St Louis County Police Department

2019 Implicit Bias Training Evaluation

Tammy Rinehart Kochel, PhD

and

Rachel Berner, M.A.

Southern Illinois University Carbondale

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Synthesis of Results:

The results are positive showing significant improvement across all 5 of the training objectives. The areas showing the highest percent improvement are objectives 1) Understand what is intrinsic bias and 2) Recognize positive and negative bias. The goal of the training was to improve knowledge and application of that knowledge. Based on the available survey data, the results show this was accomplished.

Description of the Training

St. Louis County Police Department (SLCPD) reported that 912 police personnel completed the 2019 1-hour online implicit bias training titled, "Dworak Communication and Intrinsic Bias." Officers were provided online access to the training on January 1, 2019 through June 30, 2019 and were asked to complete it independently during that timeframe. The course incorporated topics such as observation skills, types of distance (e.g., intimate, personal, social, and public), nonverbal cues, orientation, empathy as a value and tool—including empathic language, the meaning and role of intrinsic bias in cognitive processes and decision making, types of intrinsic biases such as confirmation bias, outcomes of bias, mindful versus emotional decision-making with a focus on emotional intelligence, and respectful treatment. The course was designed to improve knowledge and skills that can be applied during officers' encounters with citizens. The training had five stated objectives:

1. Understand what is intrinsic bias
2. Recognize positive and negative bias
3. Understand how bias affects decision-making
4. Understand how empathy can be used to handle bias
5. Improve the capacity to apply empathy during encounters with the public

Evaluation Strategy

The evaluator reviewed the training objectives and previewed the training and then designed a pre- and post- survey with the same 15 core questions designed to measure change on the five objectives of the training. The questions were designed for officers to self-assess their own capacity to perform specific actions, based on recognition and understanding of intrinsic bias concepts, as well as self-report their values about intrinsic bias concepts. Web-based surveys were used because officers have extensive prior experience completing online surveys of this nature, and this is the preferred approach of the department. Officers were asked to provide their real or a made-up POST ID in order to link pre- and post- survey responses of individuals, but also honor anonymity. Table 1 displays the specific survey questions and what each is designed to measure.

Table 1. Training Evaluation Survey Questions with Objectives

Survey Question	Measures	Relevant Objective
(Q1-10) In your opinion, what is your current capacity to (1=No capacity-> 5=Excellent capacity):		
1. Explain to someone what intrinsic bias is	Capacity	1
2. Read other's emotions and respond appropriately	Capacity	5
3. Articulate my own 'good' and 'bad' intrinsic biases	Capacity	2
4. Use empathetic questions and statements to reduce conflict /misunderstanding during a citizen encounter	Capacity	5
5. Adjust to account for how confirmation bias can impact my decision-making process	Capacity	3
6. Integrate knowledge about intrinsic bias into my situational awareness during a citizen encounter	Capacity	3
7. Consciously consider how my prior experiences, cultural traditions, and heritage are related to my interpretation of a situation	Capacity	1
8. Recognize when my preconceived opinions about another social group have the potential to influence my decisions	Capacity	3
9. Recognize how my words and actions help form the impression others have of me during encounters with the public	Capacity	4
10. Use visualization strategies to address intrinsic bias	Capacity	5
(Q11-15) Please report your level of agreement/disagreement with the following statements (1=Strongly disagree-> 4=Strongly agree):		
11. I believe empathy will help me to be a better police officer	Value	5
12. I see value in consciously challenging my current beliefs and why I hold them	Value	2
13. I think it is important to deconstruct my decisions and how I made them	Value	3
14. The recipient of communication will be the one who assigns meaning to what is said/conveyed	Value	4
15. My orientation/perspective entering into an encounter with the public affects my interpretation of the situation and the information I use to define the situation	Value	3

Using language provided by the evaluator after being approved by the SIUC human subjects review committee, St Louis County training academy personnel sent emails inviting officers to take the pretest before viewing the training and the posttest upon training completion. Training academy personnel sent one initial and five follow up email reminders on a monthly basis during the training period.

Evaluation Findings

Survey Response Rate

There were 112 completions of the pretest and 107 completions of the posttest. However, there were some IDs that had multiple completions of the pretest and/or posttest. It is reasonable that within a six-month timeframe some officers may have not been able to recall whether or not they had completed

the survey. Officers were also told they could use a fictitious ID. Because of this, some individuals may have chosen an ID that was already used by another officer. An ID was sometimes only present in the pretest or posttest data, not both. Duplicate surveys were removed (based on ID) and pre/post test surveys for the same ID which were taken within moments of each other (insufficient time to view the training) were excluded. After adjusting for these issues, 165 people took at least one of the surveys. Specifically, 54 individuals took both a pretest and a posttest; 58 individuals only completed the pretest; and 53 people only completed the posttest. The overall response rate (those who completed at least one survey) is 18%. The response rate for those who completed both surveys is 6%. This response rate is lower than ideal and can affect how the findings may be generalized to all who completed the training.

Table 2 describes the demographic characteristics, gender, race, and rank, of all trainees relative to survey respondents. We note that though there were 912 trainees in total, only 884 had corresponding demographic information. The demographics of trainees in table two reflect those with demographic information. Survey respondents are shown in three categories, all respondents, respondents who answered both the pretest and the post test, and respondents who only answered either the pretest or the post test. T-tests show there are no significant differences by gender, race, or rank comparing the trainees to each of the groups of respondents (α=.05). We do note non-significant differences among the respondents who completed both surveys, with a trend toward higher ranking individuals completing both surveys and more males. However, we did not weight the data, as none of the differences were statistically significantly different. It would appear that survey respondents are representative of the population of trainees, as reflected in the demographics.

Table 2. Demographics:

	Trainees n=884	All Respondents n=165	Answered Both Surveys n=54	Answered One Survey n=111
Male	84%	90%	93%	87%
Race				
White	84%	84%	88%	79%
African American	10%	9%	8%	9%
Other	6%	8%	4%	11%
Rank				
Officer	79%	74%	69%	80%
Sergeant	12%	16%	20%	12%
Lt or Above	8%	10%	11%	9%

Self-Assessment Prior to Competing the Training

The pretest scores presented in table 3 provide the average scores for all trainees that took the pretest prior to taking the training. Before taking the training, trainees in general expressed “some” to “good” capacity in regard to the training objectives. They were most auspicious in their belief that they could read others’ emotions, be empathetic in conflict, and recognize how the words used generate an impression (See Q2, 4, 9). Respondents, on average, reported “good” capacity in those areas at baseline. They held less support for thinking that there was value in challenging or deconstructing their currently held beliefs (See Q12, 13, 15).

Table 3. Pretest/posttest Descriptive Statistics and Kruskal Wallis H

Q1-10: Capacity, Q11-15: Values	Pretest Mean (St Dev) N=105	Posttest Mean (St Dev) N=100	Percent Change in Mean	Kruskal-Wallis H Score	p-value
1. Capacity: Explain to someone what intrinsic bias is	3.32 (1.042)	3.98 (.780)	19.87%	23.470	<.001***
2. Capacity: Read other's emotions and respond appropriately	4.18 (.652)	4.26 (.652)	1.91%	0.984	0.321
3. Capacity: Articulate my own 'good' and 'bad' intrinsic biases	3.67 (.884)	3.98 (.816)	8.44%	7.522	0.006**
4. Capacity: Use empathetic questions and statements to reduce conflict /misunderstanding during a citizen encounter	4.12 (.732)	4.26 (.694)	3.40%	2.074	0.150
5. Capacity: Adjust to account for how confirmation bias can impact my decision-making process	3.73 (.831)	4.08 (.756)	9.38%	10.064	0.002**
6. Capacity: Integrate knowledge about intrinsic bias into my situational awareness during a citizen encounter	3.60 (.894)	4.02 (.779)	11.67%	13.269	<.001 ***
7. Capacity: Consciously consider how my prior experiences, cultural traditions, and heritage are related to my interpretation of a situation	3.94 (.756)	4.15 (.759)	5.33%	4.223	0.040*
8. Capacity: Recognize when my preconceived opinions about another social group have the potential to influence my decisions	3.92 (.818)	4.06 (.834)	3.57%	1.964	0.161
9. Capacity: Recognize how my words and actions help form the impression others have of me during encounters with the public	4.10 (.680)	4.25 (.665)	3.66%	3.065	0.080
10. Capacity: Use visualization strategies to address intrinsic bias	3.42 (1.003)	3.89 (.827)	13.47%	13.650	<.001***
11.I believe empathy will help me to be a better police officer	3.49 (.588)	3.56 (.537)	2.01%	0.566	0.452
12.I see value in consciously challenging my current beliefs and why I hold them	3.11 (.753)	3.19 (.813)	2.57%	1.003	0.317
13.I think it is important to deconstruct my decisions and how I made them	3.13 (.798)	3.36 (.696)	7.35%	4.283	0.038*
14.The recipient of communication will be the one who assigns meaning to what is said/conveyed	3.22 (.702)	3.43 (.571)	6.52%	4.479	0.034*
15.My orientation/perspective entering into an encounter with the public affects my interpretation of the situation and the information I use to define the situation	3.06 (.752)	3.27 (.753)	6.86%	4.904	0.027*

*NOTE: *p<.05, **p<.01, ***p<.001*

Differences by Demographic Categories Prior to the Training

We tested for differences at baseline across trainees by gender, race, and rank in their self-assessed capacity and values related to implicit bias. Results for statistically significant differences are provided in table 4. Prior to taking the training, trainees differed across 4 of the 15 items (Q1, 9, 14, 15). We found the most differences by rank (across all 4 items), something that may be expected since as officers gain more experience on the job, they should improve their skills and gain insight and perspective into interactions with the public. All of these things tend to correspond to increases in rank and so we would expect the highest rank to show the highest capacity, and perhaps also more positive values. In fact, the highest rank category—Lieutenants and above—score highest at baseline on 3 of the 4 items with observed group differences. The exception is Q15, where Lieutenants are second to Sergeants. This item states "My orientation/perspective entering into an encounter with the public affects my interpretation of the situation and the information I use to define the situation." An explanation may be that respondents ranking Lieutenant and above may recognize this as the natural course of human behavior, but may also perceive that they have overcome this subjectivity and can be fully objective during those situations.

We also found two differences by race. At baseline, African American officers felt the greatest capacity to explain what is intrinsic bias (Q1), followed by white officers, and then other raced officers. However, just the opposite is the case for Q9, whereby white officers acknowledged that his/her words and actions help to create the impression of members of the public, during encounters, while African American scored slightly lower, and other raced officers scored much lower on the capacity to understand this.

Table 4: Differences at pretest by Demographic Characteristics

	Race				**Rank**			
Item for Which Differences Found	Kruskal Wallis H	White (n=93)	Black (n=9)	Other (n=9)	Kruskal Wallis H	Officer (n=79)	Sgt (n=15)	Lt & above (n= 12)
Pretest Q1: Capacity to explain to someone what is intrinsic bias.	6.076*	3.27	4.11	3.00	5.968*	3.22	3.47	4.00
Pretest Q9: Capacity to recognize how words & actions help form impression.	5.888*	4.15	4.00	3.50	13.226***	4.11	3.73	4.58
Pretest Q14: The communication recipient assigns value & meaning to what said.					6.256*	3.13	3.47	3.58
Pretest Q15: My orientation affects my interpretation of situation.					6.122*	2.96	3.47	3.25

*NOTE: *p<.05, **p<.01, ***p<.001*

Assessing Change in Capacity and Value Across Police Trainees Pre- vs Post- Training

Impact of the training was evaluated by comparing pretest scores to posttest scores. We compared this for the groups: all individuals who submitted a pretest versus all individuals who submitted a posttest

(See table 3), but also examined within person change among those who submitted both surveys (See table 5). The results are similar, showing positive changes across most items measured. In table 3, the Kruskal Wallis H test was used to compare ordinal responses across groups. These difference between pre and post test for each question are also shown below in figure 1. We see significant differences across 60% of items (9 of 15). Each of these 9 items (shaded on table 3 and with red arrows below) showed improvement, on average, following the training. Questions 2,4,8,9,11, and 12 were not found to be significantly different, although the scores are higher at post test, just not significantly so. Figures 1 and 2shows the results graphically.

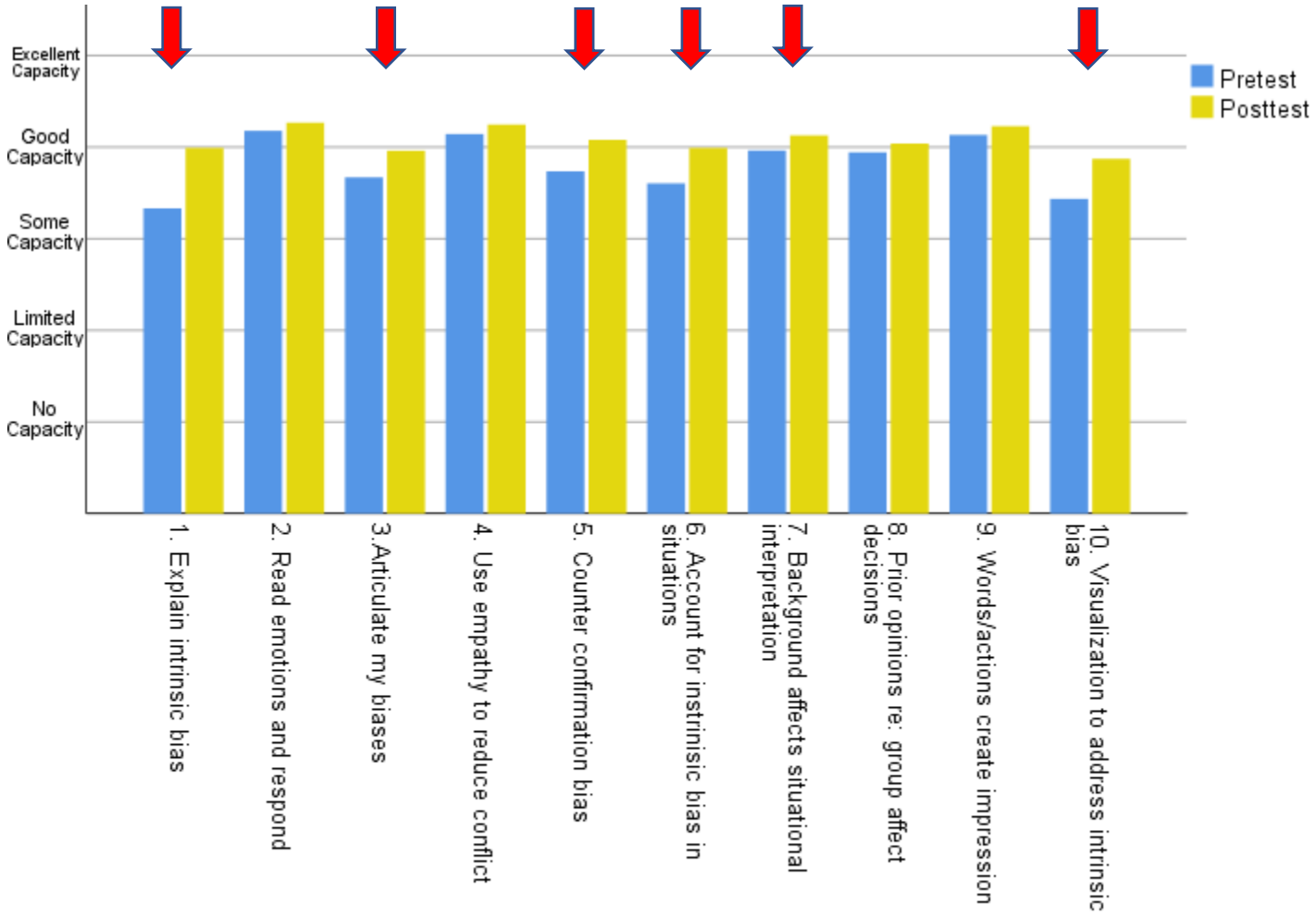


Figure 1. Pretest vs Posttest Scores on Capacity

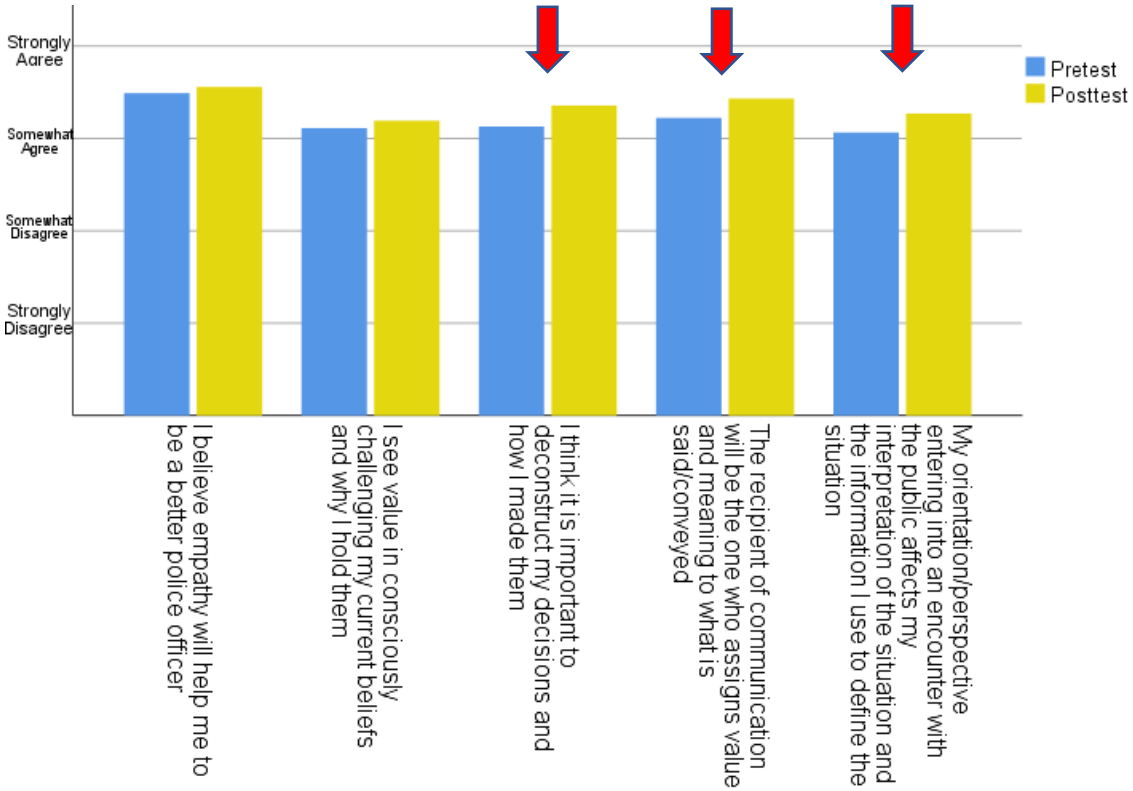


Figure 2. Pretest versus Posttest Scores on Value Questions

Table 5 compares specific trainees' pre and post test responses among the 54 police personnel that completed both the pretest and the posttest (using a paired sample t-test). This test examines whether the average difference between trainees' scores when they took the pretest versus the posttest is different from zero. Only 3 items did not show a significant difference (Q2, 11, 15). Twelve of the fifteen questions were found to have significant differences. It can be a more powerful test of change when a specific person's improvement is examined, versus comparing the entire pretest group to the posttest group. The size of the improvements are small but statistically significant. The results suggest that after taking the the implicit bias training, trainees gained capacity in regard to implicit bias and they were more willing to challenge their own beliefs and view the exchange with citizens as one whereby the citizen assigns meaning to what is said.

Table 5. Testing Differences at the Individual Level (n=54 who took both pretest and posttest)

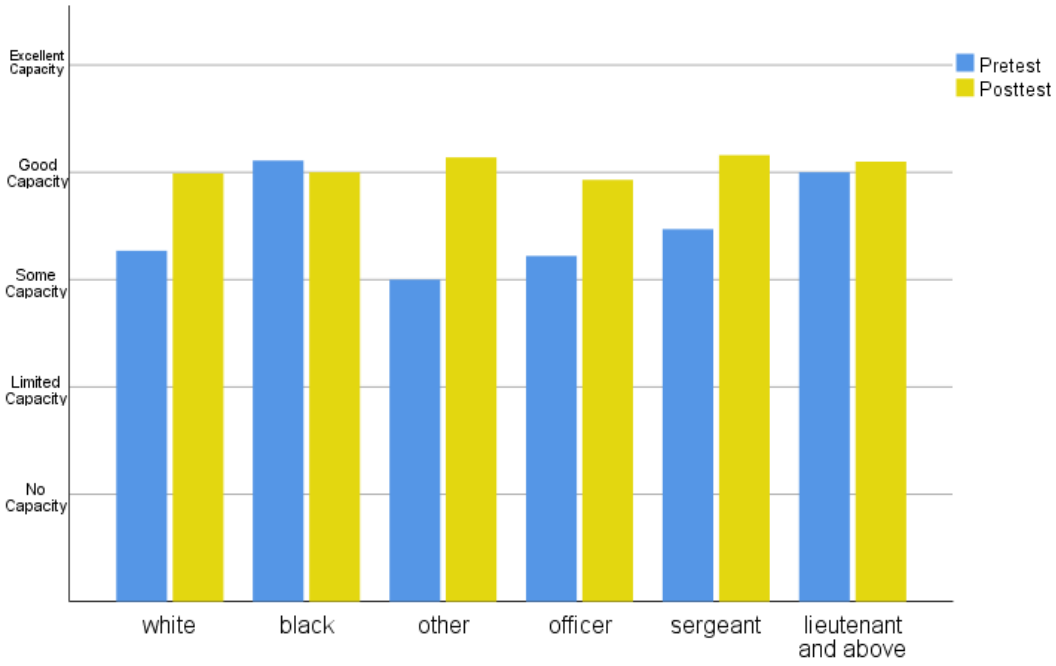
Q1-10: Capacity, Q11-15: Values	Pretest mean (Std Dev) n=54	Posttest mean (Std Dev) n=54	Percent Change	Mean Difference (s.e.)	t
1.Explain to someone what intrinsic bias is	3.40 (1.098)	4.21 (.689)	23.9%	0.811 (.124)	6.563***
2.Read other's emotions and respond appropriately	4.25 (.556)	4.40 (.569)	3.6%	0.154 (.084)	1.829
3.Articulate my own 'good' and 'bad' intrinsic biases	3.63 (.977)	4.13 (.778)	13.8%	0.500 (.120)	4.152***
4.Use empathetic questions and statements to reduce conflict /misunderstanding during a citizen encounter	4.19 (.709)	4.42 (.602)	5.4%	0.226 (.088)	2.576**
5.Adjust, to account for how confirmation bias can impact my decision-making process	3.74 (.880)	4.28 (.662)	14.6%	0.547 (.139)	3.941***
6.Integrate knowledge about intrinsic bias into my situational awareness during a citizen encounter	3.60 (.987)	4.11 (.754)	14.1%	0.509 (.122)	4.164***
7.Consciously consider how my prior experiences, cultural traditions, and heritage are related to my interpretation of a situation	4.02 (.754)	4.35 (.623)	8.1%	0.327 (.098)	3.338**
8.Recognize when my preconceived opinions about another social group have the potential to influence my decisions	3.96 (.808)	4.30 (.607)	8.6%	0.340 (.111)	3.063**
9.Recognize how my words and actions help form the impression others have of me during encounters with the public	4.21 (.717)	4.43 (.572)	5.4%	0.226 (.096)	2.364*
10.Use visualization strategies to address intrinsic bias	3.42 (1.016)	4.00 (.863)	16.9%	0.577 (.144)	4.017***
11.I believe empathy will help me to be a better police officer	3.50 (.607)	3.63 (.560)	3.7%	0.130 (.070)	1.847
12.I see value in consciously challenging my current beliefs and why I hold them	3.07 (.773)	3.30 (.743)	7.2%	0.222 (.078)	2.855**
13.I think it is important to deconstruct my decisions and how I made them	3.20 (.855)	3.48 (.606)	8.7%	0.278 (.081)	3.424***
14.The recipient of communication will be the one who assigns meaning to what is said/conveyed	3.33 (.700)	3.52 (.504)	5.6%	0.185 (.092)	2.016*
15.My orientation/perspective entering into an encounter with the public affects my interpretation of the situation and the information I use to define the situation	3.09 (.784)	3.33 (.673)	7.8%	0.241 (.124)	1.944

*NOTE: *p<.05, **p<.01, ***p<.001*

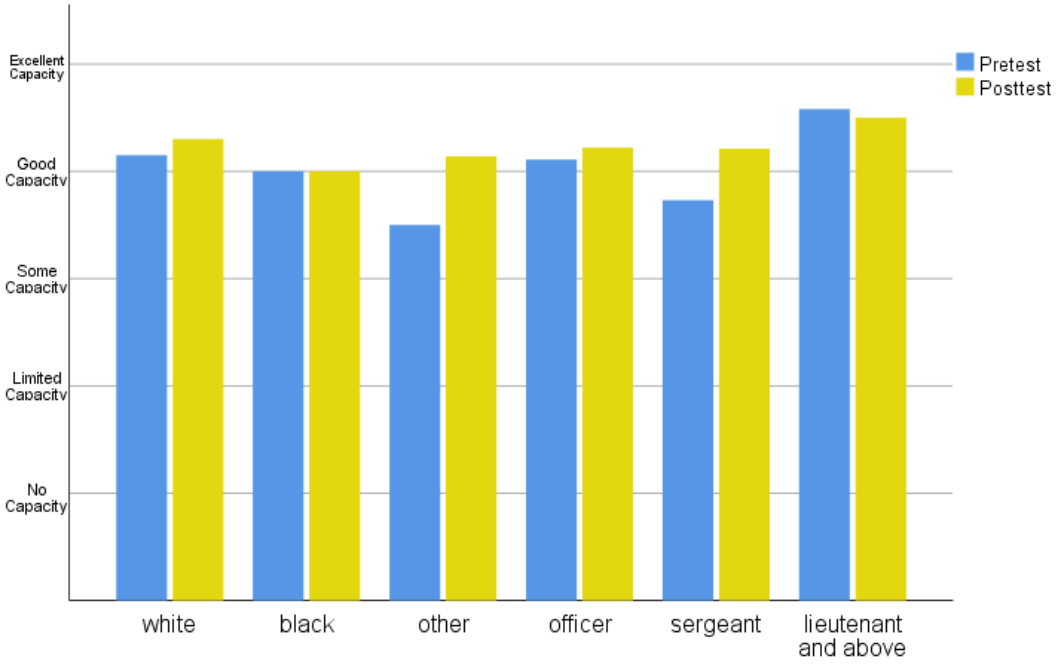
Individual characteristics as Predictors of Change

Given that we found differences across groups (by race and rank) at the pretest (Table 4), we investigated to see if we continue to observe differences at posttest. We found no significant differences at posttest across the groups. We investigated to assess whether this outcome was due to the low group at the pretest improving enough to be comparable to the other groups. Figure 3 shows the group differences in the pretest and posttest. Results show that the group scoring low does tend to increase between the pretest and the post test (e.g., Q1, white, other race, officers and sergeants' scores increased; Q9 other raced and sergeants' scores increased; Q14 and Q15, officers' scores increased). The group that was low at pretest catches up such that it is no longer significantly different.

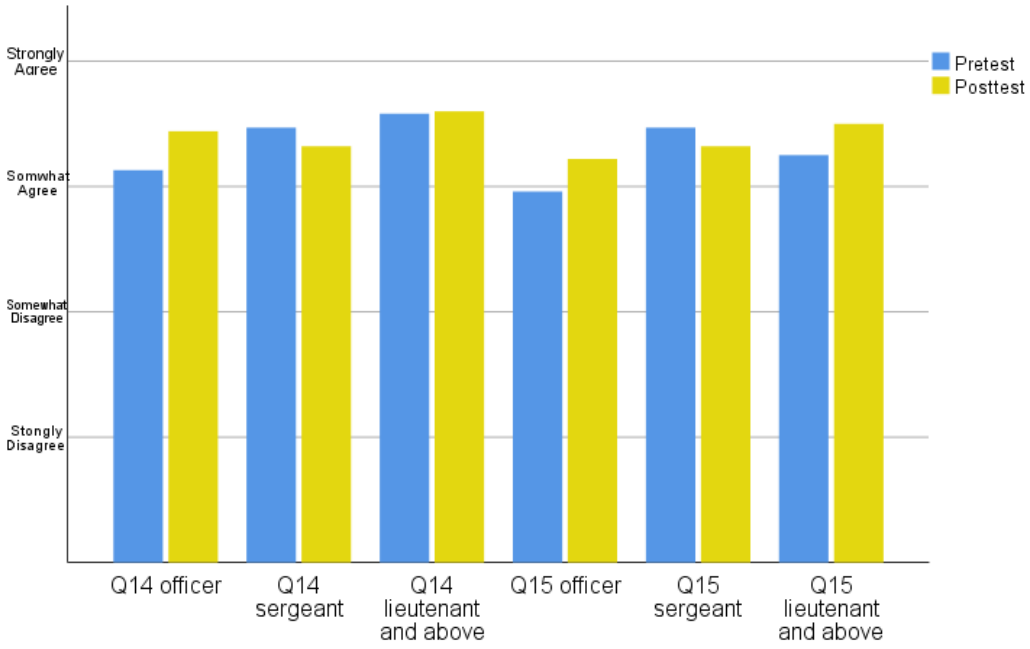
Q1 (Explain intrinsic bias): Group Pre and Post test Means



Q9 (Words/Actions make impression): Group Pre and Post test Means



Q14 (Recipient assigns meaning) & 15 (I bring perspective to define/interpret situation): Group Pre and Post test Means



Conclusions

The evaluation results for this implicit bias training are holistically favorable, with significantly higher scores post test across all 5 training objectives. The within-trainee assessment (comparing the individual person's pretest to that person's posttest) showed the strongest improvement, with all objectives showing at least a 5% average improvement across the indicators for each objective. The lowest average improvement was for objective 4: Understand how empathy can be used to handle bias with a 5.5% average increase. However, one of the indicators for objective 4 was the highest score at baseline: "Recognize how my words and actions help form the Impression others have of me during encounters with the public", making improvement difficult (if unnecessary). The objective with the least consistent positive findings was objective 5: Improve the capacity to apply empathy during encounters with the public. Some of the indicators showed a positive but not significant trend. However, this also was in part due to the relatively high scores at baseline on two of the items used to measure this objective. The areas showing the highest percent improvement are objectives 1) Understand what is intrinsic bias, with a 16% increase on average, and 2) Recognize positive and negative bias, with a 17% increase, on average. Additionally, it was compelling to see that all group differences (e.g., by race and by rank) dissipated by posttest because low scoring groups increased their scores at the posttest. The goal of the training was to improve knowledge and application of that knowledge. Based on the available survey data, the results show this was accomplished.