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# A COGNITIVE TRAINING TO IMPROVE POLICE DECISION-MAKING

A cognitive training for police officers in Chicago improved officer decision-making, reducing use of force incidents, discretionary arrests, and racial disparities in arrest rates while additionally reducing officer injuries.

Featuring an evaluation by Oeindrila Dube, Sandy Jo MacArthur, and Anuj K. Shah.

Adverse policing practices such as excessive use of force and unnecessary arrests, can be harmful to individuals and community members, and erode the public's trust in police. In the United States, these practices have generated discontent and manifested in widespread protests across the country. These practices have also proven costly for police departments, as they often result in lawsuits and settlements.

Photo credit: Anthony Berglund

There are two common perspectives on the drivers of adverse policing outcomes: one focusing on "problem" officers who may ignore official procedures and act on implicit or explicit biases, and the other emphasizing poor policies that allow the use of forceful tactics with limited oversight. However, these perspectives can overlook the cognitively demanding nature of police work, which requires officers to make quick, complex decisions under stressful conditions. This can lead officers to rely on default assumptions instead of engaging in deliberative thinking. Researchers Oeindrila Dube (University of Chicago; J-PAL), Sandy Jo MacArthur (Los Angeles Police Department (Retired)) and Anuj K. Shah (Princeton University) partnered with the Chicago Police Department (CPD) to develop a new cognitive training program for police, called Situational Decision-Making, or Sit-D. Together, they then conducted a randomized evaluation to examine Sit-D's impact on officer decision-making and adverse policing outcomes, such as use of force and discretionary arrests.

## KEY RESULTS

*The evaluation uses two data sources, endline assessments and simulator scenarios from a lab setting, and administrative data from the field.*

**In the endline assessment, Sit-D officers processed ambiguous policing scenes more thoroughly and efficiently while considering a greater variety of perspectives.**

**The training also improved officers' threat assessment and communication during simulations.** Officers were more responsive to changes in scenarios: as situations became less threatening, they lowered their intended use of force. They communicated more with subjects and deployed force more appropriately, based on the situation.

**In the field, trained officers reduced their use of force by 23 percent.** They also made fewer discretionary arrests and arrests of Black civilians. These effects are strongest in the first four months following the training, suggesting that refresher trainings may be beneficial to reinforce program impacts over time.

**Trained officers did not reduce their overall levels of activity and were less likely to take days off for injuries.** The cost saved from fewer days off for injury alone would outweigh the cost of the program.

# EVALUATION

Adverse policing actions, such as excessive use of force and unnecessary arrests, harm citizens, especially in heavily policed communities. Researchers partnered with the CPD to evaluate the impact of a new cognitive police training, Situational Decision-Making, or Sit-D, on officers' ability to consider alternative interpretations of ambiguous scenarios and their tendency to use force and make discretionary arrests.

Researchers designed the Sit-D training program in collaboration with the CPD, drawing on key concepts from behavioral science and the psychology of decision-making. During the training, officers were encouraged to manage their emotional and physiological response to policing situations, recognize common cognitive biases (such as catastrophizing and overgeneralizing), intentionally process information, and develop multiple perspectives on a given situation. The training consisted of four four-hour sessions, spread over several weeks, allowing officers to apply the lessons in the field and discuss their experiences in subsequent sessions.

In addition to classroom instruction, Sit-D officers participated in training simulations with life-size subjects projected on screens controlled by a trainer operating the simulator. The officers debriefed with trainers after each simulation to identify cognitive biases that may have impacted their decision-making and developed strategies to mitigate them.

Officers from all of Chicago's 22 districts and specialized units that had been on the job for two or more years and completed department-required courses were eligible for the evaluation. Researchers grouped the 2,070 eligible officers by their policing unit and shift time and randomly assigned 1,059 officers to the Sit-D training and 1,011 officers to the comparison group. Officers in the comparison group took a varied combination of over 100 different other trainings available from the CPD.

Four months after the training, researchers assessed officers' decision-making and ability to consider multiple interpretations of ambiguous policing scenarios and their responses to potentially threatening situations using lab assessments, which included a series of photo- and video-based tasks and interactive simulations. In addition, the researchers used police administrative data to measure officers' use of force, discretionary arrests, injuries, and overall policing activity in the field.

**Figure 1. Measuring outcomes using lab assessments and field administrative data**

# RESULTS

**Officers in the Sit-D group processed ambiguous policing scenes more efficiently and considered a greater variety of perspectives.** Sit-D officers generated a more diverse set of interpretations during the Driver's Actions Task than officers in the comparison group. They were more likely to suggest that the subject in the scenario might need assistance. In the Pictures Task, Sit-D officers recalled more details supporting interpretations other than the one they selected. These responses suggest that officers absorbed more information and explored a wider range of alternative interpretations before arriving to their conclusion. The Sit-D officers also performed this task faster than officers in the comparison group, on average.

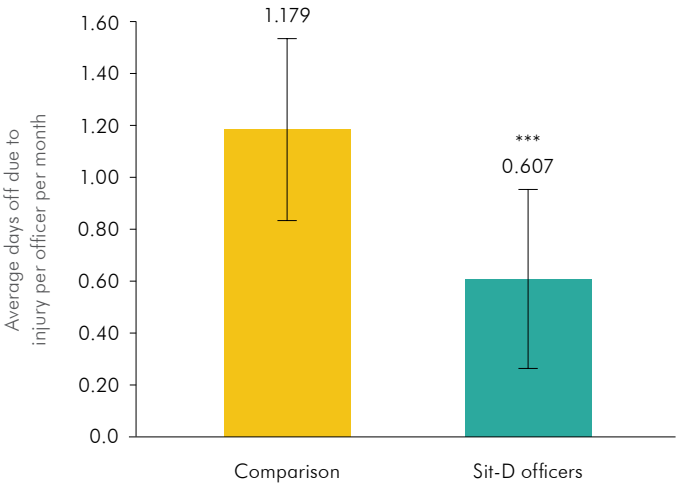
**The training improved officers' threat assessment and communication in simulated scenarios.** While analyzing videos where use of force might be necessary, Sit-D officers responded more to changes in subject behavior than comparison group officers: when subjects stopped posing a deadly threat, trained officers lowered their threat assessment and their planned use of force. They also identified more appropriate responses to these scenarios. During simulations, Sit-D officers communicated more with subjects and calibrated their actions more closely to the situation's threat level. Relative to comparison officers, Sit-D officers were more likely to fire on subjects when they posed a direct threat, without increasing the rates at which they fired in general. Thus, the training led to improved accuracy in the simulations.

**In the field, Sit-D officers used less force and made fewer unnecessary arrests.** On average, comparison group officers used nonlethal force 38 times for every 1,000 officers each month, while Sit-D officers used nonlethal force at a rate of about 29 times per 1,000 officers per month (a 23 percent reduction). Similarly, comparison group officers made about 37 discretionary arrests (e.g., arrests for disobeying police or disorderly conduct) for every 1,000 officers each month, while Sit-D officers made about 28.4 discretionary arrests (a 23 percent reduction). These effects diminished over the course of a year following the training, suggesting refresher courses may be necessary.

**The training also reduced how often officers arrested Black individuals, without changing how often they arrested individuals of other races, suggesting the training may have altered how officers act on implicit biases.** While the Sit-D training did not focus on racial bias, trained officers made 9 fewer discretionary arrests of Black individuals per 1,000 officers per month, relative to the comparison group average of 31 arrests (a 28 percent reduction).

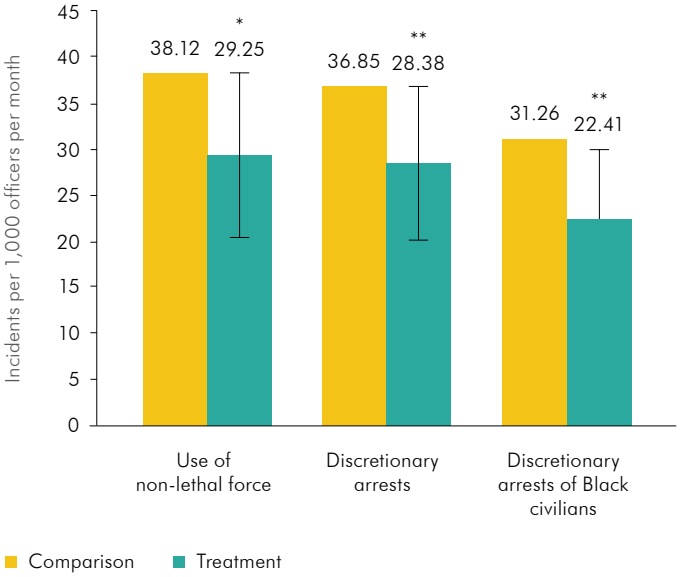
**Sit-D officers maintained similar activity levels to comparison officers but were less likely to be injured on duty.** Sit-D officers averaged 0.57 fewer injury-related absence days per month, compared to 1.2 days for the comparison group, a nearly 50 percent reduction.

### Figure 2. Impact of Sit-D training on officers' days off due to injury




Note: Error bars represent 95% confidence intervals. Statistically significant difference relative to the comparison group is noted at the 1% (***), 5% (**), or 10% (*) level.

### Figure 3. Impact of Sit-D training on use of force and arrests




Note: Error bars represent 95% confidence intervals. Statistically significant difference relative to the comparison group is noted at the 1% (***), 5% (**), or 10% (*) level.

# POLICY LESSONS

**Training officers to navigate the cognitive challenges of police work can help mitigate adverse policing outcomes and racial disparities in policing.** In Chicago, a behaviorally informed decision-making training improved police officers' threat assessment, communication, and ability to process ambiguous scenarios and reduced their use of nonlethal force and discretionary arrests. These results build on a broader body of experimental and quasi-experimental evidence showing that programs fostering deliberate thinking in sensitive situations, rather than acting on biases or default assumptions, can reduce criminal, violent, and antisocial behaviors. In addition, the training helped to close the gap in arrest rates between Black civilians and civilians of other races, suggesting that cognitive trainings may have the capacity to reshape how officers respond to race during policing situations.

**The cost saved in fewer officer injuries alone outweigh the cost of the program.** The reductions in adverse policing outcomes went hand in hand with improvements in officer safety. The Sit-D program was similar in cost to other policing training programs at $807–$864 per officer. While it is challenging to measure the "nonmarket" benefits, such as reduction in costs associated with use of force incidents and discretionary arrests, the cost saved in fewer days off taken for officer injuries over four months alone was estimated at $1,057 per officer, enough to offset the program's cost.

Photo credit: Anthony Berglund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# POLICY INFLUENCE

In 2024, Ohio's Blue Ribbon Task Force recommended the statewide incorporation of Sit-D into law enforcement training protocols. This recommendation subsequently received unanimous approval from the Ohio Peace Officer Training Commission. In 2025, the Office of the Independent Monitor for the city of Madison, Wisconsin, recommended Sit-D training for all officers in the Madison police department. Additionally, Sit-D team is in discussion with several other police departments across the Midwest about potentially implementing the training in 2025 and 2026.


FEATURED EVALUATION(S): Dube, Oeindrila, Sandy Jo MacArthur, and Anuj K. Shah. 2025. "A Cognitive View of Policing." *Quarterly Journal of Economics* 140, no. 1: 745–791. https://doi.org/10.1093/qje/qjae039.

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