

LAW ENFORCEMENT AND RACIAL JUSTICE:
OPPORTUNITIES AND CHALLENGES TO INSTITUTIONAL CHANGE

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Abstract
of
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by
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The United States is grappling with the challenge of rebuilding trust in law enforcement. Law enforcement executives pursuing racial justice strategies have a slew of options to choose from. However, many of these alternatives to standard procedure lack rigorous evaluation. My analysis will review recent trends in law enforcement in combination with existing research to offer insights to the policy question: What evidence-based tools and strategies are available to law enforcement professionals interested in racial justice?

Within this analysis, I utilize literature and case studies to highlight the opportunities and barriers facing racial justice in law enforcement. Existing research reveals the efficacy of training and organizational reform efforts, while underlining gaps in knowledge where more analysis is necessary.

Law enforcement executives are in a prime position to set the cultural and administrative tone to cultivate a trusting relationship between citizens and law enforcement. To implement successful shifts, it is essential for law enforcement executives to address internal protocol, cultural expectations, and community relations. This multi-pronged approach increases the chances of successful transition by addressing the true complexity of the issue. Incorporating the input and needs of existing officers works to foster holistic solutions and minimize resistance. Thus, law

enforcement executives looking to address racial justice within their department can focus on screening, training modules and delivery, and fostering a reflective and equitable internal culture.

In conclusion, elevating racial justice within law enforcement continues to be a complex challenge. Unclear concepts of professionalism within law enforcement create instability in the expectations of officers. Stringent protection from disciplinary action compounds this effect, further weakening attempts to create behavioral standards. Many training models and institutional change strategies lack rigorous evaluation, creating barriers for law enforcement executives working to institute reform. Law enforcement executives working to increase access to evidence-based strategies for racial justice can join the effort to bridge these gaps.

LAW ENFORCEMENT AND RACIAL JUSTICE: OPPORTUNITIES AND CHALLENGES TO INSTITUTIONAL CHANGE

Introduction

The United States is grappling with the challenge of rebuilding trust in law enforcement. After a surging public response to incidents of police brutality caught on camera, many governing bodies began searching for solutions. Law enforcement executives pursuing racial justice strategies have a slew of options to choose from. However, many of these alternatives to standard procedure lack rigorous evaluation. As law enforcement executives and governing bodies search for answers, it is essential to identify, develop, and implement evidence-based strategies to transform policing outcomes. My analysis will review recent trends in law enforcement in combination with existing research to offer insights to the policy question: What evidence-based tools and strategies are available to law enforcement professionals interested in racial justice?

Defining the Problem

The relationship between racial justice and law enforcement in the United States is a complex dynamic. Excessive use of force generates local and national tensions despite historically low crime rates (Gramlich, 2020). Black adults are five times as likely to say that law enforcement has stopped them unjustly compared to white adults (Desilver & Lipka, 2020). Black officers are also more likely than other races to see the shooting of Black Americans as a systemic issue (Desilver & Lipka, 2020). The United States sees an average of 1,000 fatal shootings at the hands of law enforcement each year, with a disproportionate representation of Black, Latinx, and Native Americans in these incidents (Fallis & Rinder, 2021). These trends elevate the urgency of identifying root causes and addressing racial justice in law enforcement.

Racial disparities in policing damage community relations and effective policing requires a cooperative relationship between residents and officers. Many policing outcomes are influenced by the extent to which residents feel comfortable interacting with law enforcement. Overall, residents in the United States report less than half of all crimes, with law enforcement solving half of the total reports (Gramlich, 2017). The lack of reporting stems from a range of drivers, including individual sense of agency and level of comfort with law enforcement. Thus, addressing community relations and racial justice works to foster a more effective system of law enforcement.

Implementing top-down changes to achieve these improvements can be challenging due to the level of local control within this sector. Law enforcement represents an incredibly decentralized system with nearly 18,000 law enforcement departments within the United States, and 509 in California alone (Banks, Hendrix, Hickman, & Kyckelhahn, 2016; Reaves, 2011). This decentralization presents barriers to top-down reforms even if such reforms promise to meet the unique regional needs of communities. Thus, as law enforcement executives work to achieve racial justice, they must navigate the agendas and perspectives of decision-makers at both the state and local levels.

Stakeholders continue to debate the root causes of racial discrepancies in policing. Are these trends the result of rogue officers? Of resistant citizens? The culture of policing? Each of these frameworks lead to different solutions. Depending on leadership philosophy, the policy shifts to address this problem can vary dramatically. One study of this dilemma finds that individuals who perceive Black men as a threat are less likely to support law enforcement reform, while people who view law enforcement as the threat tend to favor policing reforms (Skinner & Haas, 2016). This foundational divide contributes to the tangled nature of law enforcement and racial justice. Working to assess the impact of training and other strategies will support local jurisdictions to

implement meaningful changes. The following sections will review trends related to law enforcement professionalism and incidents of misconduct within policing as they contribute to tensions about the use of force and calls for racial justice.

Trends in Law Enforcement

The relationship between racial justice and law enforcement has a long history within the United States. Thus, analysis requires the consideration of historical trends that set the foundation for today's context. This section works to explain how individual officers, existing definitions of professionalism, disciplinary practices, and standard training protocols contribute to misconduct and incidents of racial injustices as part of the larger system.

Who is responsible for misconduct?

Due to the overwhelming number of incidents of police brutality across the country and in the media, the public often assumes that many if not most officers are engaging in these acts. Recent literature refutes these impressions and instead highlights an important finding - a handful of law enforcement are involved in multiple shootings (Thompson, 2021). This has serious implications for future research and reforms. Additional studies support this finding. Years of service increase the odds of having positive interactions with citizens and officers with less than five years of experience are more likely to be the subject of investigations for excessive use of force (Todak & James, 2018; McElvain & Kposowa, 2004). Evidence also suggests that misconduct can create a feedback loop, with the odds of misconduct increasing after an initial investigation (McElvain & Kposowa, 2004). These findings suggest that a significant portion of incidents of excessive force stem from a relatively small proportion of officers, and they tend to have less experience on the job. Thompson (2021) also finds that out of 33 officers who had to leave the force, three were able to return to the same department, while at least five others found

employment in different precincts. Given these trends, leaders in law enforcement can look towards existing structures that lead to this revolving door of misconduct.

Barriers to Accountability

Barriers to taking disciplinary action after incidents of misconduct and racial injustice present additional challenges. Many departments operate under collective bargaining agreements (CBAs) that include extensive protections for officers facing misconduct charges (Mogc, 2020). Unions exist to advocate on behalf of their members, yet this has specific consequences within the realm of policing. These agreements generate barriers to termination after officer misconduct through provisions such as grievance proceedings and arbitration, which allow officers to challenge disciplinary actions (Disalvo, 2020). Statutes such as these can contradict local authority after incidents of misconduct. Recent research finds a positive relationship between the existence of CBAs and the number of civilians dying at the hands of law enforcement (Cunningham, Feir & Gillezeau, 2020). These dynamics compound upon existing trends with rouge officers and unclear professional standards to exacerbate existing injustice by impeding the ability of leadership to remove officers.

How to define professionalism in Policing?

Professionalism within policing is an evolving concept. Early definitions of professionalism revolve around scientific models of policing, focusing on law enforcement as an objective entity that relies on technology and technical skill (Sklansky, 2011). Critiques offer concerns regarding the skills missing from this equation. This is particularly relevant today given the evolving role of law enforcement as officers work to both reduce crime and serve as community problem-solvers. The scientific model serves to meet the technical needs of responding to crime yet does not encompass the personal and administrative qualities necessary to building trust and

legitimacy within the communities that law enforcement serves (Sklansky, 2011). Regions are turning to community policing as a more holistic framework to both ensure public safety and foster trusting relationships. The success of this transition varies across jurisdictions. The paramilitary structure of law enforcement continues to generate an insular “us versus them” mentality, which poses a barrier to integrating community policing models (Chappell & Lanza-Kaduce, 2010). While individual officers report they do not approve of abuse of power by law enforcement, many state that they have seen their colleagues use excessive force and fellow officers are unlikely to report one another (Weisburd, Greenspan, Hamilton, Williams, & Bryan, 2020). These institutional and cultural factors combine with varying definitions of community policing to slow the implementation of this model of professionalism. Law enforcement executives may turn to training modules in an effort to cultivate consistent definitions of professionalism.

Efficacy of Training

As local law enforcement leaders navigate expectations of professionalism and CBAs, modifying training models offers one pathway to exert power. Law enforcement education consists of basic training, field training, and in-service training (Morrison, 2006). Both basic and in-service training are shown to decrease officer use of force (Lee & Vaughn, 2010). Law enforcement training began focusing on military models in the 1960s during the rise of the war on drugs (Preston, 2020). This process emphasizes chain of command and firearms, with an average requirement of 71 hours of firearms training (Reaves, 2016). California requires a total of 664 hours of training for new law enforcement, and individual departments can require additional training hours (Yarbrough, 2020). Basic training tends to focus on firearms rather than communication and de-escalation skills (Yarbrough, 2020). Existing trends within law enforcement

training emphasize firearms within a militaristic model. A wide network of stakeholders influence efforts to shift existing trends in training, professionalism, and disciplinary practices.

Key Players

The larger trends impacting racial justice in law enforcement interact with a range of stakeholders, each with their own jurisdictions and interests. Law enforcement executives interact with local departments, municipal governments, and peace officer unions as they work to implement meaningful change. These players form a complex web of power and interests. Advancing racial justice within law enforcement requires a nuanced assessment of regional relationships between these core stakeholders.

Local Departments

The decentralized structure of policing in the United States allows local law enforcement executives to set priorities within their precincts. Departments exert influence over screening requirements, initial training, and performance priorities. While academies lay foundational culture (Miles-Johnson, 2017), individual departments possess additional mechanisms for shaping outcomes, including additional training and outcome prioritization.

Unlike city law enforcement, sheriffs serve as an elected position and possess more autonomy than a police chief. Given this authority, sheriffs act as powerful players within the political arena, and can also pose a barrier to accountability. While cities have jurisdiction over police chiefs, counties are often unable to remove sheriffs that work against the goals of the region (Tomberlin, 2018). This design can insulate sheriffs from local political movements, and the main level of influence lies in public elections. While elections offer one lever of accountability, California's constitution limits county government authority to appoint, compensate, and remove sheriffs, thus limiting the ability of counties to regulate day-to-day operations (Tomberlin, 2018).

Depending on the individual sheriff's vision, this can lend towards transformative reforms within the department. Across the United States, sheriffs have set policies to shift the criminal justice environment within their jurisdiction. Examples of this include encouraging cite and release models and prioritizing diversion programs over arrests (Pishko, 2019). Alternatively, California has seen sheriff mobilization against accountability measures, such as in 2002 when the Los Angeles Sheriff successfully nullified a ballot initiative imposing term limits on the sheriff position (Tomberlin, 2018). The range of authorities and jurisdictions of local law enforcement agencies creates a complex arena for regional governing bodies.

Cities, Counties, and Municipalities

There are social and economic implications of community relationships with law enforcement at the city and county level, making local governments a key stakeholder within this process. Officer misconduct lawsuits can generate costly bills for cities. Municipalities, rather than police departments or individual officers, are the responsible entities in these cases (Corley, 2020). The US Supreme Court case *Monell v. Department of Social Services of the City of New York* set the precedent of municipal liability (Perez, 2003). This leads to a monetary responsibility for successful misconduct cases. This process can contribute to the bankrupting of cities, as occurred in San Bernardino in 2012 (Stech, 2016). The combination of legislative power and financial responsibility elevates the role of cities and counties on the road to racial justice.

Local governments hold responsibility for the consequences of friction between law enforcement and residents. Law enforcement relationships with communities also carry significant implications for public health. A survey of adults across four cities in the United States reviewing relationships between law enforcement and the public finds that up to 18% of people experience psychological violence at the hands of law enforcement (DeVylder, Oh, Nam, Sharpe, Lehmann,

& Link, 2017). This study highlights the relationship between law enforcement and mental health within communities. Given these results, stakeholders may prioritize relationships between law enforcement and citizens as part of larger public health efforts.

Law Enforcement Unions

Unions wield significant influence over police standards and policy. Law Enforcement Unions, like unions in other public and private sectors, operate to achieve benefits for their workers. Ultimately, the role of unions is to advocate for job stability, compensation, protection, and safety. This translates to lobbying for policies that insulate officers and increase barriers to termination. At the local level, collective bargaining agreements are receiving attention due to the immense protection they provide. Collective bargaining agreements can reduce overall accountability. Once set, these agreements can supersede the interests of government officials and local law enforcement executives. For example, grievance procedures and arbitration protocols allow officers to challenge disciplinary actions (Disalvo, 2021). This can undermine leadership efforts to hold officers accountable and contribute to officers returning to the force after incidents.

This stakeholder analysis sets the stage for analyzing future research and potential strategies to address racial justice. Local departments interact with municipal governments and peace officer unions to influence the realm of policing. The following section reviews existing scholarship to assess recent research and inform best practices for navigating this complex landscape.

Existing Scholarship

Through this analysis, I highlight recent findings regarding screening, training, law enforcement culture, the impact of academies, and mental health considerations as they influence community relations, use of force, and racial justice.

Recruitment & Screening

The screening process for new recruits offers one dimension of increasing racial justice within policing. Recent studies find that certain communication styles and personality traits impact the likelihood of an officer exhibiting procedurally just behaviors. Specifically, empathy and emotional control increase these behaviors, while neuroticism decreases the chance of this outcome (Lawrence, Christoff, & Escamilla, 2017). Setting high standards for initial screening is shown to reduce the use of force by increasing the efficacy of onboarding education (Stickle, 2016). These findings suggest that departments will benefit from expanding screening practices to encompass these qualities when examining new recruits. Disqualifying inappropriate applicants is another key role of screening. Despite efforts to purge law enforcement of members of the Ku-Klux-Klan, radical associations remain a problem in current policing (German, 2020). According to FBI memos, white supremacist organizations continue to infiltrate local law enforcement (German, 2020). Given these challenges, some cities such as Baltimore and Washington D.C. are implementing new screening tests that focus on interpersonal and decision-making skills rather than technical capabilities (Barret, 2019). As law enforcement departments grapple to distill ideal individual qualities while weeding out bad actors, the underlying culture within law enforcement offers an additional lens in the pursuit of racial justice.

Training Modules

As the role of law enforcement shifts away from solely enforcement to community problem solving, the necessary skills also shift. Evidence suggests that reflective learning models are more effective than the current paramilitary structure in building the capacity of individual officers (Blumberg, Schlosser, Papazoglou, Creighton, & Kaye, 2019). Common training includes procedural justice, implicit bias, de-escalation, and cultural competency. Procedural justice models

build officer capacity to communicate with citizens in a way that helps people to feel heard and respected (Wood, Tyler & Papachristos, 2020). A study on procedural justice training analyzes the impact of supporting law enforcement to *slow down* their thinking process rather than focusing on changing specific behaviors (Owens, Weisburd, & Amendola, 2018). Studies show that procedural justice training results in modifications to cadet behavior and can reduce the frequency of use of force (Wood et al., 2020). Owens et al. (2018), found this model of *slowing down* officer thinking reduced the number of incidents that resulted in arrest. While the study also found a reduction in use-of-force, the small number of incidents weakens the reliability of this finding (Owens, et al, 2018). Additional research will strengthen the understanding of procedural justice training outcomes.

In addition to procedural justice, departments are looking towards implicit bias and cultural competency. Given the racial disparities in policing outcomes, reducing implicit bias is becoming a common solution. However, there is mixed evidence surrounding this tool. Studies suggest that implicit bias training supports officers to be more aware of their bias rather than reducing it altogether (Jawando & Parsons, 2014). The Interdisciplinary Cultural Concept (ICC) model works to increase cultural competency in law enforcement by acknowledging that systemic inequality requires both individual and cultural shifts (Tarver, Herrng, & Friend, 2020). Early findings suggest that this model increases cultural awareness of officers, yet the small sample size leaves room for additional evaluation. Key takeaways include the importance of buy-in at the leadership level and the consistent connection to cultural competency rather than a single training when instituting cultural change (Tarver et al., 2020).

Further research highlights the importance of how organizations frame training objectives. A keystone study by Rawski and Workman-Stark (2018) underlines the power of framing in

effective training. This study offers an example of framing sexual jokes as unprofessional rather than as harassment in an effort to increase buy-in from employees (Rawski & Workman-Stark, 2018). The combination of type and delivery of training offers implications for both the institutional structure and culture when implementing strategies to pursue racial justice.

Law enforcement culture

While the design and implementation of training models influence outcomes, organizational structure and culture play a significant role in long-term change. Many law enforcement agencies follow a militaristic chain of command, often without prioritizing equitable interactions between high-ranking officers and subordinates; this impacts the ways in which officers then interact with citizens (Owens et al., 2018). The alternative is also possible, with studies suggesting that when officers experience a reflective work environment, they pass this mindset on to their interactions within the community (Owens et al., 2018). Additional studies support these findings. A positive climate in which employees can access resources, feedback, and opportunities to grow fosters motivation to learn (Colquitt & LePine, 2000). These studies highlight the impact of organizational culture and the overarching structure and models of authority within organizations that significantly impact overall culture.

Scholars range from researching culture on an individual basis up to department level and law enforcement as a whole. These frames carry implications for pursuing racial justice. If culture lives within the individual, leaders may turn to training, whereas if culture lives in the department, leadership may assess organizational practices, norms, and protocols. Policing culture forms at a workgroup level among officers who consistently work among each other (Ingram, Terril, & Paoline, 2018). This underlying current influences officers' perceptions of themselves, their responsibilities, and those they serve (Perez, 2003). Workgroups operating with an aggressive

culture are more likely to use force and receive complaints (Ingram, Terril, & Paoline, 2018). This scholarship underlines the impact of departmental culture on policing outcomes.

If an organization's culture does not support or align with the goals of a training, these efforts are less likely to be effective (Colquitt & LePine, 2000). Masculinity contest culture is present in law enforcement institutions and includes four factors including the importance of not showing weakness, competing with strength and stamina, prioritizing work, and maintaining a zero-sum *dog-eat-dog* perspective (Rawski & Workman-Stark, 2018). Furthermore, the social divide between law enforcement and citizens can lead to isolation and encourage an isolated community within law enforcement (Perez, 2003). Existing culture can serve as a barrier to implementing cooperative models of policing.

Executives can expect resistance to change in training priorities and organizational practices. Creating internal procedures that allow officers to contribute ideas for improvement works to generate buy-in and reduce resistance (Stenkamp, Waseem, Rad, Tan de Bibiana, Bradford & Belur, 2021). An analysis of the Victoria Police in Australia offers a strong example of holistic organizational culture shifts (Metz & Kulik, 2008). While noting that established agencies with masculine cultures prove more difficult to change, these shifts are possible with integrative top-down and bottom-up processes. After entering as the department's first female director, Christine Nixon established core changes to vision statements and organizational artifacts, while also leading outreach to officers to learn about their pain points and vision for the future (Metz & Kulik, 2008). This process offers insight for executive leaders in law enforcement: organizations can achieve sustainable change from implementing top-down shifts to create long-term commitment while uplifting the voices of officers to generate specific changes and overall buy-in. Training is most effective when there is clear support from the organization (Colquitt &

LePine, 2000). Thus, executives can benefit from conveying the motivation behind training and connecting this purpose to the overarching values of the organization.

The Academy

Institutional culture influences behavior, starting within the academy. Despite efforts to incorporate community policing principles, the academy's paramilitary structure continues to reinforce traditional policing values. For example, tactics such as collective punishment and fostering an insulated community engrain a mentality of protecting fellow officers from trouble (Chappell & Lanza-Kaduce, 2010). This culture offers a foundation of policing that often overpowers the influence of brief training modules. Superior officers' attitudes shape new recruits and set expectations for how officers manage temperament and adhere to rules (Miles-Johnson, 2017). The paramilitary structure emphasizes chain of command and internal loyalty, resulting in an *us versus them* mentality for incoming recruits (Chappell & Lanza-Kaduce, 2010). Tactics such as collective punishment and fostering an insulated community engrain a mentality of protecting fellow officers from trouble (Chappell & Lanza-Kaduce, 2010). A 2014 study attempts to reduce segregation between officers by intentionally grouping officers in racially diverse groups within the academy (Conti & Doreian, 2014). This did not result in significant inter-racial social connections within the department. This process highlights the power of peer-to-peer influence. This presents both a barrier and lever for instituting organizational change. This culture offers a foundation of policing that often overpowers the influence of brief training modules such as de-escalation and procedural justice.

Mental Health

Officer workload and mental wellness offer an additional lens on this issue. Policing is a stressful and difficult profession, leading many officers to face burn-out. Officers are more likely

to consume alcohol, which may result from job stressors (Lentz, Silverstone, & Krameddine, 2020). This dimension further highlights the need to foster mental wellness within law enforcement departments to maintain a healthy force. The Arlington Police Department (APD) offers one example of addressing this barrier. Leadership chose to reframe officer wellness by emphasizing preventative measures regarding misconduct. This shift has led to increased personal awareness of wellness by individual officers and an overall reduction in complaints filed against APD (Stenkamp et. al., 2021). This offers one promising practice to ensure the officers on duty are mentally well. Prioritizing officer wellness is one lens to address the challenge of fostering community trust and a sense of legitimacy with law enforcement.

The existing scholarship highlights the many layers influencing law enforcement outcomes. After passing existing screening tools, new recruits are inducted into the academy where they experience basic training and become immersed in the departmental culture. Strategies to influence overall outcomes will look towards one or more of these leverage points. Given limited funding and the urgency of achieving racial justice, identifying analytical criteria to assess possible alternatives will support law enforcement executives to invest in viable options.

Key criteria

Given the complexity of achieving racial justice and policing, there is a wide range of criteria available to assess possible solutions. One initial barrier is the lack of clear definitions within these criteria, so that each stakeholder may have their own perspective. Many pivotal studies on the use of force within law enforcement focus on demographic, law enforcement department, and neighborhood factors as variables to control. Within this analysis, I utilize three core criteria: equity, efficiency, and political feasibility.

Efficiency represents the maximization of results per dollar invested. This requires isolating a particular outcome to maximize. Existing research frames efficiency in both process and outcomes by measuring how police interact with citizens and the ultimate result of these interactions (Todak & James, 2018; Terrill & Reisig, 2003; McElvain & Kposowa, 2004). Efficiency can focus on maximizing the number of incidents resolved peacefully similar to the study by Todak and James (2018). When public safety translates to enforcement, maximizing efficiency may mean achieving the highest number of citations and arrests per dollar invested. On the contrary, if agencies define public safety as a residential sense of safety, stakeholders may work to increase trust with law enforcement or access to resources. Thus, when analyzing potential solutions, it is essential to outline the mission of policing as this informs the outcomes to maximize.

Utilizing an equity lens in assessing solutions leads to questions such as: Who benefits? Who is left out? These questions are essential for racial justice within policing as one of the core issues is inequitable outcomes. Using equity as an evaluative criterion when assessing possible solutions integrates an ethical lens and situates alternatives within a larger history of racial injustice in law enforcement (Rivera & Ward, 2017). Currently, younger, male, and minority citizens face the highest levels of use of force, and these patterns continue at the community level due to the concentration of disadvantage and homicide rates amongst communities (Terrill & Reisig, 2003). Equitable solutions distribute benefits according to existing needs, and thus will provide positive outcomes for residents who bear the brunt of racial injustice. Analyzing alternatives through an equity lens works to elevate solutions that will be impactful within existing law enforcement culture and socialization (Rivera & Ward, 2017). With each potential reform, the positive and negative impacts across neighborhoods, socioeconomic status, and demographic groups will serve as a measure of equity.

Political feasibility is an additional criterion within law enforcement reform. Jurisdictions with elected officials who have run on *tough on crime* policies may face additional barriers to implementing reform measures. Policy windows represent opportunities for change and occur when public attention to an issue converges with the availability of appropriate solutions and political support (Kingdon, 1984.) When these forces do not align, law enforcement leaders may consider incremental changes that are more accessible. While lack of political support complicates racial justice efforts, stakeholders can consider levers to generate the support necessary to achieve these goals. Successfully implementing incremental changes while forming alliances with influential leaders within law enforcement unions and local governments offers one means of elevating political buy-in. Thus, while political feasibility is a criterion when assessing the success of a solution, law enforcement executives may consider ways to leverage additional support.

Policy Implications

The following section outlines eight promising and evidence-based practices to support efforts to achieve racial justice in policing. Depending on the strategy's political feasibility in different regions, some options are likely to be more accessible at first. These tactics are likely to interact positively with one another, and leadership may choose to utilize momentum from early successes to build support for bolder shifts.

Prioritize empathy and emotional control within the screening process. Research shows that empathy and emotional control connect to procedurally just behavior within law enforcement (Lawrence et. al., 2017). Incorporating these qualities into initial screening processes can elevate candidates with these communication traits.

Implement training modules identified as evidence-based or promising practices. Research supports models such as procedural justice and cultural competency. Evaluations of procedural

justice suggest that this training can reduce the use of force (Owens, 2018). Departments that are interested in emerging tools and strategies can implement a rigorous evaluation model to assess the impact of these methods and contribute to existing research.

Communicate commitment to changes at the leadership level. Initiatives are more likely to make long-term impacts when leadership visibly supports new training and procedural changes (Tarver et. al., 2020). Building alliances with executives within the department and union can increase the number of leaders championing institutional changes.

Focus on the framing of new training curriculum. Utilizing sense-breaking models rather than imposing confrontational adjustments increases training efficacy (Rawski et al., 2018). Sense-breaking is a practice of challenging perspectives in a manner that does not feel punitive to minimize defensiveness and resistance by aligning the goals of a training with the organizational culture and values. Thus, law enforcement executives can look for creative ways to advance an organization towards a different perspective. Rather than taking a punitive lens that implies employee behavior is wrong or shameful, it is possible to reframe values in a way that is palatable with the existing culture. This also provides opportunities for members to internalize these values rather than adopting surface behavior changes to avoid punishment or legal recourse.

Foster a positive internal culture. Utilizing procedural justice practices within law enforcement institutions increases individual officers' motivations to learn (Colquitt et. al., 2000). Additional evidence shows that officers model interactions with citizens based on their treatment within the force (Owens et al., 2018). Thus, by creating an internal culture that prioritizes reflection, feedback, and opportunities to grow, law enforcement executives can empower officers to bring these qualities into interactions within the community.

Involve officers in decision-making to reduce resistance. Establishing mechanisms for officers to share their ideas and requests for support allows for a broader understanding of problems and solutions while allowing officers to feel heard. This can reduce the sense of initiatives coming forcefully from the top down. This mirrors the procedural justice framework within the internal law enforcement structure, further empowering law enforcement officers to pass this framework onto the community members.

Implement procedural changes within the police academy. Peer-to-peer influence appears to have more impact than individual training modules (Miles-Johnson, 2017). This suggests that the social structures within the police academy significantly impact outcomes. Remodeling the paramilitary structure of the police academy can reduce the *us versus them* mentality that exists between officer ranks and in relation to officers and citizens.

Prioritize mental health and preventative measures. Normalizing conversations about mental health also opens opportunities for preventative intervention. Arlington Police Department offers one model for early intervention. When citizens register complaints, the department connects the involved officers to supportive resources (Stenkamp et. al., 2021). Early evaluation of these efforts shows that normalizing mental health reduces complaints against the department and increased levels of personal awareness for individual officers.

Law enforcement executives are in a prime position to set the cultural and administrative tone to cultivate a trusting relationship between citizens and law enforcement. To implement successful shifts, it is essential for law enforcement executives to address internal protocol, cultural expectations, and community relations (Perez, 2003). This multi-pronged approach increases the chances of successful transition by addressing the true complexity of the issue. Incorporating the input and needs of existing officers works to foster holistic solutions and minimize resistance.

Thus, law enforcement executives looking to address racial justice within their department can focus on screening, training modules and delivery, and fostering a reflective and equitable internal culture.

Need for Future Research

Existing research offers insights into racial justice in policing, yet many gaps still exist. Many strategies lack clear definitions and rigorous evaluation of effectiveness. Law enforcement executives working to increase access to evidence-based strategies for racial justice can join the effort to bridge these gaps. By adopting reform efforts in conjunction with an evaluation strategy, local leaders can contribute to this growing body of work. Stockton, California, in partnership with the Urban Institute, is supporting these efforts. Beginning in 2016, Stockton began implementing training modules on procedural justice and implicit bias alongside larger reconciliation listening sessions (National Institute for Building Community Trust and Justice, 2018). The city is conducting a multi-year analysis on the impacts of these processes on community relations with law enforcement. Efforts such as this allow local leaders to contribute to existing evidence and uplift promising practices for departments in the future.

Conclusion

In conclusion, elevating racial justice within law enforcement continues to be a complex challenge. While public support for change has grown over the past decades, the historical trends creating current injustices have deep roots. Unclear concepts of professionalism within law enforcement create instability in the expectations of officers. Stringent protection from disciplinary action compounds this effect, further weakening attempts to create behavioral standards. Many training models and institutional change strategies lack rigorous evaluation, creating barriers for law enforcement executives working to institute reform. The analysis above examines and

integrates existing literature on the efficacy and impact of recruitment, training, and cultural shifts within law enforcement. Overarching trends reveal that leadership support is essential for instituting meaningful change. Communicating buy-in from leadership in conjunction with procedurally just models of engaging with officers constructs a foundation of support within departments and reduces initial resistance to reforms. The policy implications outlined above fall into three general categories: recruitment, training selection and delivery, and organizational culture. Depending on regional needs and political demands, some of these categories will be easier to address than others. Law enforcement executives working to advance racial justice in their region may choose to begin with recommendations that are the most politically feasible. Successful implementation of these recommendations can build momentum to tackle more difficult steps in the future.

ARTIFACT ANALYSIS: DATA, POLICY, AND POWER:

An Analysis of Tools to Pursue Racial Justice in Law Enforcement

As law enforcement executives work to achieve racial justice, there are a wide array of policy and administrative tools to support these efforts. Each methodology requires quality inputs such as clear data, stakeholder engagement, and administrative buy-in. Thus, law enforcement executives can utilize this analysis to assess the resources most accessible in their department. This allows for the selection of robust methodologies. Within this analysis, I review my statistical analysis on the impact of de-escalation training, a bill proposal to increase data collection requirements, and a power analysis of California's Peace Officer Association.

Statistical Analysis

Statistical analyses are powerful tools for identifying trends and isolating the impact of interventions such as training curriculum. However, effective statistical analysis relies on robust data to successfully control for influencing factors and identify the impact of specific interventions. My statistical analysis utilizes the Inter-university Consortium for Political and Social Research (ICPSR) Report on Multi-method Evaluation of Police Use of Force Outcomes: Cities, Counties, and National, 1998-2008 data set to analyze the impact of mandatory de-escalation training on the number of citizen complaints of excessive force. There are significant policy implications surrounding the research question "What effect does the de-escalation training have on the number of citizen complaints of excessive force?" As law enforcement agencies invest in alternative and additional training, this research serves to supplement available information on effective training methods.

While the ICPSR dataset offers a robust and representative set of information, the description of data limits the reliability of regression analysis. The survey categorizes departments

and population served into groups (small, medium, and large) while omitting the demographic qualities of both law enforcement and residents. While this is meant to elicit anonymity and honest answers, this limits the capacity to control for these factors. Additionally, this data lacks clear definitions of what constitutes “de-escalation” and “mediation” training. Given the national scope, this may lead analysis to essentially *compare apples to oranges*, with different departments operating under different training definitions. The limitations of the dataset reduce the significance of these findings, and there is room for additional research to analyze the impact of implementing de-escalation training in regions with varying levels of income and racial makeups. Given these limitations, law enforcement executives can consider the detail of data collection within their department to generate information for meaningful analyses in the future.

State-Wide Policy Proposal

When working to expand available data within law enforcement, state-wide policies offer one mechanism to implement uniformity and consistency. My policy proposal artifact is an example of a bill requiring California law enforcement agencies to collect data on the occurrence of successful de-escalation with residents that includes success rates and demographic information on citizens who are attempted to be deescalated. Lack of consistent data proves to be a barrier to adopting evidence based policing practices. This bill works to address this barrier as well as modify performance measures. Shifting the focus of performance may transform departmental culture as different outputs move into focus. After reflecting on this proposal, I would modify the data collection requirements. Rather than focusing on incident reports, I would create standards for reporting complaints of excessive force. Policy changes have the potential to rectify barriers to reliable data collection as the statistical analysis highlights. Requiring uniform data collection and reporting will increase the ability to critically analyze outcomes and develop evidence-based

practices. However, state-wide top-down policies bear the risk of local resistance and uneven implementation. If departments collect data inconsistently from one another, these types of policies will have minimal impact on future data analysis efforts. This tension highlights potential conflict between data collection and unions, and policy makers must navigate the balance of workload and information to collect. Thus, when considering top-down approaches to policy and the advancement of racial justice, it is important to consider the key stakeholders who have the power to make-or-break the implementation of new policies.

Power Analysis & Identifying Levers for Change

Stakeholder engagement is once piece of effective policy implementation, and law enforcement executives can deepen this analysis by identifying specific levers that each institution utilizes to exert power. My third artifact, California Peace Officer Association's Sources of Power: *An application of French and Raven's Sources of Power* illustrates the California's Peace Officer Association's (CPOA) sources of and utilization of power, through the lens of French and Raven's bases of power (French & Raven, 1959). Going beyond simple political influence, this approach identifies the range of levers that institutions utilize to influence policy and administration. In the case of COPA, this union is able to exert legitimate power through its role as a union, expert power through the provision of expertise, reward power through lobbying efforts, and subjectification power by establishing culture and expectations for its members. This nexus of power impacts efforts to modify data collection and reporting, offering both barriers and leverage points to advance racial justice in policing.

In conclusion, there are many tools available to law enforcement executives working towards racial justice. Valid and reliable data is a necessary input for many of these tools, and when this is unavailable, local departments can consider means of bolstering existing data

collection. To scale analysis, one option is to collaborate with regional departments to establish universal data systems. This will strengthen future analysis that draw on this information. Establishing data requirements from the top-down potentially creates uniformity but risks uneven implementation. Thus, law enforcement executives may consider forming regional alliances. Within these efforts to generate clear data and useful analysis, it is beneficial to assess the power of key stakeholders such as unions. These methodologies highlight existing options as well as viable means to improve their efficacy in future analysis and policy development.

ARTIFACT I. THE IMPACT OF DE-ESCALATION ON POLICE USE OF FORCE: A REGRESSION ANALYSIS

I. EXECUTIVE SUMMARY

The purpose of this report is to utilize the Inter-University Consortium for Political and Social Research (ICPSR) Report on Multi-method Evaluation of Police Use of Force Outcomes: Cities, Counties, and National, 1998-2008 data set to analyze the impact of mandatory de-escalation training on the number of citizen complaints of excessive force. There are significant policy implications surrounding the research question “What effect does the de-escalation training have on the number of citizen complaints of excessive force?” As law enforcement agencies invest in alternative and additional training, this research serves to supplement available information on effective training methods.

The data set serving as the focus of this article offers some limitations. The lack of demographic information stems from an effort to protect the anonymity of law enforcement departments, yet this restricts the extent of the analysis. Given these limitations, I utilize a series of control variables focusing on police training protocols to isolate the impact of de-escalation training.

Section three provides a review of available literature surrounding the impact of law enforcement training on excessive use of force. Existing research suggests that de-escalation tactics successfully predict a calm citizen demeanor after an encounter with law enforcement. Additional factors also show to impact the use of force, such as the level of experience of individual officers. The linear regression models seen in the literature review form a basis for my analysis throughout the article.

Continuing into section four, I outline the model of the analysis. This section details the information on citizen complaints of force in 2005 as they relate to a series of control variables. An array of factors influences the number of citizen complaints, and this section lists the control variables that this analysis utilizes to account for additional influences. These include the population size, department size, and other training procedures. After describing the variables and correlations within the analysis, I describe the regression process.

Section five delves into the linear and quadratic regression models as I analyze the ICPSR dataset. The linear regression model provides more statistically significant variables, and due to this I utilize this as my best functional form. The model shows heteroskedasticity and requires a robust correction. After calculating this correction, I find a negative impact on complaints of force for populations of 100,000 to 500,00 and departments with over 501 sworn officers. Additionally, I find that mandatory mediation training has a significant positive impact on complaints. This may capture a reverse causal relationship, in which mediation training increases when there is a high rate of citizen complaints.

Throughout this article, I utilize regression analysis to answer the research question: What effect does the de-escalation training have on the number of citizen complaints of excessive force? The limitations of the dataset reduce the significance of these findings, and there is room for additional research to analyze the impact of implementing de-escalation training in regions with varying levels of income and racial makeups.

II. INTRODUCTION

Police relations with community members is a topic of national attention. After incidents of police brutality caught on camera, many governing bodies are searching for solutions. There are a variety of options to proceed with, ranging from body cameras to training procedures. There are

a series of non-lethal tactics that police departments utilize as an alternative to deadly force. When choosing where to invest department funds, it is necessary to evaluate the benefit of these trainings, such as the difference between procedural justice, implicit bias, and de-escalation training. In this paper, I will utilize the Inter-university Consortium for Political and Social Research (ICPSR) Report on Multi-method Evaluation of Police Use of Force Outcomes: Cities, Counties, and National, 1998-2008 data set to work to answer the question: What effect does the de-escalation training have on number of citizen complaints of excessive force? Through this analysis, I review the dependent variable of number of complaints alongside the key explanatory variable of presence of mandatory de-escalation training. This analysis includes additional explanatory variables such as the size of the region's population and hours of other trainings to analyze and control for additional trends.

The dependent and explanatory variables come from the *Inter-University Consortium for Political and Social Research* (ICPSR) 25781 Multi-Method Evaluation of Police Use of Force Outcomes: Cities, Counties, and National, 1998-2007 dataset. This dataset looks at statistics from law enforcement agencies across the United States from 1998 to 2007. The information comes from a federal study through the Department of Justice and has robust detail and funding sources. The strength of the sample methods comes from efforts to stratify the data across national regions, population size, and number of sworn officers. This is broken down by national region, (North East, Midwest, South, and West), population size (under 10,000, 10,001-50,000, 50,001-100,000, 100,001-500,000 and 500,001-750,000), and number of sworn officers (50 or less sworn officers, 51-100 sworn officers, 101-500 sworn officers, and over 500 sworn officers). There is an equal sample distribution from each region, with an average of 2.3% from the sample residing in each category. For example, 2.3% of the sample comes from a North East region with less than 10,000

residents and 51-100 sworn officers. Thus, this dataset offers a robust sampling method and extensive information.

The information comes from voluntary surveys and omits the identifying location of each agency from the dataset to protect the confidentiality of agencies that chose to disclose. This presents challenges in analyzing the full range of factors that impact complaints of excessive use of force. Omitted information includes the names of cities, states, and individual officers. The level of omitted information limits my ability to draw conclusions from this analysis. No demographic information regarding law enforcement agencies or the communities they serve is available, thus limiting the amount of controls that are possible within the regression analysis. This removes specifications that can account for variances in use of excessive force, such as crime rate, socio-economic characteristics, and racial demographics.

Further barriers include a categorical grouping of information on population size and number of sworn officers. The size of the population data has five categories, from small (under 10,000) to large (500,000 to 750,000). Additionally, this data set categorizes the number of sworn officers into four categories, from small (50 or less sworn officers) to large (over 500 sworn officers). Ideally, I would analyze the ratio of residents in the population to the number of sworn officers to gauge the number of officers between residents. Given these limitations, this analysis works to analyze the relationship between complaints of force and mandatory de-escalation training by controlling for agency size, other training practices, and the size of the population served.

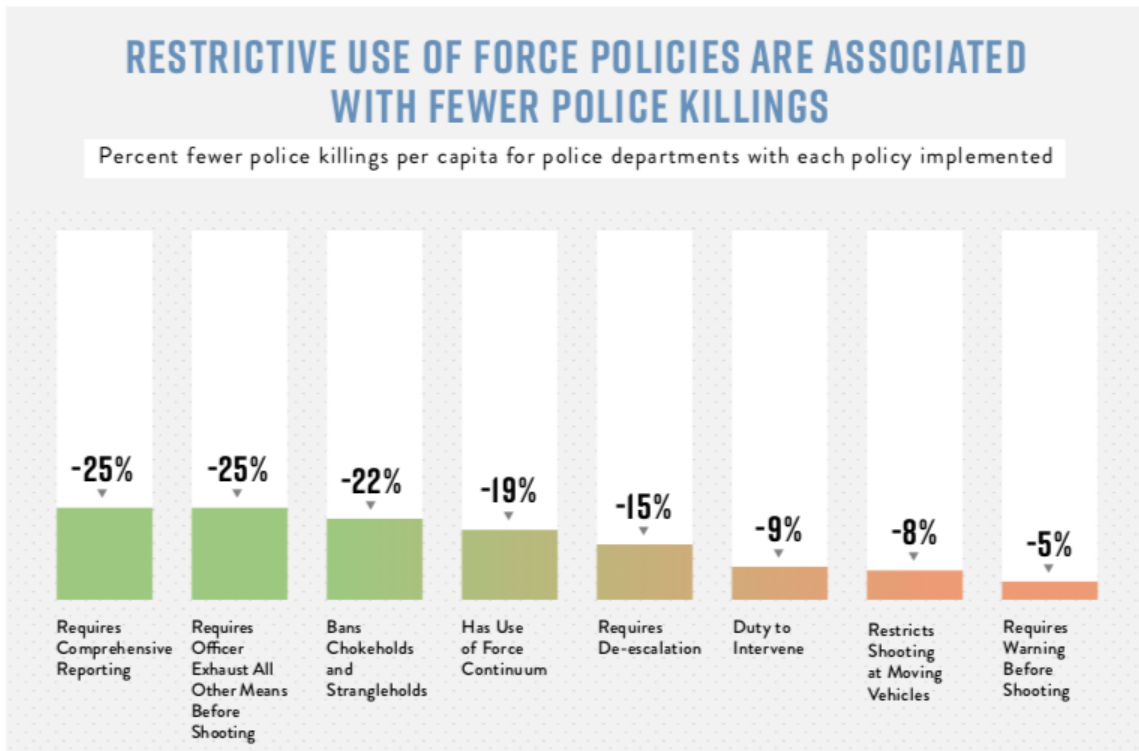
The results of this analysis have significant policy implications. Law enforcement related killings of unarmed people of color reached national attention in the late 2010s (CNN Research, 2020). After a series of protests across the nation led a series of states to implement policy changes.

The signing of Assemble Billy 392 in California raises the standard regarding police use of force; this bill redefines the existing boundary, justifying use of force only when necessary, rather than the previous standard of use when reasonable (Ortiz, 2019). Recently, Senate Bill 230 in California allocates \$10 million to law enforcement agencies to update their use of force policies to align with regulations set by Assembly Bill 392 which increases restrictions on the use of force (Wiley, 2019). Cities such as San Diego are investing this funding into new training protocols such as de-escalation modules to bolster law enforcement tactics and reduce the overall use of force (Hernandez, 2020). At the end of 2019, the Commission on Peace Officer Standards and Training (POST) began offering training modules on de-escalation to participating agencies (Peace Officer Training Annual Report, 2019). Through this trend of events, cities and states are facing decisions on how to effectively foster relationships between law enforcement and community members. Studies suggest that de-escalation training reduces police shootings, as shown in figure 1 (Sinyangwe, 2016). Evaluating the impact of de-escalation training on citizen complaints of excessive force offers strong information on methods to improve these relationships. During this time, California is dedicating resources to improving the quality of policing and evaluating the impact of training practices will steer this funding in the right direction.

In the following article, I will utilize regression techniques to assess the impact of de-escalation training on the total number of citizen complaints of excessive use of force. Section three contains a literature review on previous research conducted regarding de-escalation and factors influencing law enforcement's use of force. Section four continues on to describe the variables of focus within the analysis. Section five offers details on the dataset that forms the foundation of this analysis. Moving into section six, I will describe the linear and logistics regression models to highlight relationships between the presence of de-escalation training and

increases or reductions on overall complaints. Section seven will conclude this study, with final thoughts and opportunities for future research.

Figure 1:



Source: Sinyangwe, S. (2016). *Examining the Role of Use of Force Policies in Ending Police Violence*” Author. Use of Force Project.

III. LITERATURE REVIEW

Creating a compatible and effective police force is an essential piece of community safety. The need for equitable and efficient policing came to national attention in 2014 with the rise in media attention on police shootings of people of color. Yet scholastic inquiry into policing reaches far beyond 2014. As experts study the practices of law enforcement, a majority choose to assess the impacts of officer and citizen demographics on overall outcomes. Keystone studies utilize a range of statistical models, including cross-tabulations to delineate outcomes as well as linear, hierarchical, and logit regression processes. In this analysis I compare five essential studies on the basis of the key variables and statistical models that analysts employ to study overall policing as it relates to de-escalation and optimal outcomes with citizens. From this analysis, I develop the foundation for statistical analysis to find connections between de-escalation training and citizen complaints of excessive use of force. The following review analyzes leading studies based upon three different themes that I believe will help inform the reader regarding the basis of this study. These three themes are: variables used in police outcome studies, statistical models, and overall findings. Through synthesizing the literature, I draw connections between studies, highlight potential contradictions, and open the discussion towards further research opportunities.

Key Variables

Within my regression, I will analyze the relationships between complaints of excessive use of force from citizens and whether the police department requires de-escalation training. Many pivotal studies on this topic focus on demographic, law enforcement department, and neighborhood factors as variables to control. The ICPMSR data that I will derive my regression from lacks these key variables in an attempt to solicit anonymous survey responses from police departments. Given the limitation of the ICPMSR data, in my analysis I control for population

size, number of sworn officers in the department, the utilization of a continuum of force model, proportion of training hours spend on self-defense, firearms, and less-lethal weapons, as well as the presence of training on conducted energy devices and mediation tactics. Throughout this section, I will review significant studies regarding regression analysis connected to use of force in policing institutions.

Explanatory Variables

Major studies analyze variables relating to officer characteristics, citizen or suspect qualities, and overall outcomes. This lens searches for demographic differences that may be causing variances in the outcome of interaction between law enforcement and citizens. Cross tabulations are able to differentiate the impact demographics have on the outcome of such interactions. Key studies emphasize individual officer characteristics such as race and age. Todak and James (2018) and Aalsma, Schwartz, and Tu (2018) delve deeper through analyzing utilization of specific de-escalation tactics and whether an officer has previous investigations for misconduct, respectively (Todak & James, 2018; Aalsma, Schwartz & Tu, 2018). The integration of additional variables creates a wider perspective of the many individual characteristics and tactics that influence the outcome of law enforcement and citizen interactions.

Keystone studies break down citizen characteristics into focus variables such as demographic qualities and presentation at the time of interaction. These factors account for potential differences in treatment based on demographics while controlling for aggravation or intoxication at the onset of the interaction. The unit of analysis significantly impacts the variables of focus, with individual interactions focusing on demographics, and department wide studies focusing on neighborhood characteristics. Earlier studies emphasize officer and suspect demographics when analyzing individual interactions (Terrill & Reisig, 2003; McElvain &

Kposowa, 2004). While many studies focus on individual characteristics, Terrill and Reisig (2003) expand their study to analyze the impact of wealth, rates of concentrated disadvantage, and homicide rates within the area, in addition to the standard variables of gender, race and age. Unique findings emerge through the analysis of community factors that exert influence over the outcomes of interactions between law enforcement and citizens (Terrill & Reisig, 2003). Additional research assesses the impact of Policing the Teenage Brain training modules on officer attitudes towards youth and alternative tactics (Aalsma, et. al, 2018). This offers insight into training curriculum yet does not extend to assess if the community sees an impact in behavior.

Dependent Variables

Each of the focus studies chose different dependent variables to capture the image of law enforcement. Todak and James (2018), Terrill and Reisig (2003), and McElvain & Kposowa (2004) analyze data against end results such as the outcome of the interaction and number of investigations each officer has. These measures look to assess the endpoint of interactions, and judge the overall encounter based on these results. James et al (2019) takes a unique lens by assessing the performance during the overall encounter, rather than focusing on an end result. This creates flexibility and opens a wider analytical lens. Accounting for overall performance over outcomes strengthens the regression analysis to account for multiple factors that may impact results. This method assesses factors that would otherwise confound the study by producing a nonoptimal outcome despite tactics utilized during the encounter.

Models Used

The studies analyzed in this paper utilize a range of regression techniques. This variety results from the differences in key variables of focus within the respective analyses. Studies that focus on categorical dependent variables utilize logistic regression models. Todak and James's

(2018) study utilizes this process, with outcomes coded as either 0 if the citizen was not calm at the end of the encounter or 1 if the citizen was calm. Similarly, Todak and James (2018), McElvain & Kposowa (2004) relies on a multinomial logistic regression to analyze the categorical data. This allowed McElvain & Kposowa (2004) to compare the categorical variable of use of force, coded on a scale of intensity from 0 to 5, representing levels of force from no force up to lethal force. Using the logistic regression, McElvain & Kposowa (2004) analyzed if the use of force was proportional to officer demographics. This mechanism allows analysts to compute regressions along categorical variables while accounting for overall intensity of results.

While logistic regression generates a strong measurement, sample size can bias results. In efforts to balance the results, multiple studies compute an ordinary least squares regression (OLS). This process calculates the squared difference between observed data points and the regression line, thus assessing the overall goodness of fit of the line. McElvain & Kposowa (2004) conducts an OLS regression to control for the large sample size and assess the data for further statistical significance. This serves as a measure to clarify results and test the overall p-value of earlier analysis. Terrill and Reisig (2003) utilizes a weighted OLS regression to analyze the overall impact of suspect characteristics on use of force. This method assesses neighborhoods with more observed interactions between law enforcement and citizens with a heavier weight than those areas with less interactions. Through the use of least squares regressions, authors are able to assess the validity of results against the severity and occurrence of observed data.

Conducting hierarchal regression analysis constitutes an additional theme in studies focusing on policing outcomes. This mechanism allows the analyst to control for given variables to isolate the relative impacts of specific categories of variables. Terrill and Reisig (2003) utilize this method to understand the impact of neighborhood qualities on interactions with law

enforcement. Through this isolation, Terrill and Reisig (2003) hold interaction levels constant to examine the effects of larger geographic qualities such as poverty and homicide rates. Hierarchical regression is an effective tool when focusing on specific relationships, such as the impact of police training models as examined in Aalsma, Schwartz and Tu (2018). Through hierarchical regression methods, analysts isolate the impacts of the Policing the Teenage Brain training on law enforcement attitudes towards adolescents and de-escalation skills (Aalsma et al 2018). Studies utilize this method to control for a category of variables while assessing the impact of an additional factor, such as neighborhood context or training efficacy.

Findings

Despite the wide range of variables, perspective, and models that authors analyze information with, compelling trends emerge from compiling existing research. Table 1 in the appendix compares the pathways of variables, methods, and findings from each study. Todak and James's (2018) study shows that the use of de-escalation tactics is a significant predictor of a successful outcome of calm citizen demeanor. Both calming and humanizing tactics were statistically significant with respective regression weights of 3.5 and 3.4. However, this study reveals other significant factors, such as officer age and experience. Years of service is a strong predictor of positive outcomes from interactions with citizens (Todak & James, 2018). McElvain & Kposowa (2004) replicates this finding, revealing that younger officers were significantly more likely to have use of force investigations. Officers with less than five years of experience had an odds ratio of 1.779. These results show that investigations occur 77.9% more frequently for officers with less experience. These findings suggest that age and experience hone officer ability to de-escalate and effectively work with citizens. However, in the case of McElvain & Kposowa (2004), early misconduct creates a feedback loop; officers with one investigation are more likely

to have additional investigations. As studies draw conclusions from officer characteristics, they turn towards citizen demographic qualities for further inquiry.

Disproportionate policing regarding citizens of color is a point of focus in the United States, and key research studies dive into this topic with an array of results. Terrill and Reisig (2003) find that younger, male, and minority citizens face the highest levels of police force. Encounters with males saw a coefficient of .09, showing that men experience police use of force more than women. Age and wealth have coefficients of -.10 and -.04, respectively, showing that older, wealthier individuals are less likely to experience the use of force. Controlling for neighborhood factors reduces the gaps between ethnicities (Terrill & Reisig, 2003). This is due to the overarching variables of concentrated disadvantage and homicide rates amongst communities. McElvain & Kposowa's (2004) and Todak and James's (2018) studies found a similar insignificance around the impact of race in the final analysis results. In Todak and James's (2018) study, this may be due to issues with sampling. While the sample reflects the overall demographics of the region, it generates only 17% of observed interactions between police and citizens of color (Todak & James, 2018). Thus, while the studies find no relationship, there is room for further research to see if policing outcomes are significantly different for minority residents.

Some studies found higher performance ratings with interactions between law enforcement and people of color. According to James et al (2019), officers scored higher on performance in interactions with African American citizens. This trend continues into interactions with multiple citizens, and noncompliant individuals (James et al, 2019). The linear regression model shows a 2.45 coefficient for emotionally disturbed citizens, showing an improved performance of 2.45 with the presence of an emotionally disturbed citizen. Noncompliant and black citizens had similar results, with coefficients of 2.76 and 2.06, respectively. Armed citizens showed a coefficient of

3.43, showing that police tended to have much higher performance scores when dealing with an armed citizen. These trends suggest that officers may perform better under high stake situations, such as interactions with minorities that are currently under closer scrutiny, or when working with highly escalated people (James et al 2019).

Given the suggestion that high stakes situations push officers to use every tool available, the availability of effective training becomes a significant need. Aalsma et al (2018) assesses the potential for expanding officer skill and mindset. A regression analysis on the training reveals that the training had a significant impact on attitudes towards interacting with adolescents (Aalsma et al, 2018). Officer demographics create a significant predictor of impact, with female officers and those with higher levels of education most likely to show improved knowledge of de-escalation (Aalsma et al, 2018). Regression models showed coefficients of .154 for feeling that adolescence is a stressful time and .144 for improvements of knowledge of de-escalation skills. This shows that attending the training is an accurate predictor of increased endorsement of adolescence as a stressful time and understanding of de-escalation skills. From these trends, further research can support the utility of developing additional trainings to bolster the tools officers have at their disposal during high stakes scenarios.

Conclusion

Current research offers a variety of factors that impact the outcomes of interactions between citizens and law enforcement. Data describing the efficacy of de-escalation tactics and training lays a foundation for further research. Given Todak & James's (2018) results suggesting the use of de-escalation is a strong predictor for successfully ending encounters, my further research will look towards a deeper analysis of the impact of formal de-escalation training on rates of citizen complaints of excessive use of force from law enforcement. Aalsma et al (2018)

generates a snapshot of the immediate aftereffects of a training focusing on de-escalating teenage individuals, yet there is significant room for future research on the impact this has on field outcomes.

IV. MODEL

In this section, I present descriptions for my key explanatory variable, major dependent variable, and additional explanatory variables. I focus on the relationship between mandatory de-escalation training and the annual number of citizen complaints of excessive use of force in each law enforcement agency. I control for agency and jurisdiction characteristics to isolate the specific impact of mandatory de-escalation training. From this analysis I expect the presence of mandatory de-escalation training to reduce the total number of complaints.

I am interested in assessing the impact of de-escalation training on perceptions of excessive use of force. If there is a connection between office de-escalation training and reduced perceptions of use of force, the policy implications would be to increase access to these types of trainings. In the dataset of focus, the existence of mandatory de-escalation training a categorical variable, with a value of 1 if the training is mandatory for all sworn officers and a 0 if it is not mandatory. Within the dataset, there are 515 valid observations out of 518, with three departments providing no answer or a response of “not applicable.” Of these 515 observations, 250 (49.54%) mandate de-escalation training. Therefore, 265 (51.46%) of departments do not provide mandatory de-escalation training.

In this analysis, the dependent variable is citizen complaints of excessive use of force in 2005. This variable works to capture an aspect of police tactics as they relate to overall relationships with citizens. I analyze law enforcement training protocols alongside citizen complaint rates to assess the effectiveness of these trainings in reducing citizen perceptions of

excessive use of force. Cities work to minimize citizen complaints regarding force to foster stronger relationships with law enforcement and maximize overall safety. The key explanatory variable is the in-service mandatory de-escalation and defusing techniques training. If there is a strong correlation or causal relationship between de-escalation training and perceptions of officer use of force, then this could incentivize the development of policies that mandate these types of trainings.

Citizen complaints of excessive use of force, 2005 = f

Independent variable = f (mandatory de-escalation training;_i)

Agency characteristics = f (agency size [small agency (less than 50 sworn officers)_i, medium agency (51-100 sworn officers)_i, large agency (101-500 sworn officers)_i, extra-large agency (over 500 sworn officers)_i], use of continuum of force model_i, portion of hours spent training newest recruits on firearms_i, portion of hours spent training newest recruits on self-defense_i, portion of hours spent training newest recruits on less lethal weapons_i, mandatory conducted energy device (CED) training_i, mandatory mediation training_i)

Jurisdiction characteristics = f (extra-small population (under 10,000 residents)_i, small population (10,001-50,000 residents)_i, medium population (50,001-100,000)_i, large population (100,001-500,000)_i, extra-large population (500,001-750,000)_i)

There are three broad categories that I expect to influence the number of complaints of excessive use of force. These categories include agency characteristics, training characteristics, and jurisdiction characteristics. I include agency characteristics through data on the number of sworn officers within the department. The dataset in this study uses categorical variables rather than a continuous variable, so I base my analysis off of these categories. These variables consist of 50 or less sworn officers, 51-100 sworn officers, 101-500 sworn officers, and over 500 sworn

officers. The categorical quality of this variable creates barriers to analysis and prevents me from generating ratios of officers per capita. Thus, I include additional variables to highlight differences between departments, with a focus on internal training protocols. This includes the presence of a use of force continuum, which establishes a series of actions that officers take during an interaction and designates appropriate levels of force ("The Use-of-Force Continuum", 2009). I include this as a variable to assess if the presence of this protocol impacts the effectiveness of de-escalation training. Additional agency level variables include the portion of hours spent training new recruits on firearms, self-defense, and less lethal weapons. These variables come from dividing the data for hours spent on each category by the total number of hours of training for new recruits, then multiplying that number by 100 to generate a percentage value. These variables control for the agency's focus on other training procedures. I will analyze the impact of high and low focuses on firearms, self-defense, and less lethal weapons training in combination with the presence of de-escalation training to see if there are compounding effects.

The dataset offers few variables regarding the characteristics of the jurisdiction as whole. Without information on income, crime rates, or racial makeup, I focus my analysis on the size of the population. This takes the form of a categorical variable, with five categories including: under 10,000, 10,001-50,000, 50,001-100,000, 100,001-500,000, and 500,001-750,000 residents. This grouping poses limitations to specific analysis and per capita calculations. If this was not categorical, I would include variables that describe the number of complaints per resident, however due to the lack of this level of detail, I conduct my analysis in the existing categories.

Given these variables, I expect that mandatory de-escalation training will cause a decrease in citizen complaints of excessive use of force. As law enforcement becomes better equipped to de-escalate a volatile situation, the officers would find less motivation to resort to physical force.

However, the true expectation is unknown. If there is a causal relationship between the variables, it is possible for it to go in either direction; increases in citizen complaints may lead to more training on de-escalation methods. Cities that see a large number of complaints regarding excessive force may institute additional training policies, and there is limited information on the timeline necessary for successful implementation.

V. DATA

In this section, I present details on the dataset of focus in this paper. The Report on Multi-method Evaluation of Police Use of Force Outcomes dataset provides stratified and throughout data on law enforcement training protocols throughout the United States. However, there are several limitations stemming from the anonymity within the data. This section includes tables to highlight the descriptive statistics of each variable and account for additional correlations.

The Consortium for Political and Social Research (ICPSR) Report on Multi-method Evaluation of Police Use of Force Outcomes: Cities, Counties, and National, 1998-2008 dataset utilizes survey data from 1,000 municipal, county and state law enforcements agencies regarding the size of their jurisdiction, the number of sworn officers, training protocols, and incidents involving use of force and officer shootings. 518 survey results represent a stratified distribution, ensuring appropriate representation across regions and populations. Each combination of region, department type, and population category for populations under 500,000 represent 2.2% to 2.3% of the overall study. For populations over 500,000, each category represents .2% to 1.2% of the total study. The resulting dataset represents a stratified sample of law enforcement agencies across the nation, consisting of categories such as region, population, and number of sworn officers. Through these efforts, this dataset represents a strong sampling of national trends.

In my analysis, I focus on the number of citizen complaints of excessive use of force in 2005 as the dependent variable. Table 1 shows the descriptive statistics for each variable. The average is 12 complaints per department in 2005, with some departments reporting 0 and others reporting up to 689. This does not control for the different sizes of precincts. Tabulating total complaints of excessive use of force shows that a majority of departments receive a relatively low number of citizen complaints. A significant amount report zero complaints, while a small number of agencies report a large number of complaints, which is likely dependent on the size of the population. My key explanatory variable is the presence of mandatory de-escalation training. This is a categorical variable, with a value of one signaling that this training is a mandatory component. The summary shows that the mean of .485 suggests that on average less than half of police departments have mandatory de-escalation training. Of the additional explanatory variables, all but three are categorical variables. The three continuous variables are the ratio of training hours dedicated to self-defense, firearms, and the use of less lethal weapons. Each of these variables represents a percentage of total training hours. Departments in the study spend 1% to 45% of their training on self-defense, with an average of 8.77%. Additionally, departments spend an average of 9.7% of training time on firearms, with an overall range of 2% to 62%. Finally, departments dedicate 0% to 28.5% of their training hours to less lethal training, with an average of 3.13%.

Table 2 highlights the correlation coefficients between variables in the analysis. When analyzing correlation between variables, there are few variables that suggest correlation. Large departments with more than 500 officers are likely to have a population of 500,000 to 750,000 with a correlation coefficient of .7174. This highlights an expected pattern of assigning more sworn officers to regions with larger populations. Interestingly, there is a high correlation between the percentage of hours spent training on firearms to the percentage of time spent training on self-

defense, with a correlation coefficient of .7311. This may show that departments with more funding for training choose to invest in both of these sectors, or that departments that choose to emphasize one also choose to emphasize the other. Furthermore, departments that have mandatory mediation training are likely to also mandate de-escalation training, with a correlation coefficient of .76. This suggests that departments that focus on one form of conflict resolution may also emphasize de-escalation training.

Table 1: Descriptions of Variables

Variable	Observations	Mean	Standard Deviation	Min. Value	Max. Value
Complaints of excessive force in 2019 (Dependent variable)	430	12.65	45.39	0	689
Mandatory De-escalation training (Key explanatory variable)	515	.48	.50	0	1
Populations of under 10,000	455	.23	.42	0	1
Populations of 10,000 – 50,000	455	.06	.244	0	1
Populations of 50,001 – 100,000	455	.25	.43	0	1
Populations of 100,001 – 500,000	455	.25	.43	0	1
Populations of 500,001 – 750,000	455	.19	.39	0	1
Departments with less than 50 sworn officers	456	.37	.48	0	1
Departments with 51-100 sworn officers	456	.16	.37	0	1
Departments with 101-500 sworn officers	456	.3	.45	0	1
Departments with over 501 sworn officers	456	.16	.36	0	1
Self-Defense Training as a percentage of total training hours	409	8.77	5.32	1	40.54
Firearms Training as a percentage of total training hours	410	9.7	5.85	2	62.5
Less Lethal Training as a percentage of total training hours	393	3.13	3.73	0	28.5
Mandatory training on conducted energy device (CED)	516	.42	.49	0	1
Mandatory training on mediation	515	.41	.49	0	1
Use of Continuum of Force Model	514	.92	.26	0	1
Interaction between de-escalation training and self-defense training hours	408	4.45	5.89	0	40

Table 2: Variable Correlation Rates

	Complaints of excessive force in 2019	Mandatory De-escalation training	Pop. under 10,000	Pop. 10,000 – 50,000	Pop. 50,001 – 100,000	Pop. 100,001 – 500,000	Pop. 500,001 – 750,000
Complaints of excessive force in 2019 (Dependent variable)	1.00						
Mandatory De-escalation training (Key explanatory variable)	0.16	1.00					
Pop. of under 10,000	-0.15	-0.10	1.00				
Pop. of 10,000 – 50,000	-0.07	-0.02	-0.13	1.00			
Pop. of 50,001 – 100,000	-0.16	-0.11	-0.29	-0.16	1.00		
Pop. of 100,001 – 500,000	0.05	0.15	-0.29	-0.16	-0.36	1.00	
Pop. of 500,001 – 750,000	0.30	0.06	-0.25	-0.14	-0.32	-0.31	1.00
Departments with less than 50 sworn officers	-0.18	-0.13	0.65	0.17	-0.05	-0.30	-0.35
51-100 sworn officers	-0.11	-0.05	-0.18	0.10	0.35	-0.07	-0.20
101-500 sworn officers	-0.04	0.04	-0.34	-0.16	-0.02	0.46	-0.06
Over 501 sworn officers	0.39	0.16	-0.22	-0.12	-0.27	-0.14	0.72
Self-Defense Training as a percentage of total training hours	0.15	0.04	-0.01	0.09	-0.02	0.01	-0.03
Firearms Training as a percentage of total training hours	0.00	-0.02	0.04	0.03	0.03	-0.06	-0.03
Less Lethal Training as a percentage of total training hours	-0.08	-0.03	0.18	-0.04	0.02	-0.10	-0.06
Mandatory training on conducted energy device (CED)	0.06	0.13	-0.04	0.04	-0.07	0.05	0.03
Mandatory training on mediation	0.17	0.76	-0.06	-0.03	-0.14	0.15	0.06
Use of Continuum of Force Model	0.03	0.01	0.04	-0.03	0.05	-0.07	-0.01
Interaction between de-escalation training and self-defense training hours	0.24	0.71	-0.06	0.05	-0.10	0.13	0.00

Table 2: Variable Correlation Rates (cont.)

	Departments with less than 50 sworn officers	51-100 sworn officers	101-500 sworn officers	Over 501 sworn officers	Self-Defense Training as a percentage of total training hours	Firearms Training as a percentage of total training hours	Less Lethal Training as a percentage of total training hours
Departments with less than 50 sworn officers	1.00						
51-100 sworn officers	-0.32	1.00					
101-500 sworn officers	-0.49	-0.32	1.00				
Over 501 sworn officers	-0.31	-0.21	-0.31	1.00			
Self-Defense Training as a percentage of total training hours	0.00	-0.01	0.01	0.01	1.00		
Firearms Training as a percentage of total training hours	-0.01	0.00	0.02	-0.02	0.73	1.00	
Less Lethal Training as a percentage of total training hours	0.19	-0.04	-0.08	-0.10	0.40	0.46	1.00
Mandatory training on conducted energy device (CED)	0.01	0.05	-0.08	0.04	0.00	-0.07	-0.01
Mandatory training on mediation	-0.12	-0.10	0.10	0.14	0.05	0.02	0.01
Use of Continuum of Force Model	0.01	-0.01	0.01	-0.01	-0.03	-0.03	-0.09
Interaction between de-escalation training and self-defense training hours	-0.11	-0.01	0.03	0.11	0.57	0.33	0.12

Table 2: Variable Correlation Rates (cont.)

	Mandatory training on conducted energy device (CED)	Mandatory training on mediation	Use of Continuum of Force Model	Interaction between de-escalation training and self-defense training hours
Mandatory training on conducted energy device (CED)	1.00			
Mandatory training on mediation	0.02	1.00		
Use of Continuum of Force Model	-0.13	-0.02	1.00	
Interaction between de-escalation training and self-defense training hours	0.08	0.54	0.03	1.00

VI. REGRESSION ANALYSIS

This section discusses my regression analysis and the methodology behind finding the best functional form for this analysis. I utilize both Linear and Quadratic regressions and compare the outputs but statistical significance. The linear model calculates a line through respective data points, while the quadratic model squares the portion of firearm training to generate a parabola to best fit the data. I calculate both regressions through the STATA program.

Linear Regression: Ordinary Least Squares

Ordinary least squares regression (OLS) is a model that analyzes data by generating a line that minimizes the residuals between predictions and data points. This line follows the equation $y = mx + b$, where y represents the dependent variable, m represents the change in the dependent variable for each unit change in the independent variable x , and b represents the baseline coefficient for y when x is equal to zero. In my analysis, I calculate an OLS regression to measure the impact of mandatory de-escalation training on the total complaints of force, while controlling for additional variables. Given that both the number of sworn officers and the size of the population are categorical variables, I calculate them as individual dummy variables. In this regression, I omit small departments with less than 50 officers, as well as small regions with less than 10,000 residents. I also include one interaction variable, which is the product of mandatory de-escalation training and the percentage of total training hours dedicated to self-defense. I include this variable to analyze the impact of de-escalation training given the different ratios of training hours. In the original linear OLS regression, self-defense hours have a statistically significant positive impact on the number of complaints of excessive use of force. Through the inclusion of an interaction variable I am able to analyze the varying impact of de-escalation training given the amount of self-defense training as a portion of total training. This expectation comes from the theory that de-

escalation training alongside a focus on self-defense will increase the utilization of de-escalation overall and reduce complaints of excessive use of force.

Table 3 shows the results of this regression. The R-square value of .229 indicates that this model accounts for 22.9% of the data predictions. The coefficient for de-escalation is -16.75 which suggests that the presence of mandatory de-escalation training decreases the number of complaints of force. However, with a p-value of .195 this is not statistically significant. The chance of having more complaints increases as the number of sworn officers and population grow, which follows anticipated outcomes. Interestingly, having a large department has a heavier impact than larger population, with respective coefficients of 42.60 and 15.73, though only the department size is statistically significant. The portion of training spent on firearms has a coefficient of -1.2, suggesting that for each increase in the percent of training time spent on firearms, there is a reduction in complaints of 1.2. These results are statistically significant, with a p-value of .08. Alternatively, increasing self-defense training time has the opposite effect. With a coefficient of 1.46 and a p-value of .16, while not statistically significant, these findings suggest that increasing the self-defense portion of overall training one leads to 2.9 more complaints of excessive use of force. This is an interesting finding, and it is possible that training in firearms provides more confidence and understanding of the appropriate uses, while focusing on self-defense may encourage officers to resolve conflicts with force. Furthermore, the interaction variable highlighting the impact of a high proportion of self-defense training with the presence of mandatory de-escalation training shows a coefficient of 1.92 and is statistically significant with a p-value of .07. This shows that departments focus on self-defense training while also requiring de-escalation training see an increase in complaints of 1.92 for every unit increase in focus on self-

defense training. Given the interesting findings relating to self-defense and firearms training on complaints of force, I calculate a quadratic regression to highlight these impacts.

Quadratic Regression

To calculate a quadratic regression, I square the firearms training variable to check if the number of complaints decreases exponentially as the portion of training on firearms increases. Including a squared variable produces a parabola to fit the data rather than a line of best fit. I square this variable to highlight the impact of increasing firearms training hours on complaints of excessive force. Table 4 shows the results of this quadratic regression. With an R-squared value of .23, this model predicts 23% of the data variance. When including the square value, the coefficient for firearms training is -2.05, yet is no longer statistically significant. Furthermore, after squaring the portion of firearms training, the coefficient is .016 suggesting that there may be a positive correlation between this training and complaints of force, yet this result is not statistically significant.

When comparing the linear OLS and quadratic regressions, the linear model produces three statistically significant variables while the quadratic produces only two. Given these results, the linear OLS regression is the best functional form for this regression and will be the focus of the remaining analysis.

Testing for Multicollinearity and Heteroskedasticity

I calculate the variance inflation factor (VIF) to test for multicollinearity. This calculation tests if two explanatory variables move similarly to one another and undermine the regression analysis. As shown in table 5, all VIF scores fall below 10, showing that there is a low likelihood of multicollinearity. The variables with the highest VIF scores are the interaction between self-defense training and mandatory de-escalation training, and the main explanatory variable of de-

escalation training. Given that these fall under 10 and do not compromise the regression, I do implement corrections.

An additional barrier to assess is the presence of heteroskedasticity, or an inconsistent rate of standard errors throughout the regression. In my analysis, a chi-square value of 943.5 and p-value of .00 for the Breusch-Pagan test shows that there is heteroskedasticity, and the standard error is larger for departments that have mandatory de-escalation training than those who do not. When a regression shows heteroskedasticity, it risks a type one error in which the analyst rejects the null hypothesis when it should not be. This comes from false statistical significance. To correct, for this, I calculate a robust regression to moderate the confidence interval. Table 6 shows the results of this regression. When first running the regression, several variables showed statistical significance. Once correcting heteroskedasticity with a robust regression, three variables remain statistically significant. These include populations of 100,000 to 500,00, with a coefficient of 12.84 and p-value of .007, departments with over 501 sworn officers, with a coefficient of 42.6 and a p-value of .006, and mediation training, with a coefficient of 10.48 and a p-value of .10. These results suggest there are more complaints of excessive force in areas with populations between 100,000 and 500,000 people, with large law enforcement departments, and mediation training. The positive connection between mediation training and complaints may capture a reverse relationship in which departments that have high rates of complaints are implementing mediation training.

Panel Data

Panel data techniques are not possible given this dataset. This information represents a snapshot from surveys. These surveys contain multi-year information on complaints of force, yet they exist within the same unit of analysis, which is a single police department. Given this organization, it is not possible to ascertain if there were any changes in training protocols during

this time. If the data included multiple units for each law enforcement agency to delineate the year that the complaints of force describes, it would be possible to perform a panel data analysis.

Table 3 Linear Regression Results

	SS	df	Observations:	286.00
Model	194673.62	15.00	Prob > F	0.00
Residual	652168.03	270.00	R-squared	0.23
Total	846841.65	285.00	Adj R-squared	0.19
			Root MSE	49.15

Regression for Complaints of Force, 2005	Coefficient	Standard Error	P-value	90% Confidence Interval	
Mandatory De-escalation training (Key explanatory variable)	-16.76	12.91	0.19	-38.06	4.55
Pop. of 10,000 – 50,000	-4.68	13.71	0.73	-27.31	17.94
Pop. of 50,001 – 100,000	4.23	10.78	0.69	-13.55	22.02
Pop. of 100,001 – 500,000	12.85	12.55	0.30	-7.87	33.56
Pop. of 500,001 – 750,000	15.73	15.22	0.30	-9.38	40.85
Departments with 51-100 sworn officers	-4.73	10.27	0.64	-21.69	12.22
Departments with 101-500 sworn officers	-0.87	10.71	0.93	-18.54	16.80
Departments with over 501 sworn officers***	42.60	15.04	0.00	17.78	67.43
Self-Defense Training as a percentage of total training hours	1.47	1.05	0.16	-0.26	3.19
Firearms Training as a percentage of total training hours**	-1.20	0.70	0.08	-2.36	-0.04
Less Lethal Training as a percentage of total training hours	-0.93	1.01	0.35	-2.60	0.73
Mandatory training on conducted energy device (CED)	3.72	6.07	0.54	-6.31	13.74
Mandatory training on mediation	10.49	9.12	0.25	-4.57	25.54
Use of Continuum of Force Model	6.13	11.16	0.58	-12.30	24.55
Interaction between de-escalation training and self-defense training hours**	1.93	1.06	0.07	0.18	3.68
Constant	-7.46	15.35	0.62	-32.79	17.88

**Statistically significant at .10

*** Statistically significant at .05

Table 4 Quadratic Regression Results

	SS	df	Observations:	286.00
Model	195710.22	16.00	Prob > F	0.00
Residual	651131.43	269.00	R-squared	0.23
Total	846841.65	285	Adj R-squared	0.19
			Root MSE	49.20

Regression for Complaints of Force, 2005	Coefficient	Standard Error	P-value	90% Confidence Interval	
Mandatory De-escalation training (Key explanatory variable)	-18.38	13.16	0.16	-40.09	3.34
Pop. of 10,000 – 50,000	-3.70	13.81	0.79	-26.48	19.09
Pop. of 50,001 – 100,000	4.84	10.83	0.66	-13.03	22.71
Pop. of 100,001 – 500,000	12.99	12.57	0.30	-7.75	33.73
Pop. of 500,001 – 750,000	16.03	15.24	0.29	-9.12	41.18
Departments with 51-100 sworn officers	-4.27	10.31	0.68	-21.28	12.74
Departments with 101-500 sworn officers	-0.37	10.74	0.97	-18.10	17.37
Departments with over 501 sworn officers***	43.29	15.09	0.00	18.38	68.20
Self-Defense Training as a percentage of total training hours	1.45	1.05	0.17	-0.28	3.17
Firearms Training as a percentage of total training hours	-2.05	1.48	0.17	-4.50	0.39
Less Lethal Training as a percentage of total training hours	-0.82	1.02	0.42	-2.51	0.87
Mandatory training on conducted energy device (CED)	4.02	6.10	0.51	-6.05	14.08
Mandatory training on mediation	10.88	9.15	0.24	-4.22	25.99
Use of Continuum of Force Model	5.51	11.21	0.62	-12.99	24.02
Interaction between de-escalation training and self-defense training hours**	2.09	1.09	0.06	0.29	3.90
Firearms Training Squared	0.02	0.02	0.51	-0.02	0.06
Constant	-1.92	17.54	0.91	-30.87	27.03

**Statistically significant at .10

*** Statistically significant at .05

Table 5 VIF Calculations

	VIF	1/VIF
Interaction between de-escalation training and self-defense training hours	5.25	0.19
Mandatory De-escalation training (Key explanatory variable)	4.93	0.20
Pop. of 500,001 – 750,000	4.65	0.21
Self-Defense Training as a percentage of total training hours	4.26	0.23
Departments with over 501 sworn officers	3.74	0.27
Pop. of 100,001 – 500,000	3.61	0.28
100-500 sworn officers	2.99	0.33
Pop. of 50,001 – 100,000	2.68	0.37
Mandatory training on mediation	2.46	0.41
Firearms Training as a percentage of total training hours	2.44	0.41
Departments with 51-100	1.80	0.56
Less Lethal Training as a percentage of total training hours	1.41	0.71
Pop. 10,001-50,000	1.38	0.72
Mandatory training on conducted energy device (CED)	1.08	0.92
Use of Continuum of Force Model	1.05	0.95
Mean VIF	2.92	

Table 6: Robust Linear Regression

Observations:	286.00
Prob > F	0.00
R-squared	0.23
Root MSE	49.15

Regression for Complaints of Force, 2005	Coefficient	Standard Error	P-value	90% Confidence Interval	
Mandatory De-escalation training (Key explanatory variable)	-16.76	15.03	0.27	-41.57	8.05
Pop. of 10,000 – 50,000	-4.68	6.52	0.47	-15.44	6.07
Pop. of 50,001 – 100,000	4.23	3.88	0.28	-2.17	10.64
Pop. of 100,001 – 500,000***	12.85	6.62	0.05	1.92	23.78
Pop. of 500,001 – 750,000	15.74	12.17	0.20	-4.34	35.82
Departments with 51-100 sworn officers	-4.73	4.73	0.32	-12.54	3.07
Departments with 101-500 sworn officers	-0.87	6.61	0.90	-11.77	10.04
Departments with over 501 sworn officers***	42.60	15.45	0.01	17.11	68.10
Self-Defense Training as a percentage of total training hours	1.47	1.09	0.18	-0.33	3.27
Firearms Training as a percentage of total training hours	-1.20	0.97	0.22	-2.80	0.40
Less Lethal Training as a percentage of total training hours	-0.93	0.86	0.28	-2.35	0.48
Mandatory training on conducted energy device (CED)	3.72	6.02	0.54	-6.21	13.65
Mandatory training on mediation**	10.49	6.35	0.10	0.01	20.97
Use of Continuum of Force Model	6.13	4.84	0.21	-1.86	14.11
Interaction between de-escalation training and self-defense training hours**	1.93	1.52	0.21	-0.58	4.44
Constant	-7.46	6.38	0.24	-17.98	3.07

**Statistically significant at .10

*** Statistically significant at .05

VII. CONCLUSION

Through this analysis, I utilize linear OLS regression to assess the impact of mandatory de-escalation training on the number of citizen complaints of excessive use of force. I conduct this analysis to develop an understanding of the role of de-escalation in reducing citizen perception of excessive force and improving relationships between law enforcement and the communities they serve. The Multi-method Evaluation of Police Use of Force Outcomes dataset holds a series of factors that serve as limitations to the validity of this study. The lack of continuous information on population and number of sworn officers as well as omission of all demographic factors removes key variables from the analysis. Given these limitations, I focus on the training protocols in place with each police department.

The results of this regression are interesting in both their direction and statistical significance. Initially, I predict that mandatory de-escalation training will have a negative relationship with complaints of excessive force. This holds true in the regression analysis, yet de-escalation fails to show statistical significance. Surprisingly, in the original linear OLS regression, firearms training, self-defense training, and the interaction between self-defense and de-escalation training all show statistical significance. One surprising finding is the trends that suggest increasing firearms training and decreasing self-defense both lead to reductions in complaints of force.

When correcting for heteroskedasticity, three variables remain statistically significant. Table 7 shows the 90% confidence interval for three variables. The coefficient of 12.84 for populations of 100,000 to 500,000 aligns with early predictions, as the number of complaints typically increases with larger populations. Following this framework, the results for large departments with over 501 sworn officers shows a positive correlation, with a coefficient of 42.6.

The impact of mediation training presents an interesting contradiction to early predictions. With a coefficient of 10.48, this shows that the presence of mediation training leads to an increase in 10.48 annual complaints of force, all else equal. This is surprising, given that law enforcement agencies often implement mediation as a preventative tactic. This relationship may be capturing reverse causation, in which departments who receive a high number of complaints begin to implement mediation training. Of these variables, the size of the police agency is the most relevant variable, due to the high magnitude of the coefficient. Interpreting these results suggests that having more than 501 sworn officers increases the number of complaints by 42.6, all else equal. This is an appropriate pattern, as increasing the number of officers leads to more interactions with citizens, and a higher chance of a citizen reporting excessive force.

The R-squared in my linear regression is 0.2210. This shows that the linear regression model explains 22.1% of the variation in the dependent variable of complaints of excessive use of force. This suggests that there are variables influencing the dependent variable outside of this equation. This may be due to the lack of demographic information within the dataset. The f-test has a p-value of .00, showing that this model fits the data better than the intercept model. Thus, as it correctly predicts 22.1% of variance, this model is an improvement upon the intercept model. Despite the limitations of this model, there are interesting policy implications stemming from this research.

This analysis works to answer the question: What effect does the de-escalation training have on the number of citizen complaints of excessive force? This research generates interesting information to supplement this question. Overall, it appears that de-escalation has some negative impact on police complaints of excessive use of force. However, these results are inconclusive due to the lack of statistical significance. Yet this analysis highlights interesting trends resulting from

other training protocols. Large police departments working in areas with a high population see more complaints overall, reflecting standard patterns. These agencies may also have additional training funding to bolster their police force compared to smaller rural areas. The relationship between mediation training and complaints of force is fascinating due to the statistically significant positive relationship between this training and complaints of force. The direction of this relationship is outside the scope of this research and given the data set it is not possible to discern if the mediation training leads to complaints of force or if law enforcement agencies adapt the training after receiving a high number of complaints.

The lack of statistically significant variables limits the policy lessons stemming from this research. The negative correlations between both de-escalation and firearms training on complaints of force suggest that these may be effective tools. Yet additional research is necessary to determine their true efficacy. In a time when police relationships are on the political agenda it is important to have data that can analyze the effectiveness of different training methods. Given the weaknesses of this study one policy lesson moving forward is the implementation of a longitudinal study that can capture the impact of implementing new training methods and further develop the direction of potential causal relationships. Suggestions for further research include the implementation of a longitudinal study of police departments that includes demographic information as well as training protocols.

In conclusion, the magnitude to law enforcement training impacts complaints of excessive use of force is unclear. Time permitting, I would like to supplement this research with additional datasets from individual police departments that include vital information such as demographics and continuous population variables. This research highlights an interesting connection between mediation training and increases in complaints of force, and a longitudinal study would clarify the

direction of this relationship. There is additional research necessary to determine the appropriate policy decisions regarding law enforcement training and community relations.

Table 7 90% Confidence Intervals

Variable	Coefficient	P-value	90% Confidence Interval	
Dept. over 501 sworn officers	42.6	0.01	17.11	68.10
Pop. 100,000 to 500,000	12.84	0.05	1.92	23.78
Mandatory mediation training	10.48	0.10	0.01	20.97

Introduced by Assembly Member Cuellar

January 19, 2020

An act related to law enforcement data collection.
LEGISLATIVE COUNSEL'S DIGEST

AB 845.

This bill would require law enforcement agencies to collect data on verbally deescalated incidents with residents that includes success rates and demographic information on citizens who are attempted to be deescalated.

Vote: majority. Tax Measure no. State-Mandated Local Program: yes.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:
SECTION 1.

Title 2. Division 3. Part 2 Constitutional Officers. Chapter 6 Attorney General.

12525.5.

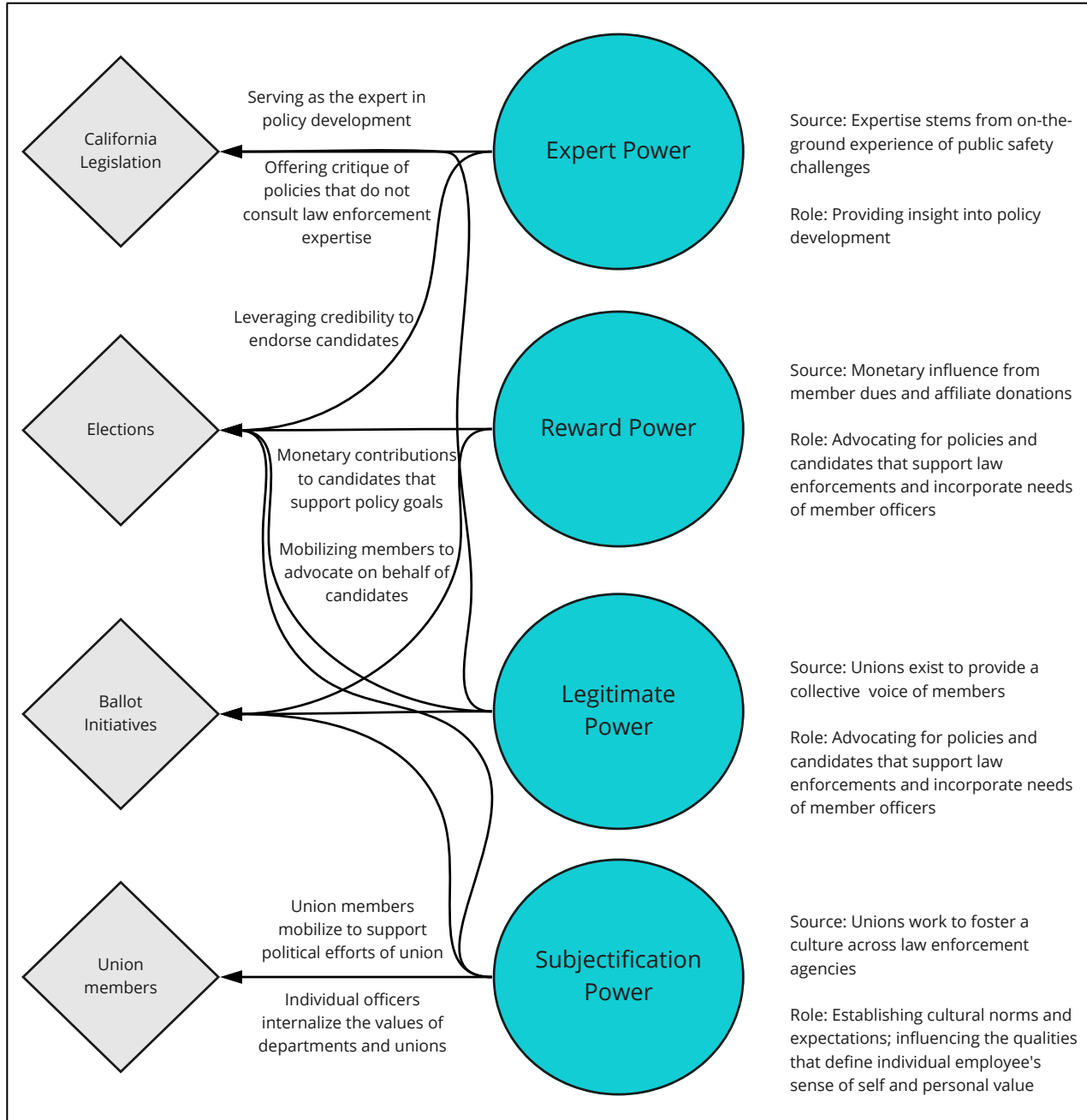
- a) (1) Each state and local agency that employs peace officers shall annually report to the Attorney General data on all stops conducted by that agency's peace officers for the preceding calendar year.

(2) Each agency that employs 1,000 or more peace officers shall begin collecting data on or before July 1, 2018 and shall issue its first round of reports on or before April 1, 2019. Each agency that employs 667 or more but less than 1,000 peace officers shall begin collecting data on or before January 1, 2019 and shall issue its first round of reports on or before April 1, 2020. Each agency that employs 334 or more but less than 667 peace officers shall begin collecting data on or before January 1, 2021 and shall issue its first round of reports on or before April 1, 2022. Each agency that employs one or more, but less than 334 peace officers shall begin collecting data on or before January 1, 2022 and shall issue its first round of reports on or before April 1, 2023.
- b) The reporting shall include, at a minimum, the following information for each stop:
 - 1) The time, date, and location of the stop.
 - 2) The reason for the stop.
 - 3) The result of the stop, such as, no action, warning, citation, property seizure, or arrest *or successful verbal de-escalation of involved citizen parties.*"

Artifact III:

California Peace Officer Association's Sources of Power

An application of French and Raven's Sources of Power



Organizations respond to and exert forces of power. The diagram above illustrates the California's Peace Officer Association's (CPOA) sources of and utilization of power, through the lens of French and Raven's (1959) bases of power. While French and Raven (1959) focus on five bases of power, this diagram emphasizes the interaction between expert, reward, legitimate, and subjectification powers. Through this lens, CPOA leverages support from its members to shape California's law enforcement policies.

Expert Power

Within the policy arena, Peace Officer Associations often serve the role of the expert. The power of expertise stems from the ability to control knowledge and expertise (French et al, 1959). For example, recently, CPOA successfully lobbied against legislation that would remove some police immunity and allow departments to decertify officers after cases of misconduct. Representatives from CPOA advocated for more time to craft “a fair, reasonable and workable decertification process” (Associated Press, 2020, para. 13). Similar trends arise with SB 731 and SB776, both aiming to reform law enforcement accountability measures (Nixon, 2020). This resistance ties to demands from CPOA and other large unions for a more collaborative design between lawmakers and law enforcement unions (Nixon, 2020).

These examples highlight the expert power exhibited within Peace Officer Associations—those working on the ground hold the knowledge necessary to develop appropriate policies. Given this power, policy work that does not consult entities such as CPOA risk appearing uninformed or misguided. CPOA offers a core source of knowledge regarding the needs of law enforcement and the state of public safety in California. In addition to holding knowledge regarding policing practices, CPOA's large membership base lays the foundation to leverage rewards as a means of power.

Reward Power

Utilizing incentives as a means of motivating certain behaviors is a core function of reward power (French et al., 1959). CPOA's history of successful lobbying in political campaigns offers an example of this form of power. According to a study from the Guardian, different law enforcement unions, including the CPOA, have contributed \$87 million to local and state elections over the past twenty years (Perkins, 2020). With a large funding pool from membership and affiliate organizations, CPOA holds the power to provide monetary support for particular candidates and initiatives. Some advocates voice concern that funding prosecutor elections may serve as an exertion of reward power to incentivize prosecutors to act favorably in charges brought against law enforcement (Willis, 2020). This fosters tensions between advocates and policy leaders regarding the exertion of reward power. Opponents critique the influence stemming from the Peace Officer Association's capacity to lobby officials (McClain, 2020).

Overall, these lobbying efforts work to secure employment, similar to other labor unions. Reductions and reforms within law enforcement may pose a threat to the livelihood of the members that CPOA exists to advocate for. Through financial contributions and the mobilization of members for lobbying purposes, CPOA exerts reward power by continuing to support candidates that advocate for favorable policies.

Legitimate Power

Raven and French's (1959) categories offer guidelines, yet mechanisms of power do not always fit clearly into one form. Lobbying for political figures and initiatives exemplifies this fluidity and shows the exertion of both reward and legitimate powers. The legitimate power of coalitions and institutions stems from cultural norms, social structures, and institutions that delineate jurisdictions and influence (French et al., 1959). For example, one of CPOA's core roles

is to advocate for issues impacting law enforcement (CPOA, 2019). As a union, CPOA leverages legitimate power through mobilization of member voice and lobbying efforts.

Subjectification Power

Organizations access political power through the formation of coalitions (Bolman and Deal, 2017). These partnerships offer sources of influence or resistance within the larger political arena. Organizational culture and loyalty foster this form of power in CPOA. Subjectification stems from setting expectations and values that individual employees then internalize (Fleming & Spicer, 2006). Through this process, law enforcement unions encourage officers to embody the values of the organization. When employees internalize organizational values, they begin to self-regulate in alignment with the overarching goals of the institution (Fleming, 2006). This works to build a foundation of loyalty, fostering not only subjectification power but working to mobilize additional legitimate lobbying powers as well.

Implications for Policy

Incorporating CPOA and other law enforcement unions into the policy making arena fosters their expert role. This model of engagement works to emphasize expert power over reward methods and can foster buy-in rather than resistance to policy shifts. Garnering the cooperation of unions such as CPOA greatly impacts the success of implementation. For example, due to the consideration of local department needs, CPOA supported recent efforts to collect data on use of force and build infrastructure for independent investigations (Hosseini, 2020). Given the immense legitimate, rewarding, and expert power that CPOA leverages in California's policy arena, utilizing this agency as an expert consultant works to incorporate the needs of law enforcement officers and ultimately leverage support for future policy shifts.

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