

## **Police Use-of-Force Self-efficacy: An Antidote to the Ferguson Effect?**

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### **Notes**

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# **Police Use-of-Force Self-efficacy: An Antidote to the Ferguson Effect?**

## **Abstract**

Research has consistently shown that officers' perceptions of deteriorated relationships with the public are associated with physical and emotional disengagement with their work. Anecdotal evidence suggests that this "Ferguson Effect" has also contributed to reluctance to use necessary physical force in the course of their duties, leading to compromises for officer safety and public safety. This study has two objectives: first, it is the only study to systematically assess the claim that apprehensiveness to use force is associated with perceptions of community support; second, it examines whether use-of-force self-efficacy reduces apprehensiveness to use force. Using OLS regression of officer surveys from 4,000 police officers in a Southeastern U.S. state, we find support for both hypotheses, as well as evidence of interaction effects. We identify several practical implications for agency leaders, and further encourage the development of use-of-force self-efficacy as a substantively and theoretically meaningful concept for researchers.

## **Introduction**

The "Ferguson Effect" and "War on Cops" describe how increased scrutiny and criticism of police may lead to changes in police attitudes and behaviors, potentially compromising public safety (MacDonald, 2015; 2017). Proponents argue that police officers may be less emotionally engaged, less proactive, and may decrease their enforcement efforts in response to public outrage and scrutiny following high-profile incidents of police brutality or other controversial incidents involving police officers. While research does not consistently support a Ferguson Effect on crime (e.g., Pyrooz *et al.* 2016), studies do consistently find that police officers' emotional and physical disengagement, as well as officers' self-legitimacy, are associated with their perceptions of

criticism from the public (e.g., Wolfe & Nix, 2016; Nix & Wolfe, 2017; Marier & Moule, 2018; Nix & Wolfe, 2018).

One largely untested hypothesis involves specific consideration of officers' reluctance to use force. Broadly, Ferguson Effect research consistently finds that officers emotionally and physically withdraw from police work in the face of public criticism. When this phenomenon is applied specifically to the domain of police use of force (UOF), it is plausible that officers who perceive public criticism may have less confidence in their ability to use force safely and effectively, and may therefore be apprehensive to use force even though it may be necessary. Indeed, there are both anecdotal and theoretical reasons to believe this is the case. Anecdotally, police leaders have claimed that officers are not using force—including deadly force—in situations that required it following the nationwide protests (Reese, 2014). A majority of police leaders perceive a recent “War on Cops,” and their belief is paired with concerns about negative effects of de-policing (Nix, Wolfe, & Campbell 2018).

Theoretically, self-efficacy—which determines how diligently or confidently one approaches challenging tasks and situations—may protect against apprehensiveness to use necessary force. Self-efficacy refers to an individual's belief in their own ability to successfully accomplish tasks, achieve goals, and handle various situations. It plays a significant role in determining how people approach challenges, set goals, and persevere in the face of difficulties (Bandura, 1977). In the context of policing generally, and the use of force specifically, officers with self-efficacy may be less likely to be apprehensive about carrying out unpleasant but necessary duties, including the use of physical coercion.

This study has two primary objectives. First, it seeks to understand whether officers' apprehensiveness to use force is associated with their perceptions of community support, as proponents of the Ferguson Effect would predict. Second, it examines whether officers' use-of-force self-efficacy—self-referent belief in their own ability to use force safely and effectively—reduces that apprehensiveness. In addition, it explores key interactions between these variables.

This study makes several key contributions. As the first study to test the hypothesis that officers' reluctance to use necessary force is associated with the quality of the relationship between the police institution and the public they serve, it adds to a growing body of evidence that poor police–public relationships may compromise officer safety and public safety. Furthermore, it is only the second study to measure and examine UOF self-efficacy, a substantively meaningful concept that, we argue, holds import for a variety of officer attitudes and behaviors—including, as found here, their reluctance to use force although it may be necessary.

## **Review of the Literature**

The "Ferguson Effect" describes a process wherein increased scrutiny and criticism of police leads to changes in police attitudes and behaviors, which may ultimately compromise public safety. Proponents suggest that police officers may be less emotionally engaged, less proactive, and may decrease their enforcement efforts in response to public outrage and scrutiny following high-profile incidents of police brutality or other controversial incidents involving police officers (MacDonald, 2015). The term "Ferguson Effect" was coined in 2014, after the shooting of Michael Brown in Ferguson, Missouri, and the subsequent protests and unrest in the city (Byers, 2014). It has expanded to include other episodes of protests following police controversies since then. Proponents of the Ferguson Effect express concerns that police officers feel demoralized and

unsupported by their communities, and this leads to a variety of forms of attitudinal and behavioral disengagement that may ultimately lead to increases in crime and violence (Lichtblau, 2016).

Rhetorically, the narrative has largely shifted from a “Ferguson Effect” to a “War on Cops,” but the arguments are similar and the genesis of each is largely attributable to Heather MacDonald of the Manhattan Institute (MacDonald, 2015; 2017). MacDonald’s “War on Cops” describes a deliberate and organized effort to target and harm police officers. This phenomenon is often fueled by media reports of violent incidents involving police officers and the perception that police officers are increasingly under attack. Proponents point to incidents of violence against police officers, anti-police rhetoric from some politicians and activists, and the increasing use of social media to spread anti-police sentiment. In addition to directly harming police officers, proponents argue, anti-police rhetoric may symbolically condone violence and undermine the legitimacy of the law, contributing to widespread crime and victimization.

Research on the Ferguson Effect and War on Cops has examined a variety of outcomes. It has revealed that, when faced with scrutiny or criticism, officers feel more burnout (Marier & Fridell, 2020), express more cynicism (Marier & Moule, 2018), demonstrate less self-legitimacy (Nix & Wolfe, 2017), conduct less proactive policing such as foot patrol and traffic stops (Capellan et al., 2020; Marier & Fridell, 2020; Shjarback et al., 2017), and disengage from community partnerships (Wolfe & Nix, 2016). When it comes to a Ferguson Effect on crime, the evidence is much less consistent (Capellan et al., 2020; Morgan & Pally, 2016; Pyrooz et al., 2016; Rosenfeld, 2015). To generalize, research on the Ferguson Effect has most consistently supported the notion that officers emotionally and physically disengage from their work when they perceive substantial tension with the public, while there is limited support for the argument that increased scrutiny or perceived tension with the public is associated with elevated crime or disorder in communities.

A handful of studies have examined victimization of the police in the context of the Ferguson Effect and the War on Cops. While Sierra-Arevalo et al. (2023) found a brief, acute spike in firearms assaults against police officers following the murder of George Floyd by Officer Derrick Chauvin, most other research has found no evidence of an increase in assaults on officers following controversial police-custody deaths and associated protests, whether those assaults were fatal (Norris, 2023; Maguire et al., 2017; White, 2020) or nonfatal (Shjarback & Maguire, 2021).

Key questions remain, however. Notwithstanding any evidence of change in assaults on the police, anecdotal evidence suggests that officers' withdrawal and disengagement may also extend to the necessary use of force in the course of police work. In Chicago, for instance, an officer suffered a concussion, multiple fractures, a neck injury, and had concrete removed from her face after an attack in which she refused to shoot her attacker "because she didn't want her family or the department to have to go through the scrutiny the next day on the national news" (Gorner & Dardick, 2016). In West Virginia, a young officer was fired for not shooting a man with a gun; backup officers arrived and shot the man, and later accused the young officer of cowardice (Sexton, 2018). In Fairfield, Ohio, two rookie officers failed to shoot a man who pointed a gun at them after he had murdered another citizen and shot into nearby cars. After officers unsuccessfully attempted to use a Taser, the man briefly escaped before threatening another group of officers with the gun, at which point he was shot and killed (Hart & LeDuc, 2022). It is prudent to explore any Ferguson Effect on police attitudes toward the use of force, given its attendant consequences for officer safety and public safety. Ultimately, police use of force must be attendant to legal

standards—objective reasonableness among them—rather than being influenced by subjective standards such as public attitudes.<sup>1</sup>

The use of force is perhaps the defining characteristic of police work. In modern societies, citizens have largely given up the personal liberty to use force to achieve their ends, and instead concentrated it into a professionalized body with explicit, bounded authority to use that force, when necessary, in order to maintain social order (Bittner 1990; Klockars, 1985). Naturally, the use of force is also the source of much controversy, especially when it is used unskillfully or unlawfully. For these reasons, UOF self-efficacy deserves particular attention.

### ***Self-efficacy: Concept and Theory***

The concept of self-efficacy was pioneered by Albert Bandura (1977). Self-efficacy beliefs (sometimes called expectancies) refer to a person's judgments about their own ability to execute behaviors necessary to produce specific outcomes. According to Bandura, self-efficacy beliefs are among the most influential determinants of human behavior. Self-efficacy theory is meant to be a general, parsimonious, unifying theory for all types of human behavior. Bandura differentiated between self-efficacy expectancies, which pertain to one's ability to perform behaviors, and outcome expectancies, which relate to the anticipated results of those behaviors. He argued that self-efficacy beliefs are more significant and influential than outcome expectancies in determining whether people attempt certain behaviors and persist in the face of obstacles.

Bandura identified four primary sources of self-efficacy beliefs: mastery experiences, vicarious experiences, social persuasion, and emotional and physiological states. According to Bandura, mastery experiences, or past successes, are the most powerful source of self-efficacy.

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<sup>1</sup> For an overview of legal standards vis-à-vis community expectations standards, see Stoughton et al., 2020.

Vicarious experiences—observing others succeed—can also increase self-efficacy. Social persuasion, such as encouragement or positive feedback from others, can influence self-efficacy beliefs. Acute emotional arousal and physiological states, such as the physical manifestations of anxiety or acute stress, can decrease self-efficacy (although, according to Bandura, the reverse is also true).

According to the theory, self-efficacy influences choice behavior, effort expenditure/persistence, and emotional reactions (Bandura, 1986). People will avoid activities that they believe exceed their capabilities, but will confidently address tasks that they deem themselves capable of doing well. People with self-efficacy will demonstrate more effort and persist for longer when faced with obstacles. Self-efficacy also fosters emotional wellbeing, where those who are inefficacious will experience negative emotions such as stress.

Self-efficacy theory has been applied to several domains of human motivation and performance, including academic achievement (Honicke & Broadbent, 2016), healthy behaviors (Sheeran et al., 2016), athletic performance (Feltz et al., 2008), and self-regulation (Panadero et al., 2017). Several studies have evaluated self-efficacy in police officers. For instance, command staff who demonstrated substantial self-efficacy (on a general scale) ranked higher on multiple dimensions of leadership, including influence, motivation, and effectiveness (Ramchunder & Martins, 2014), and younger officers reported more career commitment when they had higher levels of general job-related measures of self-efficacy such as “I am strong enough to overcome life's struggle as a police officer” (Oyesoji Aremu, 2005). Self-efficacy for exercise is associated with officers’ regular physical activity (Streetman et al. 2022), and emotional self-efficacy corresponds with their psychological health (Emeriau-Farges, 2019). The extent to which officers perceive themselves as effective in stressful police-related situations demonstrates a strong

association with police performance in a comparison of officers' own evaluations of their coping self-efficacy to their supervisors' evaluations of their performance (Band & Manuele, 1987). However, officers demonstrate significantly less coping self-efficacy when experiencing burnout (Eikenhout *et al.*, 2022).

Some research on self-efficacy in policing has focused on work with special populations. For instance, officers who express more confidence in dealing with subjects with mental illness demonstrate better de-escalation skills and make better referral decisions (Compton *et al.*, 2022). Officers demonstrate significantly more self-efficacy pertaining to LGBTQ populations after attending training on the topic (Israel *et al.*, 2014). Qualitative research indicates that self-efficacy in dealing with people with autism corresponds with three broad factors: training; malleable factors such as increased exposure to autism or gaining personal connections; and fixed factors such as the complexity of autism or stress during an emergency response (Love *et al.*, 2022).

These studies, in summary, have used either global measures of overall self-efficacy or domain-specific measures of self-efficacy that do not pertain to the use of force. Bandura (2006) has advocated for the development of domain-specific self-efficacy scales because they may provide more explanatory power than a more all-purpose measure. General considerations of self-efficacy, while important, may limit our understanding of domain-specific demands, skills, circumstances, and growth (Bandura, 2006). This study explores self-efficacy within the domain of police use of force.

Only one study has examined UOF self-efficacy in police officers. Torres (2020) surveyed law enforcement officers registered on PoliceOne.com. He found that UOF self-efficacy was a significant predictor of an officer's confidence in taking a hostile citizen into custody using only

their hands and without the use of intermediate weapons (e.g., pepper spray, baton, taser). Nonetheless, the study appears to suffer from an inescapable tautology. The outcome—confidence in the ability to physically arrest a large, hostile, unarmed citizen without the use of intermediate weapons—appears nearly identical to the measures of use-of-force self-efficacy, which include items such as “I am confident in my ability to determine the appropriate amount of force necessary in a UOF situation” and “I am confident I have received the training necessary to determine the appropriate amount of force necessary in a use of force situation.” The outcome appears to be merely a more specific instance of UOF self-efficacy. Furthermore, Torres measured apprehensiveness to use force, but modeled it as a covariate rather than considering it as a potential outcome of UOF self-efficacy. Therefore, this study extends the work of Torres (2020), and self-efficacy research more generally, in order to explore the potential role of UOF self-efficacy in mitigating “Ferguson Effects” on officers’ reluctance to use necessary force.

### **Current Study**

To summarize the foregoing review, some people have argued that when officers perceive low public support, they demonstrate apprehensiveness when it comes to the lawful and necessary use of force, compromising officer safety and public safety. This particular aspect of the Ferguson Effect has not been tested, although it has been claimed since at least 2014. Self-efficacy theory, however, provides good reason to believe that officers will be less apprehensive to use force if they have high UOF self-efficacy—potentially blunting the negative effects of perceived public support on apprehensiveness to use force.

This study capitalizes on surveys of police officers in a Southeastern U.S. state to explore factors influencing apprehensiveness to use force and whether UOF self-efficacy reduces that

apprehensiveness. Based on expectations stemming from self-efficacy theory, we hypothesize, first, that officers perceiving low support from the public will be more apprehensive to use force; second, that officers with high UOF self-efficacy will be less apprehensive to use force; and finally, that self-efficacy will act as a buffer against the impact of public support on apprehensiveness to use force. Specifically, we hypothesize that self-efficacy will moderate the relationship (if any) between public support and apprehensiveness to use force.

## **Methodology**

### ***Sample***

The surveys used in this study were originally obtained as part of a study of officer health and wellness in a southeastern U.S. state (Baker *et al.*, 2023). An online survey was administered in early 2022. The state's justice academy maintains a database of users who have conducted academy and in-service training. All users in the database ( $N = 62,702$ ) were emailed an invitation to participate in a survey focused on "law enforcement/detention health, fitness, and wellness." Overall, 6,773 responses were received, corresponding to a 10.8% response rate; however, this number also included non-sworn criminal justice personnel, retirees, detention officers, and officers in non-field assignments.<sup>2</sup> While a 10.8% response rate is comparatively low, even for police surveys, there is no methodological consensus about what response rate is 'acceptable' (Nix *et al.*, 2019), and the large sampling frame still permitted the collection of one of the largest samples of police officers ever undertaken (see Adams, 2022). After removal of those who were

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<sup>2</sup> Non-field assignments that were removed from the sample include those working in Community Policing, Command, Administration or Support, and "Other non-field assignment." Field assignments included Patrol, Investigations, Traffic, Gangs, Narcotics, School/Juvenile Policing, and "Other field assignment." However, it was not possible to make more fine-tuned distinctions, such as officers in field assignments that did not interact with the public (such as patrol officers that primarily worked in training, or certain types of investigators who rarely interacted with the public or effected arrests).

retired or non-sworn ( $N = 1,143$ ), worked in detention, corrections, or probation ( $N = 645$ ), or were listwise deleted due to missingness on study variables (see Table 1 for the number of observations per variable), 4,086-4,127 active-duty police officers are included in the multivariate analyses.

Surveyed officers are disproportionately white (84.3%) and male (86.1%), consistent with patterns across the state and the nation. Most officers (60%) are in their 30's or 40's and have an average of 17.6 years of experience. Two-thirds of the sample (66.6%) works the day shift and about one-third (35.5%) works in a rural area. Sample summary statistics appear in Table 1.

[Table 1]

## ***Measures***

### *Dependent Variable*

*Apprehensiveness to use necessary force* is a 3-item measure of officers' reluctance to use physical force when necessary to carry out their duties (Torres, 2020). The three items were, "I am apprehensive about using force even though it may be necessary," "I do not feel safe while making arrests or responding to resistance," and "I am fearful of losing my job in times I have to use force." Responses were recorded on a 5-point scale, where 1 indicates "Strongly disagree" and 5 indicates "Strongly agree." The three items were averaged into a composite scale. The three items loaded onto one factor ( $\lambda = 1.042$ ; loadings  $> .503$ ) and demonstrated moderate internal consistency ( $\alpha = .669$ ).

### *Independent Variables*

Two measures of *perceived public support* are used in order to explore how officers' perceptions of their relationship with the public may be associated with their self-efficacy. These

were derived from two survey items: “Most people respect the police” and “The relationship between my agency and the public is very good” (Marier & Moule, 2018). These items were measured on a 5-point scale where 1 indicates Strongly disagree and 5 indicates Strongly agree. Higher scores, therefore, reflect *perceived public support*, which we hypothesized will contribute to less apprehensiveness to use force. These items were *not* aggregated because they were only moderately correlated—perhaps because officers sense a mismatch between general public opinion of the police and local attitudes toward their own department.<sup>34</sup>

*Use-of-force self-efficacy* captures officers’ beliefs about their capacity to use physical force safely and effectively (adapted from Torres, 2020). Officers indicated to what extent they agree or disagree with six statements:

1. I am confident in my ability to use the appropriate amount of force necessary in a use-of-force situation.
2. I am confident I have received the training necessary to use the appropriate amount of force necessary in a use-of-force situation.
3. I am confident in my ability to make the appropriate decision in a potentially deadly situation.
4. I am confident I have received the training necessary to make the appropriate decision in a potentially deadly situation.

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<sup>3</sup> Indeed, officers much more strongly agreed with the statement “The relationship between my agency and the public is very good” than “Most people respect the police” (4.066 vs. 3.397,  $N = 4,137$ ,  $t = 37.083$ ,  $p < .001$ ). The items are moderately correlated at  $r = .32$ .

<sup>4</sup> Although there may be a difference between “respect” and “confidence,” it is worth noting that most Americans (74%) have confidence in their local police, despite declines in recent years (Ray, 2022); at the same time, 55% of our sample agreed or strongly agreed that “Most people respect the police” and more than 75% agreed or strongly agreed that “The relationship between my agency and the public is very good.” Thus, there seems to be some congruence between officers’ perceptions and actual community members’ attitudes.

5. I am confident in my ability to minimize the likelihood of getting injured in a use-of-force situation.
6. I am confident in my ability to minimize the likelihood of injuring someone else in a use-of-force situation.

The six items loaded onto one factor ( $\lambda = 2.467$ ; loadings  $> .594$ ) and demonstrated good internal consistency ( $\alpha = .801$ ). Responses were recorded on a 5-point scale, where 1 indicates “Strongly disagree” and 5 indicates “Strongly agree” and averaged into a composite index, where higher scores indicate higher perceived *use-of-force self-efficacy*.<sup>5</sup>

### *Control Variables*

Several control variables are included to reduce the likelihood of producing biased estimates. *Stress* is measured using the 10-item perceived stress scale (PSS-10) that measures the extent to which an individual perceives life as unpredictable, uncontrollable, and overwhelming (Cohen et al., 1983). It is a measure of general or overall stress, being more encompassing than occupational stress. For example, one item asks, “How often have you felt that you were unable to control the important things in your life?” Responses are measured on a 5-point scale where 1 represents “Never” and 5 represents “All of the time.” The ten items demonstrated good internal consistency ( $\alpha = .858$ ). The ten items were averaged into a composite index, where higher scores indicate more stress (see Appendix).

Four items were used to measure *burnout*, adapted from the exhaustion subscale of the Maslach Burnout Inventory (MBI-GS; Maslach et al., 1997). Officers were asked to what extent

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<sup>5</sup> UOF self-efficacy and apprehensiveness to use force, on their face, may appear to measure the same construct. Confirmatory factor analysis indicated substantially better fit for a two-factor solution, suggesting that they are, indeed, distinct (likelihood ratio test  $\chi^2 = 1,091.93$ ,  $p < .001$ ).

they agreed with statements such as, “I feel emotionally drained from work,” answering on a 5-point scale where 1 represents “Strongly Disagree” and 5 represents “Strongly Agree.” Higher scores indicate more burnout. The four items demonstrated very good internal consistency ( $\alpha = .923$ ).

We also control for various demographic factors. Dummy variables were created to measure respondent gender (1 = male) and race (1 = white, 0 = non-white). Age is measured categorically (1 = 20-29, 2 = 30-39, 3 = 40-49, 4 = 50-59, 5 = 60-69, and 6 = 70 or older). Experience is measured as a continuous variable in years. Education is measured as an ordinal variable (1 = high school, 2 = some college, 3 = 2-year degree, 4 = 4-year degree, 5 = some graduate school, and 6 = professional or graduate degree). Dummy variables also indicate whether the officer works a day shift (as opposed to night shift or rotating shifts; 1 = day shift), or works in a rural area (1 = rural).

### *Analytic Strategy*

In order to examine key hypotheses regarding apprehensiveness to use force and UOF self-efficacy, we estimated a series of multivariate equations using ordinary least squares (OLS) regression. Diagnostic tests indicated that collinearity was not a concern, with variance inflation factors below 1.20<sup>6</sup> and bivariate correlations low enough to suggest no problematic collinearity<sup>7</sup> (Tabachnick & Fidell, 2013). Unmeasured agency and community characteristics likely affect apprehensiveness to use force. Robust standard errors were used to reduce some of this bias, since

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<sup>6</sup> Except for interaction terms, which are by definition a linear function of their components and therefore collinear with them. This is not a problematic form of multicollinearity.

<sup>7</sup> Stress and burnout demonstrated the largest correlation at  $r = .551$ .

they account for non-independence of observations and reduce the Type-I error rate(Verardi & Croux, 2009). Analyses were conducted in Stata/MP 18.

## Results

Table 2 reports six OLS regression models that explored the relationships between apprehensiveness to use force, perceived public support, and UOF self-efficacy. Model 1 examines the independent effects of perceived public support on apprehensiveness to use force. Recall that Ferguson Effect proponents have argued that a lack of support from the public makes officers more apprehensive to use force. Consistent with that claim, officers are significantly less apprehensive to use force when they more strongly agree that “Most people respect the police” (Perceived Public Support 1,  $b = -.104, p < .001$ ) or that “The relationship between my agency and the public is very good” (Perceived Public Support 2,  $b = -.153, p < .001$ ).

[Table 2]

Model 2 examines the relationship between apprehensiveness to use force and UOF self-efficacy. As hypothesized, more self-efficacy is associated with less apprehensiveness to use force ( $b = -.520, p < .001$ ). Model 3 includes both the perceived public support variables as well as the UOF self-efficacy variable. All of the variables retain statistically significant relationships, suggesting that they are not confounded.

Models 4 and 5 explore interactions between perceived public support and UOF self-efficacy. We hypothesized that UOF self-efficacy would moderate any relationship between perceptions of public support and apprehensiveness to use force. Model 4 examines the interaction between UOF self-efficacy and “Most people respect the police”; Model 5 examines the interaction between UOF self-efficacy and “The relationship between my agency and the public is very good.”

The significant interaction term in Model 4 suggests that the effect of perceived public support on apprehensiveness to use force is lower among officers with lower use-of-force self-efficacy ( $b = -.073, p < .01$ ). Model 5 repeats the analysis with the other public support measure, and again finds that self-efficacy moderates the effect of public support on apprehensiveness to use force ( $b = -.121, p < .001$ ).

Figure 1 illustrates the moderating effects of UOF self-efficacy on the relationship between apprehensiveness to use force and perceptions of public support (Note: Figure 1 relies on estimates from Model 5 in Table 2). The effect of public support on apprehensiveness to use force varies by levels of UOF self-efficacy. Officers with lower UOF self-efficacy (one standard deviation below the mean) demonstrate modest decreases in their apprehensiveness to use force as perceptions of public support improve. Officers with higher UOF self-efficacy (one standard deviation above the mean) demonstrate a much stronger decrease in apprehensiveness to use force as they perceive more support from the public. Furthermore, the most apprehensive officers are those with the lowest UOF self-efficacy and the least perceived public support; the least apprehensive officers are those with the most self-efficacy and the most perceived public support. Among officers who perceive the lowest levels of perceived public support, apprehensiveness to use force is quite similar irrespective of officer UOF self-efficacy. Officers with more UOF self-efficacy are consistently less apprehensive to use force across all levels of perceived public support than their less-efficacious peers. As perceptions of public support improve, officers with more UOF self-efficacy experience less and less apprehensiveness to use force. This introduces significant gaps in apprehensiveness to use force between more and less efficacious officers when officers perceive relatively neutral or higher support from the public.

[Figure 1]

Some generalizations can be made across the six models about other covariates. Consistent with Ferguson Effects, stress and burnout demonstrate significant, positive associations with apprehensiveness to use force in every model. White officers are more apprehensive to use force than non-white officers, and so, too, are older officers. In two of the models, more educated officers were more apprehensive to use force, but these effects were small, inconsistent, and weak. Officers were no more or less likely to be apprehensive to use force if they worked day shift or worked in a rural area.

## **Discussion**

This study set out to assess the relationship between officers' UOF self-efficacy, perceptions of community support, and apprehensiveness to use force. Results suggest some support for the ways in which the Ferguson Effect may manifest in officers, as lower perceptions of public support are associated with greater apprehensiveness to use force. Providing some buffer against apprehensiveness to use force, our results suggest that officers experience less apprehensiveness to use force if they possess higher levels of UOF self-efficacy. These findings provide clear support for our hypothesis that officers who perceive low levels of public support will also experience apprehensiveness to use force. Furthermore, these findings provide support for the role of self-efficacy, as officers with higher levels of UOF self-efficacy experience less apprehensiveness to use force. Finally, we find some support for UOF self-efficacy as one potential buffer against the negative impact of low public support. Despite this support, self-efficacy was not as consistent of a buffer as we expected against low perceptions of public support.

Public support displays its strongest influence on apprehensiveness among officers who possess higher levels of self-efficacy, and relatively less influence when officers have lower levels

of self-efficacy. Officers reporting high levels of UOF self-efficacy and perceiving high public support report the least apprehensiveness about using force. Conversely, officers reporting low UOF self-efficacy *and* perceiving low public support demonstrate the most apprehensiveness about using force.

While both of those outcomes were consistent with our initial hypotheses, the interaction between self-efficacy and public support contradicted our expectations. We had expected that officers with the most self-efficacy would be *least sensitive* to variation in public support, and vice versa. Instead, we found that officers high in self-efficacy see the biggest reductions in apprehensiveness to use force as perceptions of public support improve; conversely, officers low in UOF self-efficacy see rather modest reductions in apprehensiveness to use force as perceptions of public support improve. Overall, UOF self-efficacy among officers reduces apprehensiveness to use force, with the important caveat that self-efficacy's marginal effects on apprehensiveness to use force nearly disappear among officers who perceive the lowest levels of public support.

Nonetheless, this research indicates that officers' confidence in their own abilities to use force safely and effectively is consistently associated with less apprehensiveness to use force at all levels of public support. Therefore, self-efficacy theory may be especially valuable to the research and practice of policing. First, officers' ability or requirement to use force in certain scenarios is a defining aspect of the profession. While use of force is not the only aspect of police work that affects community perceptions of policing, it is often the part of police work that ignites criticism, protests, and legitimacy deficits in policing. Greater understanding of the factors that influence officers' confidence in their ability to use force effectively, as well as the factors that may disrupt that confidence, is essential. In the worst-case scenario, officers who lack confidence in their ability to use force safely and effectively may indeed use *more* force than necessary in a given

situation. These officers may rely on, for example, a conductive energy device (CED) as a tool to resolve contentious interactions, rather than conflict resolution training or some lower level of force (Alpert & Dunham, 2010) that may be at their disposal with greater self-efficacy. Thus, UOF self-efficacy may have significant implications for public safety and officer safety. Given that agencies have much more direct influence on their officers' UOF self-efficacy than officer perceptions of (or actual) public support, specific, practical interventions aimed at increasing confidence and competency related to self-efficacy and use-of-force, such as training, could offset periods of public criticism on apprehensiveness to use force.

The contributions of this study must be considered alongside its limitations. First, this study relies on cross-sectional data, leading to correlational analysis of officers' self-reported self-efficacy, perceived public support, and apprehensiveness regarding use-of-force. This leaves open the possibility that, rather than higher public support *leading to* lower levels of apprehensiveness, an officer's apprehensiveness could lead them to perceive less support from the public. Future research should prioritize the collection of longitudinal data to determine, for example, what leads to changes in perceived public support or associated changes in perceived apprehensiveness. Second, this survey was administered to officers in a single, Southern state during the tail-end of COVID. The survey did not specifically consider whether apprehensiveness may be attributable to concerns from officers about catching transmittable diseases, in addition to the proposed sources of apprehensiveness outlined in this paper. Third, the 10.8% response rate was rather low. If non-response was due to factors unmeasured in this study, then it is possible that the estimates systematically differ from the larger population, challenging validity and generalizability. Fourth, the study examines effects stemming from one snapshot of an officer's UOF self-efficacy, rather than investigating the process through which officers build self-efficacy. Bandura (1997) suggests

and even prioritizes specific *sources* of self-efficacy for individuals, including mastery experiences (performing the task to get more information about one's own competency), verbal persuasion (feedback from sources of authority regarding competency), and physiological and affective states (familiarity with the physiological and affective feedback while performing the task). Future research should work to identify which of these sources is most important to build domain-specific self-efficacy and which sources are most accessible by police officers and leaders.

It is also possible that both UOF self-efficacy and apprehensiveness to use force vary along the continuum of force. For instance, some officers may feel highly self-efficacious using deadly force but feel inefficacious using intermediate weapons (or vice versa), and some officers may be apprehensive to use specific types of force, rather than apprehensive to use force in general. The measures used in this study are unable to ascertain these distinctions. Future research in this area may benefit from the development of subscales of apprehensiveness to use force and UOF self-efficacy along these dimensions, as well as the role of public support in each of these subareas. Critically, the current study does not ascertain the relationships between UOF measures (self-efficacy and apprehensiveness) and actual use of force (e.g. frequency or reasonableness). It will be important to establish whether any such relationships exist. It is certainly plausible that officers high in self-efficacy and low in apprehensiveness to use force behave in legally unreasonable ways owing to overconfidence, and this deserves appraisal.

Finally, this is one of only a few studies to prioritize a domain-specific consideration of self-efficacy in policing, despite Bandura's suggestion. A recent study developed a measure similar to UOF self-efficacy that the authors dubbed "police defensive tactics self-efficacy" (Butler et al., 2023). This measure assessed "a police officer's perception of their ability to effectively protect themselves using DT [defensive tactics] in a non-lethal, violent encounter" (Butler et al.,

2023, p. 63). Scores significantly improved from baseline after police recruits completed defensive tactics training in the police academy. While we see significant conceptual overlap with this measure of DT self-efficacy and UOF self-efficacy, future research will be needed to properly assess the effectiveness and distinctiveness of these measures. Unfortunately, Butler et al.'s study was published subsequent to the present study's survey design and data collection, so it did not inform the present study. Other future research may continue to assess UOF self-efficacy and the extent to which it can be trained, not only in the academy phase, but in the in-career phase. The results of our study suggest that a *deficit* in self-efficacy could be of greatest concern; thus, future research should consider the factors that contribute to officers making up these deficits.

Ultimately, this study builds upon past considerations of public support in policing, and expands it by introducing and examining the relevance of use-of-force self-efficacy. Past findings highlight the impact of perceived low public support on, for example, perceived self-legitimacy as a police officer (Nix & Wolfe, 2017), withdrawal into a traditional police culture (Marier & Moule, 2018), and poorer mental and physical health (Baker, Marier, & Cheek, 2023). This study lends credence to the claim that officers are apprehensive to use lawful, necessary force in the face of compromised community relationships, and that compromised community relationships may have this effect even among officers who possess confidence in their training and decision-making regarding use-of-force.

## **Appendix**

### ***Apprehensiveness to Use Necessary Force***

1. I am apprehensive about using force even though it may be necessary.
2. I do not feel safe while making arrests or responding to resistance.
3. I am fearful of losing my job in times I have to use force.

### ***UOF Self-efficacy***

1. I am confident in my ability to use the appropriate amount of force necessary in a use-of-force situation.
2. I am confident I have received the training necessary to use the appropriate amount of force necessary in a use-of-force situation.
3. I am confident in my ability to make the appropriate decision in a potentially deadly situation.
4. I am confident I have received the training necessary to make the appropriate decision in a potentially deadly situation.
5. I am confident in my ability to minimize the likelihood of getting injured in a use-of-force situation.
6. I am confident in my ability to minimize the likelihood of injuring someone else in a use-of-force situation.

### ***Stress (PSS-10)***

1. How often have you been upset because of something that happened unexpectedly?
2. How often have you felt that you were unable to control the important things in your life?

3. How often have you felt nervous and stressed?
4. How often have you felt confident about your ability to handle your personal problems?  
(reversed)
5. How often have you felt that things were going your way? (reversed)
6. How often have you found that you could not cope with all the things that you had to do?
7. How often have you been able to control irritations in your life? (reversed)
8. How often have you felt that you were on top of things? (reversed)
9. How often have you been angered because of things that were outside your control?
10. How often have you felt difficulties were piling up so high that you could not overcome them?

***Burnout/Emotional Exhaustion (MBI-GS)***

1. I feel burned out from my work.
2. I feel emotionally drained from work.
3. I feel frustrated by my job.
4. I feel used up at the end of the day.

## References

- Adams, I. T. (2022). *Modeling Officer Perceptions of Body-worn Cameras: A National Survey* (Doctoral dissertation, The University of Utah).
- Alpert, G. P., & Dunham, R. G. (2010). Policy and training recommendations related to police use of CEDs: Overview of findings from a comprehensive national study. *Police quarterly, 13*(3), 235-259.
- Baker, D. B., Marier, C. J., & Cheek, M. (2023). Worried Sick: Perceptions of Low Public Support, Stress, and Somatic Health Problems in Law Enforcement. *Policing: A Journal of Policy and Practice, 17*.
- Band, S. R., & Manuele, C. A. (1987). Stress and police officer performance: An examination of effective coping behavior. *Journal of Police and Criminal Psychology, 3*(3), 30–42.
- Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191–215.
- Bandura, A. (1986). Social foundations of thought and action. *Englewood Cliffs, NJ*.
- Bandura, A. (1997). Self-efficacy: The exercise of control. New York: Freeman.
- Bandura, A. (2006). Guide for constructing self-efficacy scales. In F. Pajares & T. Urdan (Eds.), *Self-efficacy Beliefs of Adolescents* (Vol. 5, pp. 307–337). Information Age Publishing.
- Butler, J. M., Gothe, N., & Petruzzello, S. (2023). An exploratory study on the impact of physical training on police recruits' self-efficacy in handling violent encounters. *Martial Arts Studies, 13*, 61–70.
- Byers, C. (2014, November 15). Crime up after Ferguson and more police needed, top St. Louis area chiefs say. *St. Louis Post-Dispatch*. [https://www.stltoday.com/news/local/crime-and-courts/crime-up-after-ferguson-and-more-police-needed-top-st/article\\_04d9f99f-9a9a-51be-a231-1707a57b50d6.html](https://www.stltoday.com/news/local/crime-and-courts/crime-up-after-ferguson-and-more-police-needed-top-st/article_04d9f99f-9a9a-51be-a231-1707a57b50d6.html)
- Capellan, J. A., Lautenschlager, R., & Silva, J. R. (2020). Deconstructing the Ferguson effect: a multilevel mediation analysis of public scrutiny, de-policing, and crime. *Journal of Crime and Justice, 43*(2), 125–144.
- Chu, D. C., Cretacci, M. A., & Jin, C. (2020). Comparison of Chinese male and female police cadets'

- perceived occupational self-efficacy. *Policing and Society*, 30(9), 1013–1026.
- Compton, M. T., Krishan, S., Broussard, B., Bakeman, R., Fleischmann, M. H., Hankerson-Dyson, D., Husbands, L., Stewart, T., D’Orio, B., & Watson, A. C. (2022). Modeling the effects of Crisis Intervention Team (CIT) training for police officers: How knowledge, attitudes, and self-efficacy drive de-escalation skills and referral decisions. *International Journal of Law and Psychiatry*, 83, 101814.
- Eikenhout, L. M. J., Delahaij, R., & Van Dam, K. (2022). Chronic stressors and burnout in Dutch police officers: Two studies into the complex role of coping self-efficacy. *Frontiers in Psychology*, 13. <https://www.frontiersin.org/articles/10.3389/fpsyg.2022.1054053/pdf>
- Emeriau-Farges, C. V., Deschênes, A. A., & Dussault, M. (2019). Emotional self-efficacy and psychological health of police officers. *Policing: An International Journal*, 42(4), 598-610.
- Feltz, D. L., Short, S. E., & Sullivan, P. J. (2008). *Self-efficacy in Sport*. Human Kinetics.
- Gorner, J., & Dardick, H. (2016). Citing beating of officer, Chicago’s top cop says police are “second-guessing themselves.” *Chicago Tribune*.
- Honicke, T., & Broadbent, J. (2016). The influence of academic self-efficacy on academic performance: A systematic review. *Educational Research Review*, 17, 63–84.
- Israel, T., Harkness, A., Delucio, K., Ledbetter, J. N., & Avellar, T. R. (2014). Evaluation of Police Training on LGBTQ Issues: Knowledge, Interpersonal Apprehension, and Self-Efficacy. *Journal of Police and Criminal Psychology*, 29(2), 57–67.
- Klockars, C. B. (1985). *The idea of police*. Sage Publications.
- Lichtblau, E. (2016, May 11). F.B.I. Director Says 'Viral Video Effect' Blunts Police Work. *New York Times*, p. A15.
- Love, A. M., Railey, K. S., & Jones, C. P. (2022). Examining the sources of police confidence when working with autistic individuals. *Policing: An International Journal*, 45(3), 481-494.
- Love, K., & Singer, M. (1988). Self-efficacy, psychological well-being, job satisfaction and job involvement: A comparison of male and female police officers. *Police Stud.: Int’l Rev. Police Dev.*

- MacDonald, H. (2015, May 29). The New Nationwide Crime Wave. *The Wall Street Journal*.  
<https://www.wsj.com/articles/the-new-nationwide-crime-wave-1432938425>
- MacDonald, H. (2017). *The War on Cops: How the New Attack on Law and Order Makes Everyone Less Safe*. Encounter Books.
- Maguire, E. R., Nix, J., & Campbell, B. A. (2017). A War on Cops? The Effects of Ferguson on the Number of U.S. Police Officers Murdered in the Line of Duty. *Justice Quarterly: JQ / Academy of Criminal Justice Sciences*, 34(5), 739–758.
- Marier, C. J., & Fridell, L. A. (2020). Demonstrations, demoralization, and de-policing. *Criminology & Public Policy*, 19(3), 693–719.
- Marier, C. J., & Moule, R. K. (2018). Feeling Blue: Officer Perceptions of Public Antipathy Predict Police Occupational Norms. *American Journal of Criminal Justice: AJCJ*.  
<https://doi.org/10.1007/s12103-018-9459-1>
- Morgan, S. L., & Pally, J. A. (2016). Ferguson, Gray, and Davis: An analysis of recorded crime incidents and arrests in Baltimore City, March 2010 through December 2015. *A Report Written for the 21st Century Cities Initiative at Johns Hopkins University*.
- Nix, J., & Pickett, J. T. (2017). Third-person perceptions, hostile media effects, and policing: Developing a theoretical framework for assessing the Ferguson effect. *Journal of Criminal Justice*, 51, 24–33.
- Nix, J., & Wolfe, S. E. (2017). The Impact of Negative Publicity on Police Self-legitimacy. *Justice Quarterly: JQ / Academy of Criminal Justice Sciences*, 34(1), 84–108.
- Nix, J., Wolfe, S. E., & Campbell, B. A. (2018). Command-level police officers’ perceptions of the “war on cops” and de-policing. *Justice quarterly*, 35(1), 33-54.
- Norris, J. J. (2023). A Closer Look at the Alleged “War on Cops”: Post-Ferguson Trends in Ideologically-Motivated Homicides of Police Officers, 2008–2021. *Police Quarterly*,  
<https://doi.org/10.1177/10986111231189827>.
- Oyesoji Aremu, A. (2005). A confluence of credentialing, career experience, self-efficacy, emotional intelligence, and motivation on the career commitment of young police in Ibadan, Nigeria. *Policing:*

*An International Journal of Police.* <https://doi.org/10.1108/13639510510628695>

- Panadero, E., Jonsson, A., & Botella, J. (2017). Effects of self-assessment on self-regulated learning and self-efficacy: Four meta-analyses. *Educational Research Review*, 22, 74–98.
- Pyrooz, D. C., Decker, S. H., Wolfe, S. E., & Shjarback, J. A. (2016). Was there a Ferguson Effect on crime rates in large U.S. cities? *Journal of Criminal Justice*, 46, 1–8.
- Ramchunder, Y., & Martins, N. (2014). The role of self-efficacy, emotional intelligence and leadership style as attributes of leadership effectiveness. *SA Journal of Industrial Psychology*, 40(1).  
<https://doi.org/10.4102/sajip.v40i1.1100>
- Ray, J. (2022). Global Progress on Safety, Confidence in Police Stalls. *Gallup*.  
<https://news.gallup.com/poll/403937/global-progress-safety-confidence-police-stalls.aspx>
- Reese, S. (2014, November 27). Police say officers hesitating to use deadly force. *Washington Times*.  
<https://www.washingtontimes.com/news/2014/nov/27/police-say-officers-hesitating-to-use-deadly-force>
- Rosenfeld, R. (2015). Was there a “Ferguson effect” on crime in St. Louis. *The Sentencing Project*, 1–4.
- Sexton, J. (2018, November 29). I Don’t Want to Shoot You, Brother. *ProPublica*.  
<https://features.propublica.org/weirton/police-shooting-lethal-force-cop-fired-west-virginia/>
- Sheeran, P., Maki, A., Montanaro, E., Avishai-Yitshak, A., Bryan, A., Klein, W. M. P., Miles, E., & Rothman, A. J. (2016). The impact of changing attitudes, norms, and self-efficacy on health-related intentions and behavior: A meta-analysis. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association*, 35(11), 1178–1188.
- Sherer, M., Maddux, J. E., Mercandante, B., Prentice-Dunn, S., Jacobs, B., & Rogers, R. W. (1982). The Self-Efficacy Scale: Construction and Validation. *Psychological Reports*, 51(2), 663–671.
- Shjarback, J. A., & Maguire, E. R. (2021). Extending Research on the “War on Cops”: The Effects of Ferguson on Nonfatal Assaults Against U.S. Police Officers. *Crime & Delinquency*, 67(1), 3–26.
- Shjarback, J. A., Pyrooz, D. C., Wolfe, S. E., & Decker, S. H. (2017). De-policing and crime in the wake

- of Ferguson: Racialized changes in the quantity and quality of policing among Missouri police departments. *Journal of Criminal Justice*, 50, 42–52.
- Sierra-Arévalo, M., Nix, J., & Mourtgos, S. M. (2023). The “war on cops,” retaliatory violence, and the murder of George Floyd. *Criminology*.
- Streetman, A. E., Becker, A., Mailey, E. L., & Heinrich, K. M. (2022). Is Self-Efficacy for Exercise Predictive of Leisure-Time Physical Activity among Police Officers? A Pilot Study. *Sustainability: Science Practice and Policy*, 14(19), 12536.
- Stoughton, S. W., Noble, J. J., & Alpert, G. P. (2021). *Evaluating police uses of force*. NYU Press.
- Torres, J. (2020). Predicting law enforcement confidence in going “hands-on”: The impact of martial arts training, UOF self-efficacy, motivation, and apprehensiveness. *Police Practice & Research: An International Journal*, 21(2), 187–203.
- Verardi, V., & Croux, C. (2009). Robust Regression in Stata. *The Stata Journal*, 9(3), 439–453.
- White, M. D. (2020). Ambush Killings of the Police, 1970–2018: A Longitudinal Examination of the “War on Cops” Debate. *Police Quarterly*, 23(4), 451–471.
- Wolfe, S. E., & Nix, J. (2016). The alleged “Ferguson Effect” and police willingness to engage in community partnership. *Law and Human Behavior*, 40(1), 1–10.

Table 1: Descriptive statistics

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>S.D.</b>	<b>Min</b>	<b>Max</b>
Apprehensiveness to Use Force	4,181	2.423	.978	1	5
Perceived Public Support 1	4,162	3.397	1.053	1	5
Perceived Public Support 2	4,157	4.068	.929	1	5
UoF Self-efficacy	4,190	4.404	.564	1	5
Burnout	4,201	2.781	1.193	1	5
Stress	4,271	2.267	.538	1	5
Male	4,311	.861		0	1
White	4,316	.843		0	1
Age	4,332	2.940	1.127	1	6
Experience	4,334	17.601	10.456	0	50
Education	4,322	4.298	1.441	2	7
Day shift	4,398	.666		0	1
Rural	4,398	.355		0	1

Table 2: OLS Regression of Apprehensiveness to Use Force

	(1)	(2)	(3)	(4)	(5)
Perceived Public Support 1	-0.104*** (0.015)	—	-0.090*** (0.015)	0.216 (0.125)	—
Perceived Public Support 2	-0.152*** (0.017)	—	-0.075*** (0.017)	—	0.417*** (0.117)
UoF Self-efficacy	—	-0.520*** (0.029)	-0.457*** (0.029)	-0.256* (0.100)	-0.019 (0.107)
Interaction: UoF Self-efficacy X Public Support 1	—	—	—	-0.073** (0.028)	—
Interaction: UoF Self-efficacy X Public Support 2	—	—	—	—	-0.121*** (0.027)
Burnout	0.171*** (0.015)	0.196*** (0.014)	0.170*** (0.015)	0.181*** (0.014)	0.171*** (0.015)
Stress	0.307*** (0.032)	0.225*** (0.033)	0.222*** (0.033)	0.209*** (0.033)	0.229*** (0.033)
Male	0.012 (0.041)	0.035 (0.038)	0.048 (0.039)	0.052 (0.038)	0.038 (0.038)
White	0.188*** (0.038)	0.169*** (0.037)	0.180*** (0.037)	0.171*** (0.036)	0.179*** (0.036)
Age	0.078*** (0.020)	0.073*** (0.020)	0.070*** (0.020)	0.072*** (0.019)	0.070*** (0.020)
Experience	-0.005* (0.002)	-0.003 (0.002)	-0.002 (0.002)	-0.003 (0.002)	-0.002 (0.002)
Education	0.022* (0.010)	0.018 (0.010)	0.018 (0.009)	0.021* (0.009)	0.016 (0.009)
Day shift	0.003 (0.030)	-0.022 (0.029)	-0.005 (0.029)	-0.004 (0.029)	-0.014 (0.029)
Rural	0.006 (0.028)	-0.016 (0.027)	-0.016 (0.027)	-0.028 (0.027)	-0.002 (0.027)
Intercept	1.810*** (0.133)	3.266*** (0.175)	3.645*** (0.186)	2.514*** (0.458)	1.597*** (0.472)
N	4,086	4,127	4,085	4,106	4,101
R2	0.204	0.244	0.261	0.258	0.259

Notes: Standard errors in the parentheses. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Figure 1: Linear prediction of Apprehensiveness to Use Force

