M. P., & Kilmer, A. (2023). Rapport and relationship building in a therapeutic community: Examining the dynamic between correctional officers and incarcerated persons. *Criminal Justice Policy Review*, 34(1), 43-64.
- Acevedo, K. C., & Bakken, T. (2003). Women adjusting to prison: Disciplinary behavior and the characteristics of adjustment. *Journal of Health & Social Policy*, 17(4), 37-60.
- Ahola, K., Toppinen-Tanner, S., & Seppänen, J. (2017). Interventions to alleviate burnout symptoms and to support return to work among employees with burnout: Systematic review and meta-analysis. *Burnout Research*, 4, 1-11.
- Alarid, L. F. (2000). Sexual assault and coercion among incarcerated women prisoners: Excerpts from prison letters. *The Prison Journal*, 80(4), 391-406.
- Alberts, D. S., & R. E. Hayes. (2006). Understanding command and control. Assistant secretary of defense (C3I/Command Control Research Program) Washington DC.
- Albrow, M. (1970). Bureaucracy. Bloomsbury Publishing.
- Allard, T. J., Wortley, R. K., & Stewart, A. L. (2008). The effect of CCTV on prisoner misbehavior. *The Prison Journal*, 88(3), 404-422.
- Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63(1), 1-18. <https://doi.org/10.1111/j.2044-8325.1990.tb00506.x>
- Allgood, M., Jensen U. T., & Stritch, J. M. (2022). Work-family conflict and burnout amid COVID-19: Exploring the mitigating effects of instrumental leadership and social belonging. *Review of Public Personnel Administration*, 0734371X221101308.
- Alonso, J. M., & Andrews, R. (2016). How privatization affects public service quality: An empirical analysis of prisons in England and Wales, 1998-2012. *International Public Management Journal*, 19(2), 235-263.
- Alter, G. C., & Vardigan, M. (2015). Addressing global data sharing challenges. *Journal of Empirical Research on Human Research Ethics*, 10(3), 317-323.
- Amirkhanyan, A. A., Cheon O., Davis, J. A., Meier K. J., & Wang, F. (2019). Citizen participation and its impact on performance in US nursing homes. *The American Review of Public Administration*, 49(7), 840-854.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411.
- Arbach-Lucioni, K., Martínez-García, M., & Andrés-Pueyo, A. (2012). Risk factors for violent behavior in prison inmates: A cross-cultural contribution. *Criminal Justice and Behavior*, 39(9), 1219-1239.
- Armstrong, T. A. (2002). The effect of environment on the behavior of youthful offenders: A randomized experiment. *Journal of Criminal Justice*, 30(1), 19-28.
- Associated Press. (2018, January 10). Why are suicide rates so high among corrections officers? Retrieved November 4, 2018, from <https://nypost.com/2018/01/09/why-are-suicide-rates-so-high-among-corrections-officers/>
- Augustyn, R. A., ten Benschel, T., Lytle, R. D., Gibbs, B. R., & Sample, L. A. (2020). " Older" Inmates in Prison: Considering the Tipping Point of Age and Misconduct. *Criminology, Crim. Just. L & Soc'y*, 21, 1.

- Babor, T. F., & Grant, M. (1989). From clinical research to secondary prevention: International collaboration in the development of the Alcohol Disorders Identification Test (AUDIT). *Alcohol Health & Research World*, 13(4), 371-374.
- Baggio, S., Peigné, N., Heller, P., Gétaz, L., Liebreuz, M., & Wolff, H. (2020). Do overcrowding and turnover cause violence in prison?. *Frontiers in Psychiatry*, 10, 1015.
- Baias, C. V. (2022). The Epidemiology of Recurrent Violence and Its Relationship with Sentence Time in the Romanian Juvenile Prison System: A Two-Year Cohort Study. *Open Journal of Epidemiology*, 12(1), 12-30.
- Baicker, K., Cutler, D., & Song, Z. (2010). Workplace wellness programs can generate savings. *Health Affairs*, 29(2), 304-311.
- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*.
- Bakker, A. B., & Demerouti, E. (2017). Job demands–resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology* 22(3), 273.
- Bakker, A. B., Demerouti, E., & Euwema, M. C. (2005). Job resources buffer the impact of job demands on burnout. *Journal of Occupational Health Psychology* 10(2), 170.
- Bakker, A. B., Demerouti, E., & Schaufeli, W. (2003). Dual processes at work in a call center: An application of the job demands-resources model. *European Journal of Work and Organizational Psychology* 12(4), 393-417.
- Bales, W. D., & Miller, C. H. (2012). The impact of determinate sentencing on prisoner misconduct. *Journal of Criminal Justice*, 40(5), 394-403.
- Balko, R. (2012). The 1960's – From root causes to brute force. In *Rise of the Warrior Cop*. New York: PublicAffairs.
- Barnes, C. Y., & Henly, J. R. (2018). “They are underpaid and understaffed”: How clients interpret encounters with street-level bureaucrats. *Journal of Public Administration Research and Theory*, 28(2), 165-181.
- Barnes, J. B., Nickerson, A., Adler, A. B., & Litz, B. T. (2013). Perceived military organizational support and peacekeeper distress: A longitudinal investigation. *Psychological Services*, 10(2), 177. <https://doi.org/10.1037/a0032607>
- Barrett, A. N., Kuperminc, G. P., & Lewis, K. M. (2013). Acculturative stress and gang involvement among Latinos: US-born versus immigrant youth. *Hispanic Journal of Behavioral Sciences*, 35(3), 370-389.
- Baruch-Feldman, C., Brondolo, E., Ben-Dayan, D., & Schwartz, J. (2002). Sources of social support and burnout, job satisfaction, and productivity. *Journal of Occupational Health Psychology*, 7(1), 84.
- Baskin, D. R., Sommers, I., & Steadman, H. J. (1991). Assessing the impact of psychiatric impairment on prison violence. *Journal of Criminal Justice*, 19(3), 271-280.
- Bayens, G. J., Williams, J. J., & Smykla, J. O. (1997). Jail type and inmate behavior: A longitudinal analysis. *Fed. Probation*, 61, 54.
- Beehr, T. A., Farmer, S. J., Glazer, S., Gudanowski, D. M., & Nair, V. N. (2003). The enigma of social support and occupational stress: Source congruence and gender role effects. *Journal of Occupational Health Psychology*, 8(3), 220. <https://doi.org/10.1037/1076-8998.8.3.220>
- Beh, L. S., & Loo, L. H. (2012). Job stress and coping mechanisms among nursing staff in public health services. *International Journal of Academic Research in Business and Social Sciences*, 2(7), 131.

- Beijersbergen, K. A., Dirkzwager, A. J., Eichelsheim, V. I., Van der Laan, P. H., & Nieuwbeerta, P. (2015). Procedural justice, anger, and prisoners' misconduct: A longitudinal study. *Criminal Justice and Behavior, 42*(2), 196-218.
- Bell, K. E. (2017). Prison violence and the intersectionality of race/ethnicity and gender. *Criminology, Crim. Just. L & Soc'y, 18*, 106.
- Bench, L. L., & Allen, T. D. (2003). Investigating the stigma of prison classification: An experimental design. *The Prison Journal, 83*(4), 367-382.
- Berg, M. T., & DeLisi, M. (2006). The correctional melting pot: Race, ethnicity, citizenship, and prison violence. *Journal of Criminal Justice, 34*(6), 631-642.
- Berk, R. A., Kriegler, B., & Baek, J. H. (2006). Forecasting dangerous inmate misconduct: An application of ensemble statistical procedures. *Journal of Quantitative Criminology, 22*, 131-145.
- Berkeley Underground Scholars. Underground scholars language guide: A guide for communicating about people involved in the carceral system. Retrieved July 13, 2022 from: <https://undergroundscholars.berkeley.edu/blog/2019/3/6/language-guide-for-communicating-about-those-involved-in-the-carceral-system>.
- Bidna, H. (1975). Effects of increased security on prison violence. *Journal of Criminal Justice, 3*(1), 33-45.
- Bierie, D. M. (2012). Is tougher better? The impact of physical prison conditions on inmate violence. *International Journal of Offender Therapy and Comparative Criminology, 56*(3), 338-355.
- Bierie, D. M. (2013). Procedural justice and prison violence: Examining complaints among federal inmates (2000–2007). *Psychology, Public Policy, and Law, 19*(1), 15.
- Bjorklund Jr, P., Daly, A. J., Ambrose, R., & van Es, E. A. (2020). Connections and capacity: An exploration of preservice teachers' sense of belonging, social networks, and self-efficacy in three teacher education programs. *AERA Open, 6*(1), 2332858420901496.
- Blitz, C. L., Wolff, N., & Shi, J. (2008). Physical victimization in prison: The role of mental illness. *International Journal of Law and Psychiatry, 31*(5), 385-393.
- Blowers, A. N., & Blevins, K. R. (2015). An examination of prison misconduct among older inmates. *Journal of Crime and Justice, 38*(1), 96-112.
- Boessen, A., & Cauffman, E. (2016). Moving from the neighborhood to the cellblock: The impact of youth's neighborhoods on prison misconduct. *Crime & Delinquency, 62*(2), 200-228.
- Bonner, H. S., Rodriguez, F. A., & Sorensen, J. R. (2017). Race, ethnicity, and prison disciplinary misconduct. *Journal of Ethnicity in Criminal Justice, 15*(1), 36-51.
- Booyens, K., & Bezuidenhout, C. (2014). An exploratory study of sex and rape behind bars in a South African prison. *International Criminal Justice Review, 24*(4), 377-391.
- Borg, M. G., & Riding, R. J. (1991). Towards a model for the determinants of occupational stress among schoolteachers. *European Journal of Psychology of Education, 6*, 355-373.
- Bosma, A. Q., C. van Ginneken, E. F., Sentse, M., & Palmen, H. (2020). Examining prisoner misconduct: A multilevel test using personal characteristics, prison climate, and prison environment. *Crime & Delinquency, 66*(4), 451-484.
- Boudoukha, A. H., Altintas, E., Rusinek, S., Fantini-Hauwel, C., & Hautekeete, M. (2013). Inmates-to-staff assaults, PTSD and burnout: Profiles of risk and vulnerability. *Journal of Interpersonal Violence, 28*(11), 2332-2350.

- Boudoukha, A. H., Hautekeete, M., Abdellaoui, S., Groux, W., & Garay, D. (2010). Burnout and victimisation: impact of inmates' aggression towards prison guards. *L'encephale*, 37(4), 284-292.
- Brazão, N., Rijo, D., Salvador, M. D. C., & Pinto-Gouveia, J. (2018). Promoting emotion and behavior regulation in male prison inmates: A secondary data analysis from a randomized controlled trial testing the efficacy of the growing pro-social program. *Law and Human Behavior*, 42(1), 57.
- Brief, A. P., & Atieh, J. M. (1987). Studying job stress: Are we making mountains out of molehills?. *Journal of Organizational Behavior*, 8(2), 115-126.
<https://doi.org/10.1002/job.4030080203>
- Briggs, C. S., Sundt, J. L., & Castellano, T. C. (2003). The effect of supermaximum security prisons on aggregate levels of institutional violence. *Criminology*, 41(4), 1341-1376.
- Brewin C. R., Andrews, B., & Valentine, J. D. (2000.) Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology*, 68, 748-766. <https://doi.org/10.1037//0022-006X.68.5.748>
- Brooke, E. J. (2020). Service experience varies: Exploring the association between military service and prison misconduct among state inmates. *Corrections*, 5(4), 292-313.
- Brower, J. (2013). Correctional officer wellness and safety literature review. Washington, DC: U.S. Department of Justice Office of Justice Programs Diagnostic Center.
- Bunde, J., & Suls, J. (2006). A quantitative analysis of the relationship between the Cook-Medley Hostility Scale and traditional coronary artery disease risk factors. *Health Psychology*, 25, 493-500.
- [Bureau of Labor Statistics. \(2021\).](https://www.bls.gov/oes/current/oes_nat.htm) May 2020 National Occupational Employment and Wage Estimates United States. Retrieved August 18, 2021, from https://www.bls.gov/oes/current/oes_nat.htm
- Burke, R. J., & Mikkelsen, A. (2005). Burnout, job stress and attitudes towards the use of force by Norwegian police officers. *Policing: An International Journal of Police Strategies & Management*, 28(2), 269-278.
- Butler, H. D., Tasca, M., Zhang, Y., & Carpenter, C. (2019). A systematic and meta-analytic review of the literature on correctional officers: Identifying new avenues for research. *Journal of Criminal Justice*, 60, 84-92.
<https://doi.org/10.1016/j.jcrimjus.2018.12.002>
- Butler, M., McNamee, C. B., & Kelly, D. (2022). Assessing the distinct factors driving violent, drug and disorder-related prison misconduct from longitudinal data in Northern Ireland. *The British Journal of Criminology*, 62(4), 877-895.
- Butler, M., McNamee, C. B., & Kelly, D. (2022). Risk factors for interpersonal violence in prison: evidence from longitudinal administrative prison data in Northern Ireland. *Journal of Interpersonal Violence*, 37(15-16), NP14610-NP14632.
- Butler, T., Kariminia, A., Trevathan, L., & Bond, J. (2004). Injury surveillance in the New South Wales prison system. *Health Promotion Journal of Australia*, 15(2), 151-154.
- Buunk, B. P., & Schaufeli, W. B. (2018). Burnout: A perspective from social comparison theory. In *Professional burnout: Recent developments in theory and research* (pp. 53-69). CRC Press.
- Buunk, B. P., & Van Yperen, N. W. (1991). Referential comparisons, relational comparisons, and exchange orientation: Their relation to marital satisfaction. *Personality and Social Psychology Bulletin*, 17(6), 709-717.

- Byrne, J., & Hummer, D. (2007). In search of the “Tossed Salad Man”(and others involved in prison violence): New strategies for predicting and controlling violence in prison. *Aggression and Violent Behavior, 12*(5), 531-541.
- California Correctional Health Care Services. COVID-19 and seasonal influenza: Interim guidance for health care and public health providers. Retrieved August 16, 2022 from: <https://cchcs.ca.gov/covid-19-interim-guidance/#isolationspacedefinition>.
- California Department of Corrections and Rehabilitation. Department Operations Manual. Retrieved June 25, 2022 from: https://www.cdcr.ca.gov/regulations/wp-content/uploads/sites/171/2022/03/CDCR-DOM_2022.pdf.
- Caloyeras, J. P., Liu, H., Exum, E., Broderick, M., & Mattke, S. (2014). Managing manifest diseases, but not health risks, saved PepsiCo money over seven years. *Health Affairs, 33*(1), 124-131.
- Camp, S. D., Daggett, D. M., Kwon, O., & Klein-Saffran, J. (2008). The effect of faith program participation on prison misconduct: The Life Connections Program. *Journal of Criminal Justice, 36*(5), 389-395.
- Camp, S. D., Gaes, G. G., Langan, N. P., & Saylor, W. G. (2003). The influence of prisons on inmate misconduct: A multilevel investigation. *Justice Quarterly, 20*(3), 501-533.
- Can, S. H., & Hendy, H. M. (2014). Police stressors, negative outcomes associated with them and coping mechanisms that may reduce these associations. *The Police Journal, 87*(3), 167-177. <https://doi.org/10.1350/pojo.2014.87.3.676>
- Cao, L., Zhao, J., & Van Dine, S. (1997). Prison disciplinary tickets: A test of the deprivation and importation models. *Journal of Criminal Justice, 25*(2), 103-113.
- Caravaca-Sánchez, F., & Wolff, N. (2021). Understanding polyvictimization in prison: Prevalence and predictors among men inmates in Spain. *Journal of Interpersonal Violence, 36*(7-8), 3411-3437.
- Carter, T. J. (2020). Misconduct in Corrections. In *Routledge Handbook on American Prisons* (pp. 186-193). Routledge.
- Carver, C. S. (1997). You want to measure coping but your protocol’s too long: Consider the brief COPE. *International Journal of Behavioral Medicine, 4*, 92-100. https://doi.org/10.1207/s15327558ijbm0401_6
- Caudill, J. W., Trulson, C. R., Marquart, J. W., Patten, R., Thomas, M. O., & Anderson, S. (2014). Correctional destabilization and jail violence: The consequences of prison depopulation legislation. *Journal of Criminal Justice, 42*(6), 500-506.
- Celinska, K., & Sung, H. E. (2014). Gender differences in the determinants of prison rule violations. *The Prison Journal, 94*(2), 220-241.
- Centers for Disease Control (2019). Binge drinking. Alcohol and Public Health. Retrieved August 25, 2021, from <https://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm>
- Centers for Disease Control and Prevention. (2019) CDC: Half of Workplaces Offer Health/Wellness Programs. Retrieved April 2, 2023 from: <https://www.cdc.gov/media/releases/2019/p0422-workplaces-offer-wellness.html>.
- Centre for Suicide Prevention (2016). Self-harm and suicide. Retrieved on March 27, 2023 from https://www.suicideinfo.ca/local_resource/self-harm-and-suicide/.
- Chang, H. T., Chi N. W., & Miao, M. C. (2007). Testing the relationship between three-component organizational/occupational commitment and organization/occupational turnover intention using a non-recursive model. *Journal of Vocational Behavior, 70*(2), 352-368. <https://doi.org/10.1016/j.jvb.2006.10.001>

- Charuvastra, A., & Cloitre, M. (2008). Social bonds and posttraumatic stress disorder. *Annual Review of Psychology, 59*, 301-328.
<https://doi.org/10.1146/annurev.psych.58.110405.085650>
- Cheek, F. E., & Miller, M. D. S. (1983). The experience of stress for correction officers: A double-bind theory of correctional stress. *Journal of Criminal Justice, 11*(2), 105-120.
- Chen, Y. S., Lai, Y. L., & Lin, C. Y. (2014). The impact of prison adjustment among women offenders: A Taiwanese perspective. *The Prison Journal, 94*(1), 7-29.
- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling, 9*, 233-255.
- Choi, J. (2019). Victimization, fear of crime, procedural injustice and inmate misconduct: An application of general strain theory in South Korea. *International Journal of Law, Crime and Justice, 59*, 100346.
- Chonco, N. R. (1989). Sexual assaults among male inmates: A descriptive study. *The Prison Journal, 69*(1), 72-82.
- Coates, T. N. (2014). Mapping the new Jim Crow. The Atlantic. Retrieved from:
<http://www.theatlantic.com/politics/archive/2014/10/mapping-the-new-jim-crow/381617>
- Cochran, J. C. (2012). The ties that bind or the ties that break: Examining the relationship between visitation and prisoner misconduct. *Journal of Criminal Justice, 40*(5), 433-440.
- Cole, D. A., Ciesla, J. A., & Steiger, J. H. (2007). The insidious effects of failing to include design-driven correlated residuals in latent-variable covariance structure analysis. *Psychological Methods, 12*(4), 381-398. <https://doi.org/10.1037/1082-989X.12.4.381>
- Coll, J. E., Weiss, E. L., & Yarvis, J. S. (2012). No one leaves unchanged—Insights for civilian mental health care: Professionals into the military experience and culture. In *Advances in Social Work Practice with the Military* (pp. 18-33). Routledge.
- Coker, A. L., Smith, P. H., Bethea, L., King, M. R., & McKeown, R. E. (2000). Physical health consequences of physical and psychological intimate partner violence. *Archives of Family Medicine, 9*(5), 451.
- Cooke, D. J., Wozniak, E., & Johnstone, L. (2008). Casting light on prison violence in Scotland: Evaluating the impact of situational risk factors. *Criminal Justice and Behavior, 35*(8), 1065-1078.
- Cooley, D. (1993). Criminal victimization in male federal prisons. *Canadian Journal of Criminology, 35*(4), 479-495.
- Copes, H., Higgins, G. E., Tewksbury, R., & Dabney, D. A. (2010). Participation in the prison economy and likelihood of physical victimization. *Victims and Offenders, 6*(1), 1-18.
- COVID Prison Project. Home. Retrieved July 12, 2022 from: <https://covidprisonproject.com/>.
- Cukor, J., Spitalnick, J., Difede, J., Rizzo, A., & Rothbaum, B. O. (2009). Emerging treatments for PTSD. *Clinical Psychology Review, 29*(8), 715-726.
<https://doi.org/10.1016/j.cpr.2009.09.001>
- Cunningham, M. D., Reidy, T. J., & Sorensen, J. R. (2005). Is death row obsolete? A decade of mainstreaming death-sentenced inmates in Missouri. *Behavioral Sciences & the Law, 23*(3), 307-320.
- Cunningham, M. D., Reidy, T. J., & Sorensen, J. R. (2008). Assertions of “future dangerousness” at federal capital sentencing: Rates and correlates of subsequent prison misconduct and violence. *Law and Human Behavior, 32*, 46-63.

- Cunningham, M. D., & Sorensen, J. R. (2006). Nothing to lose? A comparative examination of prison misconduct rates among life-without-parole and other long-term high-security inmates. *Criminal Justice and Behavior, 33*(6), 683-705.
- Cunningham, M. D., & Sorensen, J. R. (2007). Capital offenders in Texas prisons: Rates, correlates, and an actuarial analysis of violent misconduct. *Law and Human Behavior, 31*, 553-571.
- Cunningham, M. D., & Sorensen, J. R. (2007). Predictive factors for violent misconduct in close custody. *The Prison Journal, 87*(2), 241-253.
- Cunningham, M. D., Sorensen, J. R., & Reidy, T. J. (2005). An actuarial model for assessment of prison violence risk among maximum security inmates. *Assessment, 12*(1), 40-49.
- Cunningham, M. D., Sorensen, J. R., Vigen, M. P., & Woods, S. O. (2011). Correlates and actuarial models of assaultive prison misconduct among violence-predicted capital offenders. *Criminal Justice and Behavior, 38*(1), 5-25.
- Daggett, D. M., & Camp, S. D. (2009). Do official misconduct data tell the same story as the individuals who live in prison?. *Criminal Justice Review, 34*(3), 428-449.
- Dahlberg, L. L., & Krug, E. G. (2006). Violence a global public health problem. *Ciência & Saúde Coletiva, 11*(2), 277-292.
- D'Alessio, S. J., Flexon, J., & Stolzenberg, L. (2013). The effect of conjugal visitation on sexual violence in prison. *American Journal of Criminal Justice, 38*, 13-26.
- Daquin, J. C., & Daigle, L. E. (2018). Mental disorder and victimisation in prison: Examining the role of mental health treatment. *Criminal Behaviour and Mental Health, 28*(2), 141-151.
- Daquin, J. C., & Daigle, L. E. (2021). The Victim–Offender Overlap in Prison: Examining the Factors Associated With Group Membership. *Journal of Interpersonal Violence, 36*(23-24), NP13439-NP13462.
- Day, J. C., Brauer, J. R., & Butler, H. D. (2015). Coercion and social support behind bars: Testing an integrated theory of misconduct and resistance in US prisons. *Criminal Justice and Behavior, 42*(2), 133-155.
- Debell, F., Fear, N. T., Head, M., Batt-Rawden, S., Greenberg, N., Wessely, S., & Goodwin, L. (2014). A systematic review of the comorbidity between PTSD and alcohol misuse. *Social Psychiatry and Psychiatric Epidemiology, 49*(9), 1401-1425.
<https://doi.org/10.1007/s00127-014-0855-7>
- De La Torre, H., & Goetzl, R. (2016). How to design a corporate wellness plan that actually works. *Harvard Business Review, 3*(1), 1-9.
- DeLisi, M. (2003). Criminal careers behind bars. *Behavioral Sciences & the Law, 21*(5), 653-669.
- DeLisi, M., Berg, M. T., & Hochstetler, A. (2004). Gang members, career criminals and prison violence: Further specification of the importation model of inmate behavior. *Criminal Justice Studies, 17*(4), 369-383.
- DeLisi, M., Caudill, J. W., Trulson, C. R., Marquart, J. W., Vaughn, M. G., & Beaver, K. M. (2010). Angry inmates are violent inmates: A Poisson regression approach to youthful offenders. *Journal of Forensic Psychology Practice, 10*(5), 419-439.
- DeLisi, M., Trulson, C. R., Marquart, J. W., Drury, A. J., & Kosloski, A. E. (2011). Inside the prison black box: Toward a life course importation model of inmate behavior. *International Journal of Offender Therapy and Comparative Criminology, 55*(8), 1186-1207.

- Demerouti, E., & Bakker, A. B. (2008). The Oldenburg Burnout Inventory: A good alternative to measure burnout and engagement. In J. R. B. Halbesleben (Ed.), *Handbook of Stress and Burnout in Health Care*. Hauppauge, NY: Nova Science.
- Demerouti, E., Bakker, A. B., De Jonge, J., Janssen, P. P., & Schaufeli, W. B. (2001). Burnout and engagement at work as a function of demands and control. *Scandinavian Journal of Work, Environment & Health*, 279-286.
- Demerouti, E., Bakker, A., Nachreiner, F., & Ebbinghaus, M. (2002). From mental strain to burnout. *European Journal of Work and Organizational Psychology*, 11(4), 423-441.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86(3), 499.
- Demerouti, E., Bakker, A. B., & Xanthopoulou, D. (2019). Job demands-resources theory and the role of individual cognitive and behavioral strategies. The fun and frustration of modern working life: *Contributions from an Occupational Health Psychology Perspective*, 94-104.
- Derenoncourt, E., Kim, C. H., Kuhn, M., & Schularick, M. (2022). Wealth of two nations: The US racial wealth gap, 1860-2020 (No. w30101). National Bureau of Economic Research.
- DeVylder, J. E., Anglin, D. M., Bowleg, L., Fedina, L., & Link, B. G. (2021). Police violence and public health. *Annual Review of Clinical Psychology*, 18(3), 1-26.
- Diamond, B., Morris, R. G., & Barnes, J. C. (2012). Individual and group IQ predict inmate violence. *Intelligence*, 40(2), 115-122.
- Dias, C. F. & Vaughn, M. S. (2006). Bureaucracy, managerial disorganization, and administrative breakdown in criminal justice agencies. *Journal of Criminal Justice*, 34(5), 543-555.
- Dietz, E. F., O'Connell, D. J., & Scarpitti, F. R. (2003). Therapeutic communities and prison management: An examination of the effects of operating an in-prison therapeutic community on levels of institutional disorder. *International Journal of Offender Therapy and Comparative Criminology*, 47(2), 210-223.
- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 147-160.
- Downs, A. (1967). Inside bureaucracy.
- Drury, A. J., & DeLisi, M. (2010). The past is prologue: Prior adjustment to prison and institutional misconduct. *The Prison Journal*, 90(3), 331-352.
- Drury, A. J., & DeLisi, M. (2011). Gangkill: An exploratory empirical assessment of gang membership, homicide offending, and prison misconduct. *Crime & Delinquency*, 57(1), 130-146.
- Duarte, C., Cameron, D. B., Kwan, A. T., Bertozzi, S. M., Williams, B. A., & McCoy, S. I. (2022). COVID-19 outbreak in a state prison: a case study on the implementation of key public health recommendations for containment and prevention. *BMC Public Health*, 22(1), 1-12.
- Edens, J. F., Poythress, N. G., Lilienfeld, S. O., Patrick, C. J., & Test, A. (2008). Further evidence of the divergent correlates of the Psychopathic Personality Inventory factors: prediction of institutional misconduct among male prisoners. *Psychological Assessment*, 20(1), 86.
- Edens, J. F., & Ruiz, M. A. (2006). On the validity of validity scales: The importance of defensive responding in the prediction of institutional misconduct. *Psychological Assessment*, 18(2), 220.

- Edens, J. F., & Ruiz, M. A. (2009). Predicting institutional aggression by defensive prison inmates: An examination of the Personality Assessment Inventory treatment consideration scales. *International Journal of Forensic Mental Health*, 8(3), 178-185.
- Edgar, K., & O'DONNELL, I. A. N. (1998). Assault in prison: The 'victim's' contribution. *The British Journal of Criminology*, 38(4), 635-650.
- Edwards, F., Esposito, M. H., & Lee, H. (2018). Risk of police-involved death by race/ethnicity and place, United States, 2012–2018. *American Journal of Public Health*, 108(9), 1241-1248.
- Einat, T. (2013). Rape and consensual sex in male Israeli prisons: are there differences with Western prisons?. *The Prison Journal*, 93(1), 80-101.
- Ekland-Olson, S., Barrick, D. M., & Cohen, L. E. (1983). Prison overcrowding and disciplinary problems: An analysis of the Texas prison system. *The Journal of Applied Behavioral Science*, 19(2), 163-176.
- El Sayed, S. A., Morris, R. G., DeShay, R. A., & Piquero, A. R. (2020). Comparing the rates of misconduct between private and public prisons in Texas. *Crime & Delinquency*, 66(9), 1217-1241.
- Ellis, D., Grasmick, H. G., & Gilman, B. (1974). Violence in prisons: A sociological analysis. *American Journal of Sociology*, 80(1), 16-43.
- Ellison, J. M., Cain, C. M., Baker, B., & Paige, B. (2022). The dangers of short-term confinement: indicators of safety risks among individuals in jail. *International Journal of Offender Therapy and Comparative Criminology*, 0306624X221110808.
- Ellison, J. M., Steiner, B., & Wright, E. M. (2018). Examining the sources of violent victimization among jail inmates. *Criminal Justice and Behavior*, 45(11), 1723-1741.
- Endrass, J., Rossegger, A., Frischknecht, A., Noll, T., & Urbaniok, F. (2008). Using the Violence Risk Appraisal Guide (VRAG) to predict in-prison aggressive behavior in a Swiss offender population. *International Journal of Offender Therapy and Comparative Criminology*, 52(1), 81-89.
- Epstein, E. E., & McCrady, B. S. (2002). Couple therapy in the treatment of alcohol problems. In A.S. Gurman and N.S. Jacobson (Eds.), *Clinical Handbook of Couple Therapy*, 3, 597-628. New York: Guilford Press.
- Ey, S., Moffit, M., Kinzie, J. M., Choi, D., & Girard, D. E. (2013). "If you build it, they will come": attitudes of medical residents and fellows about seeking services in a resident wellness program. *Journal of Graduate Medical Education*, 5(3), 486-492.
- Fajnzylber, P., Lederman, D., & Loayza, N. (2002). Inequality and violent crime. *The Journal of Law and Economics*, 45(1), 1-39.
- Felson, R. B., Silver, E., & Remster, B. (2012). Mental disorder and offending in prison. *Criminal Justice and Behavior*, 39(2), 125-143.
- Ferdik, F. V., & Smith, H. (2017). Correctional officer safety and wellness literature synthesis. Washington, DC: US Department of Justice, Office of Justice Programs, National Institute of Justice.
- Fetzner, M. G., McMillan, K. A., Sareen, J., & Asmundson, G. J. (2011). What is the association between traumatic life events and alcohol abuse/dependence in people with and without PTSD? Findings from a nationally representative sample. *Depression and Anxiety*, 28(8), 632-638. <https://doi.org/10.1002/da.20852>
- Finn, M. A. (1995). Disciplinary incidents in prison: Effects of race, economic status, urban residence, prior imprisonment. *Journal of Offender Rehabilitation*, 22(1-2), 143-156.

- Finn, P. (2000). Addressing correctional officer stress: Programs and strategies. Washington, DC: US Department of Justice, Office of Justice Programs, National Institute of Justice.
- Fishbein, D. H. (1996). Female PCP-using jail detainees: Proneness to violence and gender differences. *Addictive Behaviors*, 21(2), 155-172.
- Flannery, D. J., Singer, M. I., Van Dulmen, M., Kretschmar, J. M., & Belliston, L. M. (2007). Exposure to violence, mental health, and violent behavior. *The Cambridge Handbook of Violent Behavior and Aggression*, 306-321.
- Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology*, 50(5), 992.
- Fontana, A., & Rosenheck, R. (1993). A causal model of the etiology of war-related PTSD. *Journal of Traumatic Stress*, 6(4), 475-500.
<https://doi.org/10.1002/jts.2490060406>
- Forst, M. L., & Brady, J. M. (1983). The effects of determinate sentencing on inmate misconduct in prison. *The Prison Journal*, 63(1), 100-113.
- Foundations Recovery Network (2020). How alcohol affects PTSD. Retrieved from:
<https://dualdiagnosis.org/how-alcohol-affects-ptsd/>
- Franklin, T. W., Franklin, C. A., & Pratt, T. C. (2006). Examining the empirical relationship between prison crowding and inmate misconduct: A meta-analysis of conflicting research results. *Journal of Criminal Justice*, 34(4), 401-412.
- French, S. A., & Gendreau, P. (2006). Reducing prison misconducts: What works!. *Criminal Justice and Behavior*, 33(2), 185-218.
- Friedman, I. A. (2003). Self-efficacy and burnout in teaching: The importance of interpersonal-relations efficacy. *Social Psychology of Education*, 6(3), 191-215.
- Friedmann, P. D., Melnick, G., Jiang, L., & Hamilton, Z. (2008). Violent and disruptive behavior among drug-involved prisoners: Relationship with psychiatric symptoms. *Behavioral Sciences & the Law*, 26(4), 389-401.
- Fuller, D. A., & Orsagh, T. (1977). Violence and victimization within a state prison system. *Criminal Justice Review*, 2(2), 35-55.
- Fusco, N., Ricciardelli, R., Jamshidi, L., Carleton, R. N., Barnim, N., Hilton, Z., & Groll, D. (2021). When our work hits home: Trauma and mental disorders in correctional officers and other correctional workers. *Frontiers in Psychiatry*, 11, 493391.
- Gaes, G. G., & Camp, S. D. (2009). Unintended consequences: Experimental evidence for the criminogenic effect of prison security level placement on post-release recidivism. *Journal of Experimental Criminology*, 5, 139-162.
- Gaes, G. G., & McGuire, W. J. (1985). Prison violence: The contribution of crowding versus other determinants of prison assault rates. *Journal of Research in Crime and Delinquency*, 22(1), 41-65.
- Gaes, G. G., Wallace, S., Gilman, E., Klein-Saffran, J., & Suppa, S. (2002). The influence of prison gang affiliation on violence and other prison misconduct. *The Prison Journal*, 82(3), 359-385.
- Gallagher, O., Regan, E. E., & O'Reilly, G. (2022). Serious violence in the Irish Prison Service: exploring the experiences of prison officers and prisoners under the Violently Disruptive Prisoner policy. *Psychology, Crime & Law*, 1-28.

- Garman, A. N., Corrigan, P. W., & Morris, S. (2002). Staff burnout and patient satisfaction: evidence of relationships at the care unit level. *Journal of Occupational Health Psychology, 7*(3), 235.
- General Motors. (2016). Form 10-K 2016. Retrieved from SEC EDGAR website <http://www.sec.gov/edgar.shtml>
- Georgia Department of Corrections. (2017). GCI. Retrieved from: <http://www.dcor.state.ga.us/Divisions/ExecutiveOperations/Personnel#:~:text=The%2012%2C500%20employees%20for%20the,the%20agency's%20most%20valuable%20resource.>
- Gillespie, W. (2005). Racial differences in violence and self-esteem among prison inmates. *American Journal of Criminal Justice, 29*, 161-185.
- Gillet, N., Gagné, M., Sauvagère, S., & Fouquereau, E. (2013). The role of supervisor autonomy support, organizational support, and autonomous and controlled motivation in predicting employees' satisfaction and turnover intentions. *European Journal of Work and Organizational Psychology, 22*(4), 450-460. <https://doi.org/10.1080/1359432X.2012.665228>
- Gilligan, J., & Lee, B. (2005). The Resolve to Stop the Violence Project: transforming an in-house culture of violence through a jail-based programme. *Journal of Public Health, 27*(2), 149-155.
- Giroux, M. B., Cochran, J. K., & Sellers, C. S. (1998). An Exploratory Analysis of the Effectiveness of Correctional Emergency Response Teams (CERT) in Jail Settings. *Journal of Crime and Justice, 21*(1), 77-94.
- Glazener, E., & Nakamura, K. (2020). Examining the link between prison crowding and inmate misconduct: Evidence from prison-level panel data. *Justice Quarterly, 37*(1), 109-131.
- Gonçalves, L. C., Gonçalves, R. A., Martins, C., & Dirkzwager, A. J. (2014). Predicting infractions and health care utilization in prison: A meta-analysis. *Criminal Justice and Behavior, 41*(8), 921-942.
- Goff, A., Rose, E., Rose, S., & Purves, D. (2007). Does PTSD occur in sentenced prison populations? A systematic literature review. *Criminal Behavior & Mental Health, 17*, 152-162. <https://doi.org/10.1002/cbm.653>
- Golembiewski, R. T., Lloyd, M., Scherb, K., & Munzenrider, R. F. (1992). Burnout and mental health among police officers. *Journal of Public Administration Research and Theory, 2*(4), 424-439.
- Gopnik, A. (2012). The caging of America. *The New Yorker*. Retrieved from <http://www.newyorker.com/magazine/2012/01/30/the-caging-of-america>
- Gordon, V., Williams, D. J., & Donnelly, P. D. (2012). Exploring the relationship between ADHD symptoms and prison breaches of discipline amongst youths in four Scottish prisons. *Public Health, 126*(4), 343-348.
- Gorodetsky, E., Carli, V., Sarchiapone, M., Roy, A., Goldman, D., & Enoch, M. A. (2016). Predictors for self-directed aggression in Italian prisoners include externalizing behaviors, childhood trauma and the serotonin transporter gene polymorphism 5-HTTLPR. *Genes, Brain and Behavior, 15*(5), 465-473.
- Gould, D. D., Watson, S. L., Price, S. R., & Valliant, P. M. (2013). The relationship between burnout and coping in adult and young offender center correctional officers: An exploratory investigation. *Psychological Services, 10*(1), 37. <https://doi.org/10.1037/a0029655>

- Gover, A. R., Pérez, D. M., & Jennings, W. G. (2008). Gender differences in factors contributing to institutional misconduct. *The Prison Journal*, 88(3), 378-403.
- Green, B. L. (1996). Trauma history questionnaire. *Measurement of Stress, Self-Report Trauma, and Adaptation*, 366-369.
- Greenglass, E. R., Burke, R. J., & Fiksenbaum, L. (2001). Workload and burnout in nurses. *Journal of Community & Applied Social Psychology*, 11(3), 211-215.
- Griffin, M. L., & Hepburn, J. R. (2006). The effect of gang affiliation on violent misconduct among inmates during the early years of confinement. *Criminal Justice and Behavior*, 33(4), 419-466.
- Griffin, M. L., & Hepburn, J. R. (2013). Inmate misconduct and the institutional capacity for control. *Criminal Justice and Behavior*, 40(3), 270-288.
- Gubler, T., Larkin, I., & Pierce, L. (2018). Doing well by making well: The impact of corporate wellness programs on employee productivity. *Management Science*, 64(11), 4967-4987.
- Haber, M. G., Cohen, J. L., Lucas, T., & Baltes, B. B. (2007). The relationship between self-reported received and perceived social support: A meta-analytic review. *American Journal of Community Psychology*, 39, 133-144.
- Haddaway, N. R., Collins, A. M., Coughlin, D., & Kirk, S. (2015). The role of Google Scholar in evidence reviews and its applicability to grey literature searching. *PloS One*, 10(9), e0138237.
- Haggerty, K. D., & Buceris, S. M. (2020). Picking battles: Correctional officers, rules, and discretion in prison. *Criminology*, 59(1), 137-157.
- Haney, C. (2003). The psychological impact of incarceration: Implications for post-prison adjustment. *Prisoners Once Removed: The Impact of Incarceration and Reentry on Children, Families, and Communities*, 33, 66.
- Harer, M. D., & Langan, N. P. (2001). Gender differences in predictors of prison violence: Assessing the predictive validity of a risk classification system. *Crime & Delinquency*, 47(4), 513-536.
- Harer, M. D., & Steffensmeier, D. J. (1996). Race and prison violence. *Criminology*, 34(3), 323-355.
- Harney, J., & Lerman, A. E. (2021). Clarifying the role of officer coping on turnover in corrections. *Criminal Justice Studies*, 34(4), 397-422.
- Harris, J. I., Winkowski, A. M., & Engdahl, B. E. (2007). Types of workplace social support in the prediction of job satisfaction. *The Career Development Quarterly*, 56(2), 150-156.
- Hart, D., Paetow, G., & Zarzar, R. (2019). Does implementation of a corporate wellness initiative improve burnout?. *Western Journal of Emergency Medicine*, 20(1), 138.
- Hartney, C. (2006). US rates of incarceration: A global perspective. *Research from the National Council on Crime and Delinquency*, (November), 1-7.
- Headley, A. M., & Wright, J. E. (2020). Is representation enough? Racial disparities in levels of force and arrests by police. *Public Administration Review*, 80(6), 1051-1062.
- Heltemes, K. J., Pelletier, K. R., Ippolito, A. C., Do, D. C., & Boylan, B. C. (2019). The association between incentive designs and health assessment or biometric screening completion. *Journal of Occupational and Environmental Medicine*, 61(4), e146-e149.
- Hensley, C., Koscheski, M., & Tewksbury, R. (2005). Examining the characteristics of male sexual assault targets in a southern maximum-security prison. *Journal of Interpersonal Violence*, 20(6), 667-679.

- Hermida, R. (2015). The problem of allowing correlated errors in structural equation modeling: concerns and considerations. *Computational Methods in Social Sciences*, 3(1), 5-17.
- Hilinski-Rosick, C. M., & Freiburger, T. L. (2016). Examining the correlates of prison misconduct among elderly inmates. *Corrections*, 1(3), 215-228.
- Hochstetler, A., & DeLisi, M. (2005). Importation, deprivation, and varieties of serving time: An integrated-lifestyle-exposure model of prison offending. *Journal of Criminal Justice*, 33(3), 257-266.
- Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine*, 351(1), 13-22. <https://doi.org/10.1056/NEJMoa040603>
- Holahan, C. J., Moos, R. H., Holahan, C. K., Brennan, P. L., & Schutte, K. K. (2005). Stress generation, avoidance coping, and depressive symptoms: a 10-year model. *Journal of Consulting and Clinical Psychology*, 73(4), 658. <https://doi.org/10.1037/0022-006X.73.4.658>
- Holzer, M., and Stephanie P. N. (2020). A call for action: Public administration, public policy, and public health responses to the COVID-19 pandemic. *The American Review of Public Administration*, 50(6-7), 450-454.
- Hooberman, J., Rosenfeld, B., Rasmussen, A., & Keller, A. (2010). Resilience in trauma-exposed refugees: The moderating effect of coping style on resilience variables. *American Journal of Orthopsychiatry*, 80(4), 557. <https://doi.org/10.1111/j.1939-0025.2010.01060.x>
- Horwitz, J. R., Kelly, B. D., & DiNardo, J. E. (2013). Wellness incentives in the workplace: cost savings through cost shifting to unhealthy workers. *Health Affairs*, 32(3), 468-476.
- Houser, K. A., Belenko, S., & Brennan, P. K. (2012). The effects of mental health and substance abuse disorders on institutional misconduct among female inmates. *Justice Quarterly*, 29(6), 799-828.
- Howard, M. V., Corben, S. P., Raudino, A., & Galouzis, J. J. (2020). Maintaining safety in the prison environment: a multilevel analysis of inmate victimisation in assaults. *International Journal of Offender Therapy and Comparative Criminology*, 64(10-11), 1091-1113.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55. <https://doi.org/10.1080/10705519909540118>
- Hughes, T. A., & Wilson, D. J. (2003). Reentry trends in the United States. Washington, DC: US Department of Justice, Bureau of Justice Statistics.
- Hundt, N. E., Robinson, A., Arney, J., Stanley, M. A., & Cully, J. A. (2015). Veterans' perspectives on benefits and drawbacks of peer support for posttraumatic stress disorder. *Military Medicine*, 180(8), 851-856. <https://doi.org/10.7205/MILMED-D-14-00536>
- Iversen, V. C., Mangerud, W. L., Søndena, E., Kjelsberg, E., & Helvik, A. S. (2014). Exploring the role of communication skills among natives and immigrants on their misconduct behaviour in prisons. *International Journal of Culture and Mental Health*, 7(1), 109-121.
- Jaegers, L. A., Matthieu, M. M., Vaughn, M. G., Werth, P., Katz, I. M., & Ahmad, S. O. (2019). Posttraumatic stress disorder and job burnout among jail officers. *Journal of Occupational and Environmental Medicine*, 61(6), 505-510. <https://doi.org/10.1097/JOM.0000000000001600>

- James, L., Todak, N., & Best, S. (2017). The negative impact of prison work on sleep health. *American Journal of Industrial Medicine*, 60(5), 449-456.
<https://doi.org/10.1002/ajim.22714>
- Jiang, S., & Fisher-Giorlando, M. (2002). Inmate misconduct: A test of the deprivation, importation, and situational models. *The Prison Journal*, 82(3), 335-358.
- Jiang, S., Fisher-Giorlando, M., & Mo, L. (2005). Social support and inmate rule violations: A multilevel analysis. *American Journal of Criminal Justice*, 30, 71-86.
- Jiang, S., & Winfree Jr, L. T. (2006). Social support, gender, and inmate adjustment to prison life: Insights from a national sample. *The Prison Journal*, 86(1), 32-55.
- Johnson, B. D. (2006). The multilevel context of criminal sentencing: Integrating judge- and county-level influences. *Criminology*, 44, 259-298.
- Johnson, O., Gilbert, K., & Ibrahim, H. (2018). Race, gender, and the contexts of unarmed fatal interactions with police. Fatal Interactions with the Police Study (FIPS).
- Johnson, R. R. (2015). Police organizational commitment: The influence of supervisor feedback and support. *Crime & Delinquency*, 61(9), 1155-1180.
<https://doi.org/10.1177/0011128712466887>
- Jones, D., Molitor, D., & Reif, J. (2019). What do workplace wellness programs do? Evidence from the Illinois workplace wellness study. *The Quarterly Journal of Economics*, 134(4), 1747-1791.
- Jones, T., Beidleman, W. B., & Fowler, R. D. (1981). Differentiating violent and nonviolent prison inmates by use of selected MMPI scales. *Journal of Clinical Psychology*, 37(3), 673-678.
- Joon Jang, S. (2020). Prison strains, negative emotions, and deviance among prisoners in South Korea: A latent-variable modeling test of general strain theory. *International Journal of Offender Therapy and Comparative Criminology*, 64(15), 1607-1636.
- Jurik, N. C. (1985). Individual and organizational determinants of correctional officer attitudes toward inmates. *Criminology*, 23(3), 523-540.
- Kadra, G., Dean, K., Hotopf, M., & Hatch, S. L. (2014). Investigating exposure to violence and mental health in a diverse urban community sample: data from the South East London Community Health (SELCoH) survey. *PLoS One*, 9(4), e93660.
- Kaplan, D., Harik, P., & Hotchkiss, L. (2001). Cross-sectional estimation of dynamic structural equation models in disequilibrium. *Structural Equation Modeling: Present and Future*, 315-339.
- Karasek Jr, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, 285-308.
- Katz, E. (2022). As turnover soars, most VA employees say they were not emotionally supported during the pandemic. Retrieved April 2, 2023 from:
<https://www.govexec.com/workforce/2022/05/turnover-va-employees-not-emotionally-supported-pandemic/366761/>.
- Kavaklı, M., & Ünal, G. (2021). The effects of social comparison on the relationships among social media addiction, self-esteem, and general belongingness levels. *Current Issues in Personality Psychology*, 9(2), 114-124.
- Kellar, M., & Wang, H. M. (2005). Inmate assaults in Texas county jails. *The Prison Journal*, 85(4), 515-534.

- Kelley, C. L., Britt, T. W., Adler, A. B., & Bliese, P. D. (2014). Perceived organizational support, posttraumatic stress disorder symptoms, and stigma in soldiers returning from combat. *Psychological Services, 11*(2), 229. <https://doi.org/10.1037/a0034892>
- Kelly, M. (2000). Inequality and crime. *Review of Economics and Statistics, 82*(4), 530-539.
- Kennedy, N. (2014). An interpretative phenomenological analysis of prisoners' experience of riotous behaviour in an adult male prison. *Journal of Forensic Practice, 16*(3), 203-215.
- Kerley, K. R., Copes, H., Tewksbury, R., & Dabney, D. A. (2011). Examining the relationship between religiosity and self-control as predictors of prison deviance. *International Journal of Offender Therapy and Comparative Criminology, 55*(8), 1251-1271.
- Kerley, K. R., Hochstetler, A., & Copes, H. (2009). Self-control, prison victimization, and prison infractions. *Criminal Justice Review, 34*(4), 553-568.
- Kickert, W. (2007). Distinctiveness in the study of public management in Europe. An introduction. In *The Study of Public Management in Europe and the US* (pp. 15-27). Routledge.
- Kigerl, A., & Hamilton, Z. (2016). The impact of transfers between prisons on inmate misconduct: Testing importation, deprivation, and transfer theory models. *The Prison Journal, 96*(2), 232-257.
- Kim, B., Jee, S., Lee, J., An, S., & Lee, S. M. (2018). Relationships between social support and student burnout: A meta-analytic approach. *Stress and Health, 34*(1), 127-134.
- Klasnja, P., & Pratt, W. (2012). Healthcare in the pocket: mapping the space of mobile-phone health interventions. *Journal of Biomedical Informatics, 45*(1), 184-198.
- Kline, R. B. (2015). Principles and practice of structural equation modeling. Guilford Publications.
- Kop, N., & Euwema, M. C. (2001). Occupational stress and the use of force by Dutch police officers. *Criminal Justice and Behavior, 28*(5), 631-652.
- Kop, N., Euwema, M., & Schaufeli, W. (1999). Burnout, job stress and violent behaviour among Dutch police officers. *Work & Stress, 13*(4), 326-340.
- Kroner, D. G., & Mills, J. F. (2001). The accuracy of five risk appraisal instruments in predicting institutional misconduct and new convictions. *Criminal Justice and Behavior, 28*(4), 471-489.
- Kuanliang, A., & Sorensen, J. (2008). Predictors of self-reported prison misconduct. *Criminal Justice Studies, 21*(1), 27-35.
- Kuanliang, A., Sorensen, J. R., & Cunningham, M. D. (2008). Juvenile inmates in an adult prison system: Rates of disciplinary misconduct and violence. *Criminal Justice and Behavior, 35*(9), 1186-1201.
- Kukla-Acevedo, S. (2009). Leavers, movers, and stayers: The role of workplace conditions in teacher mobility decisions. *The Journal of Educational Research, 102*(6), 443-452. <https://doi.org/10.3200/JOER.102.6.443-452>
- Kula, S. (2017). Occupational stress, supervisor support, job satisfaction, and work-related burnout: Perceptions of Turkish National Police (TNP) members. *Police Practice and Research, 18*(2), 146-159. <https://doi.org/10.1080/15614263.2016.1250630>
- Kunst, M. J., Bogaerts, S., & Winkel, F. W. (2009). Peer and inmate aggression, type D-personality and post-traumatic stress among Dutch prison workers. *Stress and Health: Journal of the International Society for the Investigation of Stress, 25*(5), 387-395. <https://doi.org/10.1002/smi.1247>

- Kuo, S. Y. (2020). Prison victimization among Taiwanese male inmates: an application of importation, deprivation, and routine activities theories. *Security Journal*, 33(4), 602-621.
- Kuo, S. Y., Cuvelier, S. J., & Huang, Y. S. (2014). Identifying risk factors for victimization among male prisoners in Taiwan. *International Journal of Offender Therapy and Comparative Criminology*, 58(2), 231-257.
- Kuo, S. Y., & Zhao, R. (2019). Prison misconduct among female inmates with mental disorders, substance abuse/dependence, and co-occurring disorders in Taiwan. *International Journal of Comparative and Applied Criminal Justice*, 43(3), 263-276.
- Kupchik, A., & Snyder, R. B. (2009). The impact of juvenile inmates' perceptions and facility characteristics on victimization in juvenile correctional facilities. *The Prison Journal*, 89(3), 265-285.
- Labrecque, R. M., Mears, D. P., & Smith, P. (2020). Gender and the effect of disciplinary segregation on prison misconduct. *Criminal Justice Policy Review*, 31(8), 1193-1216.
- Labrecque, R. M., & Smith, P. (2019). Assessing the impact of time spent in restrictive housing confinement on subsequent measures of institutional adjustment among men in prison. *Criminal Justice and Behavior*, 46(10), 1445-1455.
- Lacey, K. K., McPherson, M. D., Samuel, P. S., Powell Sears, K., & Head, D. (2013). The impact of different types of intimate partner violence on the mental and physical health of women in different ethnic groups. *Journal of Interpersonal Violence*, 28(2), 359-385.
- Lahm, K. F. (2008). Inmate-on-inmate assault: A multilevel examination of prison violence. *Criminal Justice and Behavior*, 35(1), 120-137.
- Lahm, K. F. (2009). Educational participation and inmate misconduct. *Journal of Offender Rehabilitation*, 48(1), 37-52.
- Lahm, K. F. (2009). Inmate assaults on prison staff: A multilevel examination of an overlooked form of prison violence. *The Prison Journal*, 89(2), 131-150.
- Lahm, K. F. (2009). Physical and property victimization behind bars: A multilevel examination. *International Journal of Offender Therapy and Comparative Criminology*, 53(3), 348-365.
- Lahm, K. (2016). Official incidents of inmate-on-inmate misconduct at a women's prison: Using importation and deprivation theories to compare perpetrators to victims. *Criminal Justice Studies*, 29(3), 214-231.
- Lambert, E. G. (2001). To stay or quit: A review of the literature on correctional staff turnover. *American Journal of Criminal Justice*, 26(1), 61-76. <https://doi.org/10.1007/BF02886857>
- Lambert, E., & Hogan, N. (2009). The importance of job satisfaction and organizational commitment in shaping turnover intent: A test of a causal model. *Criminal Justice Review*, 34(1), 96-118. <https://doi.org/10.1177/0734016808324230>
- Lambert, E. G., Hogan, N. L., Paoline, E. A., & Clarke, A. (2005). The impact of role stressors on job stress, job satisfaction, and organizational commitment among private prison staff. *Security Journal*, 18, 33-50.
- Laws, B. (2019). The return of the suppressed: Exploring how emotional suppression reappears as violence and pain among male and female prisoners. *Punishment & Society*, 21(5), 560-577.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer
- Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, 81(2), 123.

- Lee, S. J., & Edens, J. F. (2005). Exploring predictors of institutional misbehavior among male Korean inmates. *Criminal Justice and Behavior*, 32(4), 412-432.
- Lehmann, A., & Ittel, A. (2012). Aggressive behavior and measurement of psychopathy in female inmates of German prisons—A preliminary study. *International Journal of Law and Psychiatry*, 35(3), 190-197.
- Leigey, M. E., & Hodge, J. P. (2013). And then they behaved: Examining the institutional misconduct of adult inmates who were incarcerated as juveniles. *The Prison Journal*, 93(3), 272-290.
- Leino, T., Eskelinen, K., Summala, H., & Virtanen, M. (2011a). Work-related violence, debriefing and increased alcohol consumption among police officers. *International Journal of Police Science & Management*, 13(2), 149-57. <https://doi.org/10.1350/ijps.2011.13.2.229>
- Lenz, S., Bruijn, B., Serman, N., & Bailey, L. (2014). Effectiveness of cognitive processing therapy for treating posttraumatic stress disorder. *Journal of Mental Health Counseling*, 36(4), 360-376. <https://doi.org/10.17744/mehc.36.4.1360805271967kvq>
- Lerman, A. E. (2017). California correctional officer survey [Data file].
- Lerman, A. E., & Harney, J. (2019). Feedback Effects and the Criminal Justice Bureaucracy: Officer Attitudes and the Future of Correctional Reform. *The ANNALS of the American Academy of Political and Social Science*, 685(1), 227-249. <https://doi.org/10.1177/0002716219869907>
- Lerman, A. E., Harney, J., & Sadin, M. (2021). Prisons and Mental Health: Violence, Organizational Support, and the Effects of Correctional Work. *Criminal Justice and Behavior*. <https://doi.org/10.1177/00938548211037718>
- Levitt, L., & Loper, A. B. (2009). The influence of religious participation on the adjustment of female inmates. *American Journal of Orthopsychiatry*, 79(1), 1-7.
- Li, X., Guan, L., Chang, H., & Zhang, B. (2014). Core self-evaluation and burnout among nurses: the mediating role of coping styles. *PloS One*, 9(12). <https://doi.org/10.1371/journal.pone.0115799>
- Lindegaard, M. R., & Gear, S. (2014). Violence makes safe in South African prisons: Prison gangs, violent acts, and victimization among inmates. *Focaal*, 2014(68), 35-54.
- Lindquist, C. A., & Whitehead, J. T. (1986). Burnout, job stress and job satisfaction among southern correctional officers: Perceptions and causal factors. *Journal of Offender Counseling Services Rehabilitation*, 10(4), 5-26.
- Linos, E., Halley, M. C., Sarkar, U., Mangurian, C., Sabry, H., Olazo, K., ... & Jagsi, R. (2021). Anxiety levels among physician mothers during the COVID-19 pandemic. *American Journal of Psychiatry*, 178(2), 203-204.
- Linos, E., Ruffini, K., & Wilcoxon, S. (2022). Reducing burnout and resignations among frontline workers: A field experiment. *Journal of Public Administration Research and Theory*, 32(3), 473-488.
- Liebling, A. (2000). Prison officers, policing and the use of discretion. *Theoretical Criminology*, 4(3), 333-357.
- Liebling, A., Durie, L., van den Beukel, A., Tait, S., & Harvey, J. (2005). Revisiting prison suicide: the role of fairness and distress. *The Effects of Imprisonment*, 209-231.
- Lipsky, M. (1980). *Street-Level Bureaucracy*. Russell Sage Foundation.
- Listwan, S. J., Daigle, L. E., Hartman, J. L., & Guastaferrro, W. P. (2014). Poly-victimization risk in prison: The influence of individual and institutional factors. *Journal of Interpersonal Violence*, 29(13), 2458-2481.

- Livingstone, R. V. (2022). Overlooking the front line: impacts of front-line worker inclusion on implementation and outcomes of collaborative innovation. *Public Administration*.
- Lizano, E. L., & Barak, M. E. M. (2012). Workplace demands and resources as antecedents of job burnout among public child welfare workers: A longitudinal study. *Children and Youth Services Review, 34*(9), 1769-1776.
- Logan, M. W., Morgan, M. A., Long, J. S., Hazelwood, A., & Bacigalupo, J. (2022). More similar than different? Examining prison infractions and recidivism among female and male white-collar offenders. *Journal of Criminal Justice, 82*, 101982.
- Loper, A. B. (2006). How do mothers in prison differ from non-mothers?. *Journal of Child and Family Studies, 15*, 82-95.
- Lutze, F. E., & Murphy, D. W. (1999). Ultramasculine prison environments and inmates' adjustment: It's time to move beyond the "boys will be boys" paradigm. *Justice Quarterly, 16*(4), 709-733.
- MacDonald, J. M. (1999). Violence and drug use in juvenile institutions. *Journal of Criminal Justice, 27*(1), 33-44.
- Maertz Jr, C. P., Griffeth, R. W., Campbell, N. S., & Allen, D. G. (2007). The effects of perceived organizational support and perceived supervisor support on employee turnover. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 28*(8), 1059-1075. <https://doi.org/10.1002/job.472>
- Maitland, A. S., & Sluder, R. D. (1998). Victimization and youthful prison inmates: An empirical analysis. *The Prison Journal, 78*(1), 55-73.
- March, J. G., & Olsen, J. P. (2010). *Rediscovering institutions*. Simon and Schuster.
- Martin, M. S., Eljdupovic, G., McKenzie, K., & Colman, I. (2015). Risk of violence by inmates with childhood trauma and mental health needs. *Law and Human Behavior, 39*(6), 614.
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior, 2*(2), 99-113.
- Massoglia, M. (2008). Incarceration as exposure: the prison, infectious disease, and other stress-related illnesses. *Journal of Health and Social Behavior, 49*(1), 56-71. <https://doi.org/10.1177/002214650804900105>
- Massoglia, M. (2008). Incarceration, health, and racial disparities in health. *Law & Society Review, 42*(2), 275-306. <https://doi.org/10.1111/j.1540-5893.2008.00342.x>
- Matejkowski, J. (2017). The moderating effects of antisocial personality disorder on the relationship between serious mental illness and types of prison infractions. *The Prison Journal, 97*(2), 202-223.
- McCall, J. J. (1970). Economics of information and job search. *The Quarterly Journal of Economics, 113*-126. <https://doi.org/10.2307/1879403>
- McCorkle, R. C., Miethe, T. D., & Drass, K. A. (1995). The roots of prison violence: A test of the deprivation, management, and "not-so-total" institution models. *Crime & Delinquency, 41*(3), 317-331.
- McCrary, B. S., & Epstein, E. E. (1995). Directions for research on alcoholic relationships: Marital- and individual-based models of heterogeneity. *Psychology of Addictive Behaviors, 9*, 157-166. <https://doi.org/10.1037/0893-164X.9.3.157>
- McShane, M. D., Williams, F. P., III, Scbichor, D., & McClain, K. (1991). Early exits: Examining employee turnover. *Corrections Today, 53*, 220-225.

- Meade, A. W., Johnson, E. C., & Braddy, P. W. (2008). Power and sensitivity of alternative fit indices in tests of measurement invariance. *Journal of Applied Psychology, 93*, 568-592. <https://doi.org/10.1037/0021-9010.93.3.568>
- Meade, B., & Steiner, B. (2013). The effects of exposure to violence on inmate maladjustment. *Criminal Justice and Behavior, 40*(11), 1228-1249.
- Mears, D. P., Stewart, E. A., Siennick, S. E., & Simons, R. L. (2013). The code of the street and inmate violence: Investigating the salience of imported belief systems. *Criminology, 51*(3), 695-728.
- Megargee, E. I. (1977). The association of population density, reduced space, and uncomfortable temperatures with misconduct in a prison community. *American Journal of Community Psychology, 5*(3), 289-298.
- Melrose, K. L., Brown, G. D., & Wood, A. M. (2015). When is received social support related to perceived support and well-being? When it is needed. *Personality and Individual Differences, 77*, 97-105.
- Mental Health First Aid (2020). Mental health first aid public safety. Retrieved from: <https://www.mentalhealthfirstaid.org/population-focused-modules/public-safety/>
- Messina, N. P., & Calhoun, S. (2022). An experimental study of a peer-facilitated violence prevention program for women in prison. *Journal of Interpersonal Violence, 37*(17-18), NP16130-NP16156.
- Miller, G. J. (2005). Solutions to principal-agent problems in firms. In *Handbook of New Institutional Economics*, 349-370. Springer, Boston, MA.
- Miller, S. M. (2013). Administering representation: The role of elected administrators in translating citizens' preferences into public policy. *Journal of Public Administration Research and Theory, 23*(4), 865-897.
- Milward, H. B., & Provan, K. G. (1998). Principles for controlling agents: The political economy of network structure. *Journal of Public Administration Research and Theory, 8*(2), 203-222.
- Mitchell, O., Mackenzie, D. L., Styve, G. J., & Gover, A. R. (2000). The impact of individual, organizational, and environmental attributes on voluntary turnover among juvenile correctional staff members. *Justice Quarterly, 17*(2), 333-357.
- Molleman, E., Pruyn, J., & Van Knippenberg, A. (1986). Social comparison processes among cancer patients. *British Journal of Social Psychology, 25*(1), 1-13.
- Morash, M., Jeong, S. J., & Zang, N. L. (2010). An exploratory study of the characteristics of men known to commit prisoner-on-prisoner sexual violence. *The Prison Journal, 90*(2), 161-178.
- Morash, M., Jeong, S., Bohmert, M. N., & Bush, D. R. (2012). Men's vulnerability to prisoner-on-prisoner sexual violence: A state correctional system case study. *The Prison Journal, 92*(2), 290-311.
- Morgan, R. D., Gendreau, P., Smith, P., Gray, A. L., Labrecque, R. M., MacLean, N., ... & Mills, J. F. (2016). Quantitative syntheses of the effects of administrative segregation on inmates' well-being. *Psychology, Public Policy, and Law, 22*(4), 439.
- Morgan, W. (2009). Correctional officer stress: A review of the literature 1977-2007. *American Jails, 23*(2), 33-34, 36-43.
- Morris, R. G. (2016). Exploring the effect of exposure to short-term solitary confinement among violent prison inmates. *Journal of Quantitative Criminology, 32*, 1-22.

- Morris, R. G., Carriaga, M. L., Diamond, B., Piquero, N. L., & Piquero, A. R. (2012). Does prison strain lead to prison misbehavior? An application of general strain theory to inmate misconduct. *Journal of Criminal Justice*, 40(3), 194-201.
- Morris, R. G., Longmire, D. R., Buffington-Vollum, J., & Vollum, S. (2010). Institutional misconduct and differential parole eligibility among capital inmates. *Criminal Justice and Behavior*, 37(4), 417-438.
- Morris, R. G., & Worrall, J. L. (2014). Prison architecture and inmate misconduct: A multilevel assessment. *Crime & Delinquency*, 60(7), 1083-1109.
- Moynihan, D. P., & Pandey, S. K. (2007). Finding workable levers over work motivation: Comparing job satisfaction, job involvement, and organizational commitment. *Administration & Society*, 39(7), 803-832.
- Munyon, T. P., Carnes, A. M., Lyons, L. M., & Zettler, I. (2020). All about the money? Exploring antecedents and consequences for a brief measure of perceived financial security. *Journal of Occupational Health Psychology*, 25(3), 159.
<https://doi.org/10.1037/ocp0000162>
- Murakawa, N. (2014). *The first civil right: How liberals built prison America*. Oxford University Press.
- Nacci, P. L., Teitelbaum, H. E., & Prather, J. (1977). Population density and inmate misconduct rates in the federal prison system. *Fed. Probation*, 41, 26.
- National Conference of State Legislatures. (2021). Criminal justice budgeting: Shortening length of stay. Retrieved on March 27, 2023 from: <https://www.ncsl.org/civil-and-criminal-justice/criminal-justice-budgeting-shortening-length-of-stay#:~:text=People%20released%20in%202018%20had,shorten%20jail%20and%20prison%20stays>.
- Neal, D. M., & Phillips, B. D. (1995). Effective emergency management: Reconsidering the bureaucratic approach. *Disasters*, 19(4), 327-337.
- Nevitt, J., & Hancock, G. R. (2001). Performance of bootstrapping approaching to model test statistics and parameter standard error estimation in structural equation modeling. *Structural Equation Modeling*, 8, 353-377.
- Nie, Z., Jin, Y., He, L., Chen, Y., Ren, X., Yu, J., & Yao, Y. (2015). Correlation of burnout with social support in hospital nurses. *International Journal of Clinical and Experimental Medicine*, 8(10), 19144.
- Norris, F. H., & Kaniasty, K. (1996). Received and perceived social support in times of stress: a test of the social support deterioration deterrence model. *Journal of Personality and Social Psychology*, 71(3), 498.
- Novero, C. M., Booker Loper, A., & Warren, J. I. (2011). Second-generation prisoners: Adjustment patterns for inmates with a history of parental incarceration. *Criminal Justice and Behavior*, 38(8), 761-778.
- Novisky, M. A., & Peralta, R. L. (2020). Gladiator School: Returning Citizens' Experiences with Secondary Violence Exposure in Prison. *Victims & Offenders*, 1-25.
<https://doi.org/10.1080/15564886.2020.1721387>
- NSI Nursing Solutions, Inc. (2021). 2021 NSI National Health Care Retention & RN Staffing Report. Retrieved August 25, 2021, from https://www.nsinursingsolutions.com/Documents/Library/NSI_National_Health_Care_Retention_Report.pdf

- O'Donnell, M. L., Creamer, M., & Pattison, P. (2004). Posttraumatic stress disorder and depression following trauma: understanding comorbidity. *American Journal of Psychiatry*, *161*(8), 1390-1396. <https://doi.org/10.1176/appi.ajp.161.8.1390>
- Office of the Surgeon General. (2022). The US Surgeon General's Framework for Workplace Mental Health & Well-Being.
- Omori, M., & Petersen, N. (2020). Institutionalizing inequality in the courts: Decomposing racial and ethnic disparities in detention, conviction, and sentencing. *Criminology*, *58*, 678-713.
- Oppenheim, S. (2019). How the corporate wellness market has exploded: Meet the latest innovators in the space. *Forbes*.
- Orrick, E. A., & Morris, R. G. (2015). Do parole technical violators pose a safety threat? An analysis of prison misconduct. *Crime & Delinquency*, *61*(8), 1027-1050.
- Orth, U., & Wieland, E. (2006). Anger, hostility, and posttraumatic stress disorder in trauma-exposed adults: A meta-analysis. *Journal of Consulting and Clinical Psychology*, *74*(4), 698. <https://doi.org/10.1037/0022-006X.74.4.698>
- Ortiz, J. M. (2021). Doxa is dangerous: How academic doxa inhibits prison gang research. In *Routledge International Handbook of Critical Gang Studies* (pp. 624-632). Routledge.
- Osilla, K. C., Van Busum, K., Schnyer, C., Larkin, J. W., Eibner, C., & Mattke, S. (2012). Systematic review of the impact of worksite wellness programs. *The American Journal of Managed Care*, *18*(2), e68-81.
- Ozer E. J., Best, S. R., Lipsey, T. L., & Weiss, D. S. (2003). Predictors of posttraumatic stress disorder and symptoms in adults: a meta-analysis. *Psychological Bulletin*, *129*, 52-73. <https://doi.org/10.1037/0033-2909.129.1.52>
- Papadakaki, M., Tsalkanis, A., Prokopiadou, D., Goutsou, M., & Chliaoutakis, J. (2019). Is sexual assault a problem in Greek prisons? Initial evidence from a Greek male prison. *Safety*, *5*(4), 84.
- Papanicolas, I., Woskie, L. R., & Jha, A. K. (2018). Health care spending in the United States and other high-income countries. *JAMA*, *319*(10), 1024-1039.
- Pare, P. P., & Logan, M. W. (2011). Risks of minor and serious violent victimization in prison: The impact of inmates' mental disorders, physical disabilities, and physical size. *Society and Mental Health*, *1*(2), 106-123.
- Parks, K. M., & Steelman, L. A. (2008). Organizational wellness programs: a meta-analysis. *Journal of Occupational Health Psychology*, *13*(1), 58.
- Pastore, D. R., Fisher, M., & Friedman, S. B. (1996). Violence and mental health problems among urban high school students. *Journal of Adolescent Health*, *18*(5), 320-324.
- Patenaude, A. L. (2001). Analysis of issues affecting correctional officer retention within the Arkansas Department of Correction. *Corrections Management Quarterly*, *5*, 49-67.
- Patenaude, A. L. (2004). No promises, but I'm willing to listen and tell what I hear: Conducting qualitative research among prison inmates and staff. *The Prison Journal*, *84*(4), 69S-91S.
- Patrick, S. (1998). Differences in inmate-inmate and inmate-staff altercations: Examples from a medium security prison. *The Social Science Journal*, *35*(2), 253-263.
- Pearlin, L. I., Menaghan, E. G., Lieberman, M. A., & Mullan, J. T. (1981). The stress process. *Journal of Health and Social Behavior*, 337-356. <https://doi.org/10.2307/2136676>
- Pearlin, L. I. (1989). The sociological study of stress. *Journal of Health and Social Behavior*, 241-256. <https://doi.org/10.2307/2136956>

- Peirce, J., & Fondevila, G. (2020). Concentrated violence: The influence of criminal activity and governance on prison violence in Latin America. *International Criminal Justice Review*, 30(1), 99-130.
- Person, A. L., Colby, S. E., Bulova, J. A., & Eubanks, J. W. (2010). Barriers to participation in a worksite wellness program. *Nutrition Research and Practice*, 4(2), 149-154.
- Peterman, D. E., Rubien-Thomas, E., O'Brien, T., Richeson, J. A., Casey, B. J., Meares, T., ... & Baskin-Sommers, A. (2021). Procedurally just organizational climates improve relations between corrections officers and incarcerated individuals. *Psychology, Crime & Law*, 27(5), 456-475.
- Petrocelli, M., Piquero, A. R., & Smith, M. R. (2003). Conflict theory and racial profiling: An empirical analysis of police traffic stop data. *Journal of Criminal Justice*, 31, 1-11.
- Pettit, B., & Western, B. (2004). Mass imprisonment and the life course: Race and class inequality in US incarceration. *American Sociological Review*, 69(2), 151-169.
- Pérez, D. M., Gover, A. R., Tennyson, K. M., & Santos, S. D. (2010). Individual and institutional characteristics related to inmate victimization. *International Journal of Offender Therapy and Comparative Criminology*, 54(3), 378-394.
- Pfeiffer, P. N., Heisler, M., Piette, J. D., Rogers, M. A., & Valenstein, M. (2011). Efficacy of peer support interventions for depression: a meta-analysis. *General Hospital Psychiatry*, 33(1), 29-36. <https://doi.org/10.1016/j.genhosppsych.2010.10.002>
- Pompero, A., Wooldredge, J., Lugo, M., Sullivan, C., & Latessa, E. J. (2017). Reducing inmate misconduct and prison returns with facility education programs. *Criminology & Public Policy*, 16(2), 515-547.
- Prati, G., & Pietrantonio, L. (2010). The relation of perceived and received social support to mental health among first responders: a meta-analytic review. *Journal of Community Psychology*, 38(3), 403-417.
- Prendergast, M., Farabee, D., & Cartier, J. (2001). The impact of in-prison therapeutic community programs on prison management. *Journal of Offender Rehabilitation*, 32(3), 63-78.
- Prigerson, H. G., Maciejewski, P. K., & Rosenheck, R. A. (2002). Population attributable fractions of psychiatric disorders and behavioral outcomes associated with combat exposure among US men. *American Journal of Public Health*, 92(1), 59-63. <https://doi.org/10.2105/AJPH.92.1.59>
- Pronk, N. P. (2014). Placing workplace wellness in proper context: value beyond money. *Preventing Chronic Disease*, 11.
- Ramirez, J. (1983). Race and the apprehension of inmate misconduct. *Journal of Criminal Justice*, 11(5), 413-427.
- Ramlall, S. (2004). A review of employee motivation theories and their implications for employee retention within organizations. *Journal of American Academy of Business*, 5, 52-63.
- Reidy, T. J., Cihan, A., & Sorensen, J. R. (2017). Women in prison: Investigating trajectories of institutional female misconduct. *Journal of Criminal Justice*, 52, 49-56.
- Reidy, T. J., & Sorensen, J. R. (2017). Prison homicides: A multidimensional comparison of perpetrators and victims. *Journal of Forensic Psychology Research and Practice*, 17(2), 99-116.
- Reidy, T., & Sorensen, J. (2020). Visitation and misconduct among maximum-security inmates. *The Prison Journal*, 100(4), 447-467.

- Reidy, T. J., Sorensen, J. R., & Bonner, H. S. (2020). Prison homicide: an extension of violent criminal careers?. *Journal of Interpersonal Violence, 35*(23-24), 5676-5690.
- Reidy, T. J., Sorensen, J. R., & Cihan, A. (2018). Institutional misconduct among juvenile offenders serving a blended sentence. *Journal of Criminal Justice, 57*, 99-105.
- Reidy, T. J., Sorensen, J. R., & Cunningham, M. D. (2012). Community violence to prison assault: A test of the behavioral continuity hypothesis. *Law and Human Behavior, 36*(4), 356.
- Reidy, T. J., Sorensen, J. R., & Cunningham, M. D. (2013). Probability of criminal acts of violence: A test of jury predictive accuracy. *Behavioral Sciences & the Law, 31*(2), 286-305.
- Reidy, T. J., Sorensen, J. R., & Davidson, M. (2016). Testing the predictive validity of the Personality Assessment Inventory (PAI) in relation to inmate misconduct and violence. *Psychological Assessment, 28*(8), 871.
- Reisig, M. D., & Mesko, G. (2009). Procedural justice, legitimacy, and prisoner misconduct. *Psychology, Crime & Law, 15*(1), 41-59.
- Resnick, H. S., Acierno, R., & Kilpatrick, D. G. (1997). Health impact of interpersonal violence 2: Medical and mental health outcomes. *Behavioral Medicine, 23*(2), 65-78.
- Rhineberger-Dunn, G., Mack, K. Y., & Baker, K. M. (2016). Secondary trauma among community corrections staff: An exploratory study. *Journal of Offender Rehabilitation, 55*(5), 293-307.
- Ricciardelli, R. (2014). Coping strategies: Investigating how male prisoners manage the threat of victimization in federal prisons. *The Prison Journal, 94*(4), 411-434.
- Ricciardelli, R., & Sit, V. (2016). Producing social (dis) order in prison: The effects of administrative controls on prisoner-on-prisoner violence. *The Prison Journal, 96*(2), 210-231.
- Rocheleau, A. M. (2013). An empirical exploration of the “pains of imprisonment” and the level of prison misconduct and violence. *Criminal Justice Review, 38*(3), 354-374.
- Rocheleau, A. M. (2015). Ways of coping and involvement in prison violence. *International Journal of Offender Therapy and Comparative Criminology, 59*(4), 359-383.
- Rogers, J. B. (2001). FOCUS Survey and Final Report: A Summary of the Findings: Families Officers and Corrections Understanding Stress.
- Ross, J. I. (2013). Deconstructing correctional officer deviance: Toward typologies of actions and controls. *Criminal Justice Review, 38*(1), 110-126.
<https://doi.org/10.1177/0734016812473824>
- Ruddell, R., Decker, S. H., & Egley Jr, A. (2006). Gang interventions in jails: A national analysis. *Criminal Justice Review, 31*(1), 33-46.
- Salvagioni, D. A. J., Melanda, F. N., Mesas, A. E., González, A. D., Gabani, F. L., & Andrade, S. M. D. (2017). Physical, psychological and occupational consequences of job burnout: A systematic review of prospective studies. *PloS One, 12*(10), e0185781.
- Sandler, J. C., Freeman, N. J., Farrell, P., & Seto, M. C. (2013). Predicting institutional sexual misconduct by adult male sex offenders. *Criminal Justice and Behavior, 40*(10), 1131-1148.
- Sarchiapone, M., Carli, V., Cuomo, C., Marchetti, M., & Roy, A. (2009). Association between childhood trauma and aggression in male prisoners. *Psychiatry Research, 165*(1-2), 187-192.

- Sazzad, H. M., McCredie, L., Treloar, C., Lloyd, A. R., & Lafferty, L. (2020). Violence and hepatitis C transmission in prison—A modified social ecological model. *Plos One*, *15*(12), e0243106.
- Schaufeli, W. B., & Peeters, M. C. (2000). Job stress and burnout among correctional officers: A literature review. *International Journal of Stress Management*, *7*(1), 19-48.
- Schenk, A. M., & Fremouw, W. J. (2012). Individual characteristics related to prison violence: A critical review of the literature. *Aggression and Violent Behavior*, *17*(5), 430-442.
- Scieपुरa, B., & Linos, E. (2021). When perceptions of public service harms the public servant: Predictors of Burnout and compassion fatigue in government. *Review of Public Personnel Administration*, 0734371X221081508.
- Scott, W. R. (2013). *Institutions and organizations: Ideas, interests, and identities*. Sage publications.
- Sechrest, D. K. (1991). The effects of density on jail assaults. *Journal of Criminal Justice*, *19*(3), 211-223.
- Sechrest, D. K., & Crim, D. (1989). Population density and assaults in jails for men and women. *American Journal of Criminal Justice*, *14*, 87-103.
- Seidler, G. H., & Wagner, F. E. (2006). Comparing the efficacy of EMDR and trauma-focused cognitive-behavioral therapy in the treatment of PTSD: a meta-analytic study. *Psychological Medicine*, *36*(11), 1515-1522.
<https://doi.org/10.1017/S0033291706007963>
- Semenza, D. C., & Grosholz, J. M. (2019). Mental and physical health in prison: how co-occurring conditions influence inmate misconduct. *Health & Justice*, *7*(1), 1-12.
- Sewell, A. A., Jefferson, K. A., & Lee, H. (2016). Living under surveillance: Gender, psychological distress, and stop-question-and-frisk policing in New York City. *Social Science & Medicine*, *159*, 1-13.
- Sezer, H. (2022). *Killing Our Future: The Long-Term and Intergenerational Effects of School Shootings on Labor-Market Outcomes*. CentER, Tilburg University.
- Shanafelt, T. D., Balch, C. M., Bechamps, G., Russell, T., Dyrbye, L., Satele, D., ... & Freischlag, J. (2010). Burnout and medical errors among American surgeons. *Annals of Surgery*, *251*(6), 995-1000.
- Shepherd, B. R., Fritz, C., Hammer, L. B., Guros, F., & Meier, D. (2019). Emotional demands and alcohol use in corrections: A moderated mediation model. *Journal of Occupational Health Psychology*, *24*(4), 438. <https://doi.org/10.1037/ocp0000114>
- Shim, D. C., Park, H. H., & Eom, T. H. (2017). Street-level bureaucrats' turnover intention: Does public service motivation matter? *International Review of Administrative Sciences*, *83*(3), 563-582. <https://doi.org/10.1177/0020852315582137>
- Shine, J., & Hobson, J. (2000). Institutional behaviour and time in treatment among psychopaths admitted to a prison-based therapeutic community. *Medicine, Science and the Law*, *40*(4), 327-335.
- Shirom, A. (2010). Employee burnout and health. *Contemporary Occupational Health Psychology*, 59-76.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: new procedures and recommendations. *Psychological Methods*, *7*(4), 422.
- Siennick, S. E., Mears, D. P., & Bales, W. D. (2013). Here and gone: Anticipation and separation effects of prison visits on inmate infractions. *Journal of Research in Crime and Delinquency*, *50*(3), 417-444.

- Silver, I. A., & Nedelec, J. L. (2018). Cognitive abilities and antisocial behavior in prison: A longitudinal assessment using a large state-wide sample of prisoners. *Intelligence, 71*, 17-31.
- Skaalvik, E. M., & Skaalvik, S. (2019). Teacher self-efficacy and collective teacher efficacy: relations with perceived job resources and job demands, feeling of belonging, and teacher engagement. *Creative Education, 10*(7), 1400-1424.
- Skopp, N. A., Edens, J. F., & Ruiz, M. A. (2007). Risk factors for institutional misconduct among incarcerated women: An examination of the criterion-related validity of the Personality Assessment Inventory. *Journal of Personality Assessment, 88*(1), 106-117.
- Smith, J. M., Gacono, C. B., & Cunliffe, T. B. (2022). The PCL-R, PAI, and Rorschach as Predictors of Institutional Misconduct with Incarcerated Women. *Women & Criminal Justice, 32*(6), 483-501.
- Song, Z., & Baicker, K. (2019). Effect of a workplace wellness program on employee health and economic outcomes: a randomized clinical trial. *JAMA, 321*(15), 1491-1501.
- Sorensen, J. R., & Cunningham, M. D. (2007). Operationalizing risk: The influence of measurement choice on the prevalence and correlates of prison violence among incarcerated murderers. *Journal of Criminal Justice, 35*(5), 546-555.
- Sorensen, J. R., & Cunningham, M. D. (2009). Once a killer, always a killer? Prison misconduct of former death-sentenced inmates in Arizona. *The Journal of Psychiatry & Law, 37*(2-3), 237-263.
- Sorensen, J., & Cunningham, M. D. (2010). Conviction offense and prison violence: A comparative study of murderers and other offenders. *Crime & Delinquency, 56*(1), 103-125.
- Sorensen, J. R., Cunningham, M. D., Vigen, M. P., & Woods, S. O. (2011). Serious assaults on prison staff: A descriptive analysis. *Journal of Criminal Justice, 39*(2), 143-150.
- Sorensen, J., & Davis, J. (2011). Violent criminals locked up: Examining the effect of incarceration on behavioral continuity. *Journal of Criminal Justice, 39*(2), 151-158.
- Sorensen, J., Wrinkle, R., & Gutierrez, A. (1998). Patterns of rule-violating behaviors and adjustment to incarceration among murderers. *The Prison Journal, 78*(3), 222-231.
- Sorensen, J., & Wrinkle, R. D. (1996). No hope for parole: Disciplinary infractions among death-sentenced and life-without-parole inmates. *Criminal Justice and Behavior, 23*(4), 542-552.
- Sparks, R., Bottoms, A., & Hay, W. (1996). *Prisons and the Problem of Order*. Clarendon Press.
- Spinaris, C. G., Denhof, M. D., & Kellaway, J. A. (2012). Posttraumatic stress disorder in United States corrections professionals: Prevalence and impact on health and functioning. Desert Waters Correctional Outreach, 1-32.
- Stacer, M. J., & Solinas-Saunders, M. (2015). Physical and verbal assaults behind bars: Does military experience matter?. *The Prison Journal, 95*(2), 199-222.
- Stack, S., & Tsoudis, O. (1997). Suicide risk among correctional officers: A logistic regression analysis. *Archives of Suicide Research, 3*(3), 183-186.
<https://doi.org/10.1080/13811119708258270>
- Stadnyk, B. (2004). Posttraumatic stress disorder, violence and quality of life in Saskatchewan corrections workers. Faculty of Graduate Studies and Research, University of Regina.
- Stanisławski, K. (2019). The coping circumplex model: an integrative model of the structure of coping with stress. *Frontiers in Psychology, 10*.
<https://doi.org/10.3389/fpsyg.2019.00694>

- Stata (2020). Satorra-Bentler adjustments. Retrieved from:
<https://www.stata.com/features/overview/sem-satorra-bentler/>
- StataCorp. 2019. Stata Statistical Software: Release 16. College Station, TX: StataCorp LLC.
- Steiner, B. (2009). Assessing static and dynamic influences on inmate violence levels. *Crime & Delinquency*, 55(1), 134-161.
- Steiner, B., Butler, H. D., & Ellison, J. M. (2014). Causes and correlates of prison inmate misconduct: A systematic review of the evidence. *Journal of Criminal Justice*, 42(6), 462-470.
- Steiner, B., Ellison, J. M., Butler, H. D., & Cain, C. M. (2017). The impact of inmate and prison characteristics on prisoner victimization. *Trauma, Violence, & Abuse*, 18(1), 17-36.
- Steiner, B., & Wooldredge, J. (2008). Inmate versus environmental effects on prison rule violations. *Criminal Justice and Behavior*, 35(4), 438-456.
- Steiner, B., & Wooldredge, J. (2009). Individual and environmental effects on assaults and nonviolent rule breaking by women in prison. *Journal of Research in Crime and Delinquency*, 46(4), 437-467.
- Steiner, B., & Wooldredge, J. (2009). The relevance of inmate race/ethnicity versus population composition for understanding prison rule violations. *Punishment & Society*, 11(4), 459-489.
- Steiner, B., & Wooldredge, J. (2013). Implications of different outcome measures for an understanding of inmate misconduct. *Crime & Delinquency*, 59(8), 1234-1262.
- Steiner, B., & Wooldredge, J. (2015). Racial (in) variance in prison rule breaking. *Journal of Criminal Justice*, 43(3), 175-185.
- Steiner, B., & Wooldredge, J. (2018). Prison officer legitimacy, their exercise of power, and inmate rule breaking. *Criminology*, 56(4), 750-779.
- Steinke, P. (1991). Using situational factors to predict types of prison violence. *Journal of Offender Rehabilitation*, 17(1-2), 119-132.
- Stinglhamber, F., Nguyen, N., Josse, M., & Demoulin, S. (2022). The development of prison officers' job satisfaction and its impact on depersonalization of incarcerated persons: The role of organizational dehumanization. *Criminal Justice and Behavior*, 49(11), 1600-1617.
- Struckman-Johnson, C., & Struckman-Johnson, D. (2002). Sexual coercion reported by women in three Midwestern prisons. *Journal of Sex Research*, 39(3), 217-227.
- Struckman-Johnson, C., Struckman-Johnson, D., Rucker, L., Bumby, K., & Donaldson, S. (1996). Sexual coercion reported by men and women in prison. *Journal of Sex Research*, 33(1), 67-76.
- Sugie, N. F., & Turney, K. (2017). Beyond incarceration: Criminal justice contact and mental health. *American Sociological Review*, 82(4), 719-743. <https://doi.org/10.1177/0003122417713188>
- Sundt, J. L., Castellano, T. C., & Briggs, C. S. (2008). The sociopolitical context of prison violence and its control: A case study of supermax and its effect in Illinois. *The Prison Journal*, 88(1), 94-122.
- Sung, H. E. (2010). Prevalence and risk factors of violence-related and accident-related injuries among state prisoners. *Journal of Correctional Health Care*, 16(3), 178-187.
- Sykes, Gresham M. (2007). *The society of captives: A study of a maximum security prison.* Princeton University Press.

- Tartaglino, A. J., & Safran, D. A. (1997). A topography of psychiatric disorders among correction officers. *Journal of Occupational and Environmental Medicine*, 39(6), 569-573.
- Tartaro, C. (2002). The impact of density on jail violence. *Journal of Criminal Justice*, 30(6), 499-510.
- Tasca, M., Griffin, M. L., & Rodriguez, N. (2010). The effect of importation and deprivation factors on violent misconduct: An examination of Black and Latino youth in prison. *Youth Violence and Juvenile Justice*, 8(3), 234-249.
- Tartaro, C., & Levy, M. P. (2007). Density, inmate assaults, and direct supervision jails. *Criminal Justice Policy Review*, 18(4), 395-417.
- Teasdale, B., Daigle, L. E., Hawk, S. R., & Daquin, J. C. (2016). Violent victimization in the prison context: An examination of the gendered contexts of prison. *International Journal of Offender Therapy and Comparative Criminology*, 60(9), 995-1015.
- Tellhed, U., Bäckström, M., & Björklund, F. (2017). Will I fit in and do well? The importance of social belongingness and self-efficacy for explaining gender differences in interest in STEM and HEED majors. *Sex Roles*, 77, 86-96.
- Tessier, S. (2012). From field notes, to transcripts, to tape recordings: evolution or combination?. *International Journal of Qualitative Methods*, 11(4), 446-460.
- Tetric, L. E., Slack, K. J., Da Silva, N., & Sinclair, R. R. (2000). A comparison of the stress-strain process for business owners and nonowners: Differences in job demands, emotional exhaustion, satisfaction, and social support. *Journal of Occupational Health Psychology*, 5(4), 464. <https://doi.org/10.1037/1076-8998.5.4.464>
- Thomas, J. L., Wilk, J. E., Riviere, L. A., McGurk, D., Castro, C. A., & Hoge, C. W. (2010). Prevalence of mental health problems and functional impairment among active component and National Guard soldiers 3 and 12 months following combat in Iraq. *Archives of General Psychiatry*, 67(6), 614-623. <https://doi.org/10.1001/archgenpsychiatry.2010.54>
- Thomson, N. D., Towl, G. J., & Centifanti, L. (2016). The habitual female offender inside: How psychopathic traits predict chronic prison violence. *Law and Human Behavior*, 40(3), 257.
- Thomson, N. D., Vassileva, J., Kiehl, K. A., Reidy, D., Aboutanos, M., McDougale, R., & DeLisi, M. (2019). Which features of psychopathy and impulsivity matter most for prison violence? New evidence among female prisoners. *International Journal of Law and Psychiatry*, 64, 26-33.
- Thoits, P. A. (2010). Stress and health: Major findings and policy implications. *Journal of Health and Social Behavior*, 51(S), S41-S53. <https://doi.org/10.1177/0022146510383499>
- Tischler, C. A., & Marquart, J. W. (1989). Analysis of disciplinary infraction rates among female and male inmates. *Journal of Criminal Justice*, 17(6), 507-513.
- Toman, E. L. (2019). The victim-offender overlap behind bars: Linking prison misconduct and victimization. *Justice Quarterly*, 36(2), 350-382.
- Toman, E. L., Cochran, J. C., & Cochran, J. K. (2018). Jailhouse blues? The adverse effects of pretrial detention for prison social order. *Criminal Justice and Behavior*, 45(3), 316-339.
- Tostlebe, J. J., & Pyrooz, D. C. (2022). Procedural justice, legal orientations, and gang membership: Testing an alternative explanation to understand the gang-misconduct link. *Criminology*, 60(4), 700-739.
- Tracy, S. J. (2005). Locking up emotion: Moving beyond dissonance for understanding emotion labor discomfort. *Communication Monographs*, 72(3), 261-283.

- Transparent California (2021). California's largest public pay and pension database. [Data file.] Retrieved from: <https://transparentcalifornia.com/>
- Trammell, R., Rundle, M., & Borrego, A. R. (2021). Anger, frustration, and snitching: Inmates describe structured isolation in a high-tech prison. *Deviant Behavior*, 42(9), 1067-1085.
- Trounson, J. S., & Pfeifer, J. E. (2017). Correctional officers and workplace adversity: Identifying interpersonal, cognitive, and behavioral response tendencies. *Journal of Correctional Health Care*, 23(4), 437-448. <https://doi.org/10.1177/1078345817720923>
- Trounson, J. S., Pfeifer, J. E., & Skues, J. L. (2019). Perceived workplace adversity and correctional officer psychological well-being: an international examination of the impact of officer response styles. *The Journal of Forensic Psychiatry & Psychology*, 30(1), 17-37. <https://doi.org/10.1080/14789949.2018.1441427>
- Trulson, C. R. (2007). Determinants of disruption: Institutional misconduct among state-committed delinquents. *Youth Violence and Juvenile Justice*, 5(1), 7-34.
- Trulson, C. R., Craig, J. M., Caudill, J. W., & DeLisi, M. (2022). Violent Institutional Misconduct in the Transition from Juvenile to Adult Correctional Facilities. *The Prison Journal*, 102(5), 519-541.
- Trulson, C. R., DeLisi, M., Caudill, J. W., Belshaw, S., & Marquart, J. W. (2010). Delinquent careers behind bars. *Criminal Justice Review*, 35(2), 200-219.
- Turney, K., Wildeman, C., & Schnittker, J. (2012). As fathers and felons: explaining the effects of current and recent incarceration on major depression. *Journal of Health and Social Behavior*, 53(4), 465-481. <https://doi.org/10.1177/0022146512462400>
- Udechukwu, I. I. (2009). Correctional officer turnover: Of Maslow's needs hierarchy and Herzberg's motivation theory. *Public Personnel Management*, 38(2), 69-82.
- Udechukwu, I., Harrington, W., Manyak, T., Segal, S., & Graham, S. (2007). The Georgia Department of Corrections: An exploratory reflection on correctional officer turnover and its correlates. *Public Personnel Management*, 36(3), 247-268. <https://doi.org/10.1177/009102600703600305>
- United States Department of Veterans Affairs. (2019). PTSD and problems with alcohol use. Retrieved from: https://www.ptsd.va.gov/understand/related/problem_alcohol_use.asp
- Usher, A. M., Stewart, L. A., & Wilton, G. (2013). Attention deficit hyperactivity disorder in a Canadian prison population. *International Journal of Law and Psychiatry*, 36(3-4), 311-315.
- Valentine, C. L., Mears, D. P., & Bales, W. D. (2015). Unpacking the relationship between age and prison misconduct. *Journal of Criminal Justice*, 43(5), 418-427.
- van Ginneken, E. F. (2022). Is Cell Sharing Associated with Wellbeing, Misconduct and Prison Climate? Evidence from a Dutch Study. *European Journal of Crime, Criminal Law and Criminal Justice*, 30(1), 41-68.
- Van Roy, K., Vanheule, S., & Inslegers, R. (2015). Research on Balint groups: a literature review. *Patient Education and Counseling*, 98(6), 685-694.
- Van Voorhis, P. (1994). Measuring prison disciplinary problems: A multiple indicators approach to understanding prison adjustment. *Justice Quarterly*, 11(4), 679-709.
- Wagner, M., McBride, R. E., & Crouse, S. F. (1999). The effects of weight-training exercise on aggression variables in adult male inmates. *The Prison Journal*, 79(1), 72-89.
- Walby, K., & Cole, D. (2019). Beyond emotional labour: Emotions and peer support in a Canadian prison. *Emotion, Space and Society*, 33, 100631.

- Walters, G. D. (1998). Time series and correlational analyses of inmate-initiated assaultive incidents in a large correctional system. *International Journal of Offender Therapy and Comparative Criminology*, 42(2), 124-132.
- Walters, G. D. (2005). Predicting institutional adjustment with the lifestyle criminality screening form and psychological inventory of criminal thinking styles. *International Journal of Forensic Mental Health*, 4(1), 63-70.
- Walters, G. D. (2007). Predicting institutional adjustment with the Psychological Inventory of Criminal Thinking Styles composite scales: Replication and extension. *Legal and Criminological Psychology*, 12(1), 69-81.
- Walters, G. D., & Crawford, G. (2013). In and out of prison: Do importation factors predict all forms of misconduct or just the more serious ones?. *Journal of Criminal Justice*, 41(6), 407-413.
- Walters, G. D., & Crawford, G. (2014). Major mental illness and violence history as predictors of institutional misconduct and recidivism: Main and interaction effects. *Law and Human Behavior*, 38(3), 238.
- Wang, Y., Zhang, H., Lei, J., & Yu, Y. (2019). Burnout in Chinese social work: Differential predictability of the components of the Maslach Burnout Inventory. *International Journal of Social Welfare*, 28(2), 217-228.
- Wareham, J., Smith, B. W., & Lambert, E. G. (2015). Rates and patterns of law enforcement turnover: A research note. *Criminal Justice Policy Review*, 26(4), 345-370.
<https://doi.org/10.1177/0887403413514439>
- Warren, J. I., Hurt, S., Loper, A. B., Bale, R., Friend, R., & Chauhan, P. (2002). Psychiatric symptoms, history of victimization, and violent behavior among incarcerated female felons: An American perspective. *International Journal of Law and Psychiatry*, 25(2), 129-149.
- Warren, J. I., Hurt, S., Loper, A. B., & Chauhan, P. (2004). Exploring prison adjustment among female inmates: Issues of measurement and prediction. *Criminal Justice and Behavior*, 31(5), 624-645.
- Waugh Jr, W. L., & Streib, G. (2006). Collaboration and leadership for effective emergency management. *Public Administration Review*, 66, 131-140.
- Welsh, W. N., McGrain, P., Salamatin, N., & Zajac, G. (2007). Effects of prison drug treatment on inmate misconduct: A repeated measures analysis. *Criminal Justice and Behavior*, 34(5), 600-615.
- Weber, M. (1958). *From Max Weber: Essays in sociology*. Translated by H. H. Gerth and C. Wright Mills. New York, NY: Oxford University.
- Wells, J. B., Minor, K. K., Lambert, E. G., & Tilley, J. L. (2016). A model of turnover intent and turnover behavior among staff in juvenile corrections. *Criminal Justice and Behavior*, 43(11), 1558-1579. <https://doi.org/10.1177/0093854816645140>
- West, C. P., Dyrbye, L. N., Erwin, P. J., & Shanafelt, T. D. (2016). Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis. *The Lancet*, 388(10057), 2272-2281.
- Whiteside, E., & Bond, C. A. (2017). Understanding disruptive behaviour in the juvenile prison estate. *Journal of Forensic Practice*, 19(2), 162-170.
- Wieclaw, J., Agerbo, E., Mortensen, P. B., Burr, H., Tüchsen, F., & Bonde, J. P. (2006). Work related violence and threats and the risk of depression and stress disorders. *Journal of*

- Epidemiology & Community Health*, 60(9), 771-775. <https://doi.org/10.1136/jech.2005.042986>
- Williams, K. A., Kolar, M. M., Reger, B. E., & Pearson, J. C. (2001). Evaluation of a wellness-based mindfulness stress reduction intervention: A controlled trial. *American Journal of Health Promotion*, 15(6), 422-432.
- Williams, P. (2015). Criminalising the Other: challenging the race-gang nexus. *Race & Class*, 56(3), 18-35. <https://doi.org/10.1177/0306396814555622>.
- Williamson, O. E. (1973). Markets and hierarchies: Some elementary considerations. *The American Economic Review*, 63(2), 316-325.
- Winterdyk, J., & Ruddell, R. (2010). Managing prison gangs: Results from a survey of US prison systems. *Journal of Criminal Justice*, 38(4), 730-736.
- Wise, C. R. (2006). Organizing for homeland security after Katrina: Is adaptive management what's missing?. *Public Administration Review*, 66(3), 302-318.
- Wolff, N., Blitz, C. L., & Shi, J. (2007). Rates of sexual victimization in prison for inmates with and without mental disorders. *Psychiatric Services*, 58(8), 1087-1094.
- Wolff, N., & Shi, J. (2009). Type, source, and patterns of physical victimization: A comparison of male and female inmates. *The Prison Journal*, 89(2), 172-191.
- Wolff, N., & Shi, J. (2011). Patterns of victimization and feelings of safety inside prison: The experience of male and female inmates. *Crime & Delinquency*, 57(1), 29-55.
- Wolff, N., Shi, J., & Siegel, J. (2009). Understanding physical victimization inside prisons: Factors that predict risk. *Justice Quarterly*, 26(3), 445-475.
- Wolff, N., Blitz, C. L., Shi, J., Siegel, J., & Bachman, R. (2007). Physical violence inside prisons: Rates of victimization. *Criminal Justice and Behavior*, 34(5), 588-599.
- Wolff, N., Blitz, C. L., Shi, J., Bachman, R., & Siegel, J. A. (2006). Sexual violence inside prisons: Rates of victimization. *Journal of Urban Health*, 83, 835-848.
- Wolff, N., Shi, J., Blitz, C. L., & Siegel, J. (2007). Understanding sexual victimization inside prisons: Factors that predict risk. *Criminology & Public Policy*, 6(3), 535-564.
- Wong, C. S., & Law, K. S. (1999). Testing reciprocal relations by nonrecursive structural equation models using cross-sectional data. *Organizational Research Methods*, 2(1), 69-87. <https://doi.org/10.1177/109442819921005>
- Wood, S. R. (2013). Dual severe mental and substance use disorders as predictors of federal inmate assaults. *The Prison Journal*, 93(1), 34-56.
- Wood, S. R. (2018). Co-occurring serious mental illnesses and substance use disorders as predictors of assaultive infraction charges among adult male jail inmates. *The Journal of Forensic Psychiatry & Psychology*, 29(2), 189-210.
- Wood, S. R., & Buttaro Jr, A. (2013). Co-occurring severe mental illnesses and substance abuse disorders as predictors of state prison inmate assaults. *Crime & Delinquency*, 59(4), 510-535.
- Wooldredge, J., & Steiner, B. (2009). Comparing methods for examining relationships between prison crowding and inmate violence. *Justice Quarterly*, 26(4), 795-826.
- Wooldredge, J., & Steiner, B. (2012). Race group differences in prison victimization experiences. *Journal of Criminal Justice*, 40(5), 358-369.
- Wooldredge, J., & Steiner, B. (2016). Assessing the need for gender-specific explanations of prisoner victimization. *Justice Quarterly*, 33(2), 209-238.
- Worrall, J. L., & Morris, R. G. (2011). Inmate custody levels and prison rule violations. *The Prison Journal*, 91(2), 131-157.

- Worrall, J. L., & Morris, R. G. (2012). Prison gang integration and inmate violence. *Journal of Criminal Justice, 40*(5), 425-432.
- Wright, K. N. (1991). The violent and victimized in the male prison. *Journal of Offender Rehabilitation, 16*(3-4), 1-26.
- Wright, K. (1994). *Effective prison leadership*. Binghamton, NY: William Neil.
- Wright, J. E., & Headley, A. M. (2020). Police use of force interactions: Is race relevant or gender germane?. *The American Review of Public Administration, 50*(8), 851-864.
- Wulf-Ludden, T. (2013). Interpersonal relationships among inmates and prison violence. *Journal of Crime and Justice, 36*(1), 116-136.
- Yasmeen, S., Tangney, J. P., Stuewig, J. B., Hocter, C., & Weimer, L. (2021). The implications of borderline personality features for jail inmates' institutional misconduct and treatment-seeking. *Personality Disorders: Theory, Research, and Treatment*.
- Yazdankhahfard, M., Haghani, F., & Omid, A. (2019). The Balint group and its application in medical education: A systematic review. *Journal of Education and Health Promotion, 8*.
- Young, M. H., Justice, J. V., & Erdberg, P. (2004). Assault in prison and assault in prison psychiatric treatment. *Journal of Forensic Sciences, 49*(1), 141-149.
- Zaleski, E. H., Levey-Thors, C., & Schiaffino, K. M. (1998). Coping mechanisms, stress, social support, and health problems in college students. *Applied Developmental Science, 2*(3), 127-137.
- Zhang, S. X., Roberts, R. E., & McCollister, K. E. (2009). An economic analysis of the in-prison therapeutic community model on prison management costs. *Journal of Criminal Justice, 37*(4), 388-395.