

# Officer Diversity May Reduce Black Americans' Fear of the Police

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## **Abstract:**

Would police racial and gender diversification reduce Black Americans' fear of the police? The theory of representative bureaucracy indicates that it might. We tested the effects of officer diversity in two experiments embedded in a national survey that oversampled Black Americans, producing several findings. First, in early 2022, nearly two years after George Floyd's killing, most Black Americans remained afraid of police mistreatment. Second, in a conjoint experiment where respondents were presented with 11,000 officer profiles, Black Americans were less afraid when the officers were non-White (Black or Hispanic/Latino) instead of White and were female instead of male. Third, in a separate experiment with pictured police teams, Black Americans were less afraid of being mistreated by non-White and female officers. Fourth, experimental evidence emerged that body-worn cameras (BWC) reduced fear among both Black and non-Black respondents. These findings support calls to diversify police agencies and to require officers to wear and notify civilians of BWC.

**Keywords:** Policing, fear, representative bureaucracy; diversification, body-worn cameras

## 1. INTRODUCTION

A hidden cost of being Black in the United States is living in fear of the police (Dingle, 2022; Graham et al., 2020). Compared to other racial and ethnic groups, Black Americans report the most experience with police mistreatment and the most fear of being mistreated in the future (Pickett et al., 2022). The prevalence of police-related fear is high among Black Americans (Graham et al., 2020; Gregory & Edmonds, 2023)—the majority are afraid of being hurt by officers (Pickett et al., 2022), with some even saying that police violence is their “number one fear in life” (Smith Lee & Robinson, 2019, p. 156). Most also worry about the police hurting their family members and friends. This fear is not limited to specific subgroups of Black Americans. It is ubiquitous in Black America, being as prevalent and intense among wealthy Black civilians as among the poor, among Black women as among Black men (Pickett et al., 2022). In fact, recent evidence indicates that Black Americans are more afraid of the police than of crime, and that nearly half of Black Americans would rather be a victim of a serious crime (e.g., robbery) than have unsolicited contact with officers (Pickett et al., 2022).

Police-related fear is socially and psychologically harmful (Alang et al., 2021; DeVlyder et al., 2017; Pickett et al., 2022). It can lead Black Americans to avoid the police, to refrain from reporting crimes, to act nervously (and suspiciously) in encounters with officers, and even to withdraw from public life altogether (Fader, 2021; Holmes & Smith, 2008; Pickett et al., 2022). Police-related fear makes interactions with officers terrifying for Black Americans, increasing their risk of developing post-traumatic stress disorder (Lewis & Wu, 2021; Smith Lee & Robinson, 2019). Because of elevated fear, aggressive policing and instances of police violence are debilitating even for Black Americans not directly involved, harming their mental health and

worsening their school and work performance (Ang, 2021; Del Toro et al., 2019; Del Toro et al., 2022; Fine et al., 2022; Gottlieb & Wilson, 2019; Hawkins, 2022; Legewie & Fagan, 2019).

Black Americans' fear of the police is thus a racially disparate health crisis, and reducing it a policy priority (Graham et al., 2020; Pickett et al., 2022). Various reforms designed to improve how officers treat civilians and decrease racial bias in policing have been implemented and empirically evaluated (Lum et al., 2020; Peyton et al., 2019; Weisburd et al., 2022). Chief among them is police diversification—hiring more minority and female officers (Ba et al., 2021; Peyton et al., 2022). American policing is dominated by White men, who constitute the modal officer, and who are often overrepresented in police agencies relative to the communities they serve (Ba et al., 2022; Morabito & Shelley, 2015). For decades, most Black Americans have wanted to change this (Weitzer & Tuch, 2006). However, the evidence about how police racial and gender diversification affects officer behavior has been mixed (Ba et al., 2021; Headley & Wright, 2020; Hoekstra & Sloan, 2022; Ochs, 2011; Ridgeway, 2020; Shjarback et al., 2017).

Even if diversifying the police had no effects on officer behavior, however, it would still be beneficial if it made Black Americans less afraid, thereby emotionally deescalating their encounters with police and reducing the broader adverse effects of fear in their daily lives. In the current study, we extend research on police diversification to the analysis of public emotions. Using two methodologically dissimilar experiments (descriptive vs. visual), we test how officers' demographic profiles affect Black Americans' fear of being stopped and questioned. The experiments were embedded in a 2022 national survey (N = 1,100), which oversampled Black Americans to permit separate analyses for Black (N = 511) and non-Black respondents (N = 589). Before describing our methods and results, we first review relevant theoretical and empirical literature on police-related fear and the effects of diversification in policing.

## **2. THEORETICAL OVERVIEW**

### **2.1. Why Many Black Americans Fear the Police**

Two dominant theoretical models help explain the high prevalence of police-related fear in Black America: the victimization and vulnerability models (Pickett et al., 2022). The victimization model traces fear to experiential factors (e.g., past mistreatment) that affect what Reiss (1991, p. 143) has termed “danger expectancy” and others have characterized as “perceived risk” (Ferraro, 1995, p. 30). In the context of policing, Black Americans are the racial group that reports the most personal and vicarious experience with mistreatment (e.g., verbal and physical abuse) (Pickett et al., 2022; Tapp & Davis, 2022). For example, Black Americans are much less likely to be treated respectfully in police stops (Voigt et al., 2017). They are also the racial group that is most likely to be killed by officers; in fact, a leading cause of death for young Black men in the United States is police use of force (Edwards et al., 2019). In turn, personal and vicarious experiences with police mistreatment strongly influence danger expectations, such as perceptions of the prevalence of police misconduct (Weitzer & Tuch, 2006), and explain a sizable portion of the racial divide in police-related fear (Pickett et al., 2022).

Danger expectancy is also central to the vulnerability model, according to which “groups who believe they are exposed to danger, unable to protect themselves, and susceptible to serious consequences should be more fearful” (Pickett et al., 2022, p. 295). Such vulnerability beliefs are likely to arise from cultural understandings in Black America of police racial bias—what McCarthy et al. (2020) characterized as “shared historical memories of police malfeasance”—and to be reinforced by what Jones-Brown and Williams (2021, p. 3) termed the “over-policing of Black bodies.” At many times in American history, the activities of the police (e.g., in repressing civil rights protests) have, in clear and visible ways, impeded the group interests of

Black Americans (Barker et al., 2021; Francis & Wright-Rigueur, 2021; Wasow, 2020). There is also a long history of policing being animated by, and organized around, anti-Black prejudice and stereotypes linking Blackness to criminality (Weitzer & Tuch, 2006; Francis & Wright-Rigueur, 2021). Evidence exists, for example, that police agencies throughout the country perpetuate racial crime stereotypes by dramatically overrepresenting Black suspects in social media posts (Grunwald et al., 2022). Additionally, over the past decades, many incidents of officers using excessive force against Black Americans received widespread public attention, giving rise to the Black Lives Matter movement (Francis & Wright-Rigueur, 2021; Reny & Newman, 2021), and reinforcing concerns about policing being a racialized social institution that contributes to Black subordination through discrimination, harassment, and violence (e.g., Weitzer, 2015; Weitzer & Tuch, 2006).<sup>1</sup> All of this is likely to increase Black Americans' fear of the police through felt vulnerability (Pickett et al., 2022).

## **2.2. Why Officer Racial Diversity May Reduce Fear**

The victimization and vulnerability models indicate that Black Americans' fear of the police stems, in part, from their experiences with mistreatment and their perceptions of racism in policing (Pickett et al., 2022). The theory of representative bureaucracy indicates that police racial diversification may help to reduce fear through both mechanisms (Ricucci & Van Ryzin, 2017; Ricucci et al., 2018). First, a larger number of non-White officers may reduce fear through active representation—that is, by improving police culture and behavior (Headley,

<sup>1</sup> For example, a recent government investigation into a large metropolitan police agency found that it “unlawfully discriminates against Black people in its enforcement activities,” while also executing unlawful stops, searches, and arrests and using excessive force (U.S. Department of Justice [DOJ], 2023, p. 1). In one terrifying case, an “officer ordered his dog to bite a Black 14-year-old even though he was not resisting” (DOJ, 2023, p. 15). The officer did this “without giving any warning,” and then “shouted, ‘Stop fighting my dog!’ despite video showing the teen lying still with one arm behind his back and the other arm in the dog’s mouth” (DOJ, 2023, p. 15).

2022). As Holmes and Smith (2008, p. 135) explained, “minority officers may be knowledgeable about minority communities and cultures and may be more empathetic to minority concerns.” Consistent with this theoretical possibility, after interviewing 7,917 police officers, Morin et al. (2017, p. 6) concluded that “the frequency and sheer size of the differences between the views of black and white officers mark one of the singular findings of this survey.” For example, there was a 63-percentage-point gap between Black and White officers (69% vs. 6%, respectively) in support for changes to give Black Americans equal rights. Similarly, there was a 30-percentage-point gap between Black and White officers (57% vs. 27%, respectively) in the belief that police killings of Black civilians are signs of a broader problem in policing.

However, police racial diversity may also reduce fear through passive/symbolic representation—that is, independent of officer behavior, the mere representation of minorities in policing may make Black Americans less afraid (Ricucci et al., 2018; Theobald & Haider-Markel, 2009). The reason is that many Black Americans “see white police officers as a major source of danger and death” (Feagin, 1991, p. 113)—a danger expectancy that is amplified by the perceived prevalence of police racial bias (Linly, 2023; Weitzer & Tuch, 2006). Although the exact extent of racism in policing remains unknown, and although it is still unclear if the police differ from the public in their racial attitudes, there is zero doubt that some officers are racists (Johnson, 2022). Table 1 illustrates this fact, showing racist statements and social media posts from officers employed (or formerly employed) in jurisdictions across the United States. Notably, these texts reflect only a small sample of those that have come to light. In one police department, for example, up to 40% of the officers were involved in text chains circulating racist statements (Hassan, 2023). Linly (2023, p. 1) explained why such communications between

officers reinforce Black Americans' fears: "If you're sharing racist texts, you're racist. If you're racist, you might kill me."

[Insert Table 1 about here]

In short, the theory of symbolic representation indicates that because Black Americans realize that anti-Black prejudice fosters discrimination in policing, just as it does in other domains of social life, police racial diversification may reduce fear. Black Americans also recognize that racial stereotypes that are prevalent in wider society—stereotypes that identify them as the locus of criminal threat (Pickett et al., 2012)—influence police activities by affecting how officers exercise discretion (Weitzer & Tuch, 2006). If Black Americans perceive that race differences exist among officers—specifically, that officers of color are less likely to endorse racial crime stereotypes, or to harbor anti-Black prejudice, and are more likely to support the interests of historically disadvantaged minority groups—then police racial diversity is likely to reduce fear (Weitzer & Tuch, 2006; Riccucci et al., 2018). This is true regardless of whether those perceived race differences among officers are accurate or not, as "an individual's perception is his/her reality" (Theobald & Haider-Markel, 2009, p. 411).

### **2.3. Why Officer Gender Diversity May Reduce Fear**

The policy theory for why police gender diversification may reduce fear points to the importance of at least two mechanisms. One is the potential beneficial effects of representation, both active and symbolic, in bureaucracies on public opinion (Barnes et al., 2017; Riccucci et al., 2014). Policing is widely understood to be a profession "characterized by extreme hegemonic masculinity" (Schuck, 2014, p. 161), and its male-dominant culture is believed to contribute to officers' use of excessive force, especially against civilians of color (Harris, 2000). As Schuck and Rabe-Hemp explain (2016, p. 860), "women, by their presence in police agencies, serve as

change catalysts ... destabilising the existing male working-class culture and resulting in agencies that are more open to change.” By extension, a greater proportion of female officers may “influence the workplace climate, such that empathy, fairness, and equity become prominent” (Schuck, 2014, p. 160).

Therefore, civilians may become less afraid as gender diversity in policing increases, because they may receive better treatment and/or because they may perceive that the presence of female officers makes policing more responsive to the needs and interests of different demographic groups, while also increasing accountability within police agencies (e.g., for sexual misconduct). The underlying theoretical argument is that civilians recognize that female officers bring their background experiences as women with them into the profession (Schuck and Rabe-Hemp, 2016), which, in turn, positively influence how both they and their male colleagues approach criminal justice issues (Barnes et al., 2017; Schuck, 2014).

A second theoretical mechanism that may connect officer gender diversity to reduced fear is civilians’ perceptions of sex differences in decision-making and behavior (Barnes et al., 2017). As Schuck (2014, p. 160) explains, “women are believed to be more people focused, socially skilled, and emotionally sensitive than men and more likely to engage in caring behavior.” The conventional belief is that women are more likely than men to use an empathetic, caring, and relationship-oriented decision-making style (Schuck, 2014). There is strong evidence that women are, on average, more empathetic than men (Greenberg et al., 2018). By extension, civilians may believe: (1) that female officers will outperform male officers at “emotion work,” such as “demonstrating empathy and using social-emotional skills” (Schuck, 2014, p. 163), (2) that they will bring an “ethic of care” with them to the profession (Rabe-Hemp, 2008, p. 426), and (3) that they will be better able to de-escalate situations (Schuck, 2014).

Similarly, across both time and place, women are much less likely than men to act aggressively or to behave violently (Steffensmeier & Allan, 1996). As Perry (2017, p. 73) explained, “masculinity seems to be a need for dominance, and the oldest way of asserting it is by force.” One example from policing, which was widely covered in the news, occurred in Sunrise, Florida, in 2021, when an unidentified female officer was choked on camera by her male colleague, Sgt. Christopher Pullease, after she pulled him away from a handcuffed Black suspect who he was threatening to pepper spray. There is strong evidence that civilians are aware of the sizable sex differences that exist in aggression and violence (Roberts & Stalans, 1997). By extension, independent of officer race, Black Americans, and possibly other civilians as well, may be less afraid in encounters involving female officers.

### **3. THE STATE OF POLICING: DIVERSIFICATION IN THE UNITED STATES**

For much of its history, American policing has been predominantly performed by White males (Sklansky, 2006). That began to change in the 1970s, following a series of affirmative action rulings and reports by two separate national commissions that emphasized the importance of racial diversification. The President’s Commission on Law Enforcement and Administration of Justice (1967) argued that a lack of racial diversity in police departments signals to Black communities that their neighborhoods are “being policed, not for the purpose of maintaining law and order, but for the purpose of maintaining ... [the] status quo” (p. 101). The National Advisory Commission on Civil Disorders (1967) further noted that “for police in a [Black] community, to be predominantly white can serve as a dangerous irritant” (p. 165). To improve police-community relations, both commissions recommended intensifying recruitment of Black applicants, fully and visibly integrating Black officers (e.g., not strictly assigning them to patrol primarily Black neighborhoods), and reviewing promotion policies to ensure Black officers are

not unfairly prevented from obtaining supervisory or leadership roles. According to the National Advisory Commission on Civil Disorders (1967, p. 166):

Some cities have adopted a policy of assigning one white and one [Black] officer to patrol cars, especially in ghetto areas. These assignments result in better understanding, tempered judgment and increased ability to separate the truly suspect from the unfamiliar.

Notably missing from both Commissions' reports was any concern about the near complete absence of women in policing. However, a series of lawsuits alleging gender-based discrimination in the 1960s and 1970s, alongside Executive Order 11478 (prohibiting discrimination in federal employment) and the Crime Control Act of 1973 (making grantees ineligible for funds if their employment practices were deemed discriminatory) opened the doors for women to be fully integrated into policing (Archbold & Schulz, 2012).

The situation has improved over the past 50 years (Sklansky, 2006). In October 1967, a survey of 28 large agencies by the International Association of Chiefs of Police revealed that less than 9% of the sample's officers were non-White, and that every agency's racial composition was substantively less diverse than that of its community (National Advisory Commission on Civil Disorders, 1967, p. 169). By 2020, the Bureau of Justice Statistics estimated that nationally, nearly 30% of local police officers were non-White (Goodison, 2022). Yet there is a great deal of geographic variation, and many large agencies remain less diverse than the communities they serve (Ba et al., 2022, p. 15; Peyton et al., 2022, p. 2). Worse, an ongoing retention crisis characterized in part by a wave of retirements among Black officers threatens to undo what progress has been achieved (Graham, 2021). Meanwhile, gender disparities are even more pronounced and have proven more resistant to change. By 1987, roughly 9% of local police officers were women (Reaves, 1996). Unfortunately, gender diversity has improved only

marginally since then: Women account for roughly 13% of local police officers despite comprising 51% of the U.S. population (Goodison, 2022; see also Ba et al., 2022, Fig. B6).

#### **4. THE STATE OF THE EVIDENCE: EFFECTS OF POLICE DIVERSITY**

Over the past few decades, there has been a tremendous amount of research on the effects of police racial and gender diversity, which has yielded mixed findings. Unfortunately, almost all previous studies have been non-experimental and cross-sectional. Almost all of them have focused on policing outcomes (e.g., arrests, shootings), rather than on civilians' perceptions or emotions. Often outcomes have been measured at the aggregate level, creating difficulties in isolating causal mechanisms (Schuck & Rabe-Hemp, 2016) as well as “an ecological fallacy problem” (Theobald & Haider-Markel, 2009, p. 413). Almost all previous studies have also been plagued by serious methodological limitations (Ridgeway, 2020), such as the inability to control for patrol assignments or selection bias in administrative data (Ba et al., 2021; Knox et al., 2020).

Consequently, only one tentative conclusion can be drawn from the literature: The weight of the evidence suggests that male and female officers treat civilians differently (Lonsway & Wood, 2002; Schuck, 2014). Morin et al. (2017) found that male officers were 13-percentage points more likely than female officers to have had a recent physical altercation with a civilian. Rabe-Hemp (2008) found that male officers were much more likely to use extreme controlling behaviors with civilians (e.g., threats, physical restraints). Similarly, Brandl and Strohshine (2013) found that male officers tended to use force more frequently than female officers. McElvain and Kposowa (2008) found that male officers were more likely than female officers to shoot civilians. Headley and Wright (2020) found that male officers were more likely than female officers to use force. Ba et al. (2021) found that male officers, regardless of their race/ethnicity, used substantially more force than female officers, even while working in comparable conditions

and making a similar number of stops. Although some studies have not found statistically significant gender differences in officer behavior (e.g., Ridgeway, 2020), when differences have emerged, they have been in a consistent direction: “female officers are less likely to use force or be the subject of citizen complaints than male officers” (Schuck & Rabe-Hemp, 2016, p. 862).

By contrast, the existing evidence is unclear about whether White and non-White officers treat civilians differently. Morin et al. (2017) found that White officers were 16-percentage points more likely than Black officers to have recently fought or struggled with a civilian. However, Gilliard-Matthews et al. (2008) found that Black officers were more likely than White officers to ticket Black drivers. Sun and Payne (2004, pp. 534-535) found that Black officers tended to be more coercive than White officers but were “more likely to engage in supportive actions in predominantly Black neighborhoods.” McElvain and Kposowa (2008) found that White officers were the most likely to use deadly force. However, Ridgeway (2020, p. 63) found the opposite was true in the NYPD: “Black officers had three times greater odds of shooting than white officers.” Wright and Headley (2020) analyzed data from Indianapolis and Dallas and found that White officers were the most likely to use force against Black civilians. They replicated this finding in New Orleans (Headley & Wright, 2020). However, Brandl and Strohshine (2013) did not find significant race differences in officers’ use of force. Hoekstra and Sloan (2022) analyzed 1.6 million 911 calls and found that White officers used much more force than Black officers, especially when dispatched to neighborhoods with more Black residents. Ba et al. (2021) found that White officers made more arrests and used more force than Black and Hispanic officers, even when controlling for patrol assignments.

The existing evidence is also unclear about the effects of aggregate-level police racial or gender diversity (Donohue & Levitt, 2001; Ochs, 2011; Schuck & Rabe-Hemp, 2016; Smith,

2003; Smith & Holmes, 2003). Wilkins and Williams (2008), for example, found that police racial diversity was associated with *more* racial profiling. Similarly, Shjarback et al. (2017) found police racial diversity was positively associated with stops of Black drivers. On the other hand, Gaston et al. (2021) and Pyo (2023) found that police racial diversity was associated with fewer policing-related deaths of minority civilians, and Hong (2017) found that police racial diversity was associated with less officer misconduct. Other studies suggest the relationship between officer diversity and police use of force may be nonlinear, but even this research comes to opposite conclusions about its direction (Headley, 2022; Nicholson-Crotty et al., 2017). The problem with interpreting such findings, however, is that aggregate outcomes reflect a whole host of factors that are hard to disentangle (Theobald & Haider-Markel, 2009); for example, the positive association sometimes found between police gender diversification and civilian complaints appears to reflect organizational changes within agencies that affect their data collection procedures (Schuck & Rabe-Hemp, 2016).

Similarly, and more directly relevant to the current project, it is unclear how police diversity affects civilians' perceptions or emotions, as there has been too little research. A handful of non-experimental studies have explored how officer demographics (real or perceived) are associated with civilians' perceptions of the police, yielding mixed evidence (e.g., Engel, 2005; Socia et al., 2021; Theobald & Haider-Markel, 2009). The few experimental studies that exist have generally found police diversity to be beneficial, although none focused on police-civilian encounters or civilians' reactions to specific officers. Peyton et al. (2022) showed that when residents of Yonkers, NY were informed about the low diversity among local police officers, it reduced their trust in policing. Riccucci et al. (2018) found that Black Americans trusted a police department more when they were told 85% (compared to 15%) of its officers

were Black. In another experiment, Riccucci et al. (2014) found that civilians rated a Domestic Violence Unit's performance higher and trusted it more when they were told 60% (compared to 10%) of its officers were female.

In the current study, we built on the above research by providing the first experimental test of the effects of officer diversity on civilians' emotions. We focused on symbolic representation. Specifically, we tested whether officers' demographic profiles affect civilians' fear of the police. To ensure the robustness of results, we used different experimental designs to test the same two hypotheses: (1) Black Americans will be less afraid when officers are non-White (Black or Hispanic/Latino) instead of White, and (2) they will be less afraid when officers are female instead of male. Because Black Americans are the racial group that most distrusts and fears the police, it is among them that we expected the effects of officer diversity to be largest.

## **5. MATERIALS AND METHODS**

### **5.1. Data**

To enable the planned experiments, we used a self-administered questionnaire that was completed online. The survey was fielded by YouGov in the spring of 2022 (between April 21 and May 2), after receipt of IRB approval. YouGov's online samples are widely used in scientific studies and have extensive empirical support (Ansolabehere & Schaffner, 2014; Simmons & Bobo, 2015). For our experiment, YouGov constructed two synthetic sampling frames (SSF) via stratified sampling from the 2019 American Community Survey, which were used to select two matched (on gender, age, and education) samples of opt-in panelists: a general population sample (N = 650) and a large oversample of Black Americans (N = 450). (The general population sample was also matched on race.) Using propensity scoring based on region and the matching variables, both samples were then weighted to their respective SSFs, after

which the weights were post-stratified on 2016 and 2020 Presidential vote choice. The descriptive statistics for both samples are provided in the Appendix.

The purpose of the oversample was to yield (after combining Black respondents in the oversample with those in the general population sample) similarly sized analytic samples of Black and non-Black Americans ( $N = 511$  and  $589$ , respectively). Per this sampling design, we estimated the models for the experiments separately for Black and non-Black respondents. The online supplement, however, provides an alternative disaggregation (i.e., non-White compared to White respondents), which shows similar benefits of police diversification. For the main analysis, we applied the provided sampling weights. However, unweighted findings are included in the online supplement. They are similar, with the exception that a few diversity coefficients become significant among non-Black respondents.

## **5.2. Measurement of baseline fear**

There is strong evidence that humans can and do reliably report their emotions in surveys (Kaiser & Oswald, 2022). Therefore, at the start of the questionnaire, before the two experiments, we measured respondents' baseline (or general) fear of the police using an index taken from prior research (Pickett et al., 2022). The index was designed in accordance with best practices for measuring fear in reference to interpersonal harm, as the emotion is experienced in everyday life at a generalized level (Ferraro, 1995). First, to ensure face validity (Ferraro, 1995), the question stem explicitly stated that it was about “emotional fear” and the response options were emotion-specific (i.e., 0 = very unafraid, 4 = very afraid). Second, to ensure content validity (Ferraro, 1995), the question included multiple items that asked how fearful respondents were of experiencing 10 specific forms of police mistreatment, which varied both in type and severity (e.g., “yell at you,” “pepper spray you,” “shoot at you with a gun”). The full list of items is

provided in the online supplement. Importantly, previous work demonstrated that this index has construct validity, as scores on it are predicted by past police mistreatment and predict relevant policy attitudes, behavioral intentions, and encounter-specific fear (Pickett et al., 2022).

In our survey, as in other data (Pickett et al., 2022), the responses to the 10 items loaded on a single factor (loadings: .78 to .96) and had high reliability ( $\alpha = .98$ ). Accordingly, and following past research (Pickett et al., 2022), we averaged them to construct the fear-of-police index. In our data, as in an earlier survey (Pickett et al., 2022), baseline fear and past experiences (personal or vicarious) with police mistreatment were positively and substantially correlated ( $r = .39, p < .001$ ), reaffirming the construct validity of the measure.<sup>2</sup> Using the same response scale used to measure police-related fear and five items taken from prior research (Pickett et al., 2022), we also measured respondents' fear of crime, so that we could compare it to their fear of police. We averaged responses to the fear of crime items to form an index ( $\alpha = .92$ , loadings: .77 to .86). As in Pickett et al. (2022), fear of crime was positively correlated with fear of the police ( $r = .52$ ). To measure relative fear, we subtracted the fear of crime index from the fear of police index, so that positive values on the resulting variable denoted greater fear of the police than of crime, whereas negative values indicated the opposite.

### **5.3. Experiment 1**

Our first experiment was a paired-profile conjoint analysis with a  $2^23^34^2$  factorial design (Bansak et al., 2021; Hainmueller et al., 2014). Every respondent evaluated five conjoint tables,

<sup>2</sup> To measure personal and vicarious experiences with police mistreatment, we asked respondents how often (0 = never, 3 = three times or more) the police had: (1) "Stopped you, your friends, or your family members on the street without good reason"; (2) "Used insulting language toward you, your friends, or your family members"; (3) "Used excessive force against you, your friends, or your family members." The responses loaded on a single factor (loadings: .73 to .83), and thus we averaged them to form an index ( $\alpha = .84$ ).

each containing two officer profiles. They indicated which officer in each pairing would make them the most afraid. The officer profiles were defined by seven attributes: two main attributes of interest (officer race and sex), along with five other attributes that were included either because of their policy relevance (body camera usage) or to reduce the risk of construct confounding (officer age, body type, education, and past complaints). This experimental design (and sample size) ensured over 85% statistical power in both subsamples (Black and non-Black respondents) to detect five-point changes in the probability of profile selection due to officer race and gender (Stefanelli & Lukac, 2022). The online supplement provides the conjoint table template and the text of all attribute levels. The levels of each attribute were randomized independently for each profile in each conjoint table. Consistent with best practices, however, attribute ordering within the conjoint tables was randomized between respondents and held constant across tables (Bansak et al., 2021).

In total, after missing data, the first experiment yielded 10,972 choice outcomes (one for each of the two profiles in each evaluated conjoint table) clustered in 1,099 respondents. Following the standard analytic strategy for forced-choice conjoint analysis (Bansak et al., 2021; Hainmueller et al., 2014), we estimated the average marginal component effects (AMCE) using ordinary least squares (OLS) regression with data at the profile level and robust standard errors clustered at the respondent level.

#### **5.4. Experiment 2**

To ensure that any observed effects of officer diversity in the first experiment were not contingent on the specific procedures or outcome variable used therein, we conducted a second experiment with a different design. This helped to avoid “mono-operation bias” (Shadish et al., 2002, p. 75). The second experiment had a  $2^3 3^2$  factorial design and entailed showing each

respondent a picture of a two-person officer team and then measuring their encounter-specific fear of being stopped by those officers (see Fig. 1.). We randomized the race and sex of each pictured officer as well as the location of the stop (empty vs. busy street). This experimental design (and sample size) ensured over 85% statistical power in both subsamples (Black and non-Black respondents) to detect medium-sized effects of the pictured officers' attributes.

To create the officer pictures, we edited 12 photos taken from the Chicago Face Database (CFD) (Ma et al., 2015). Using CFD respondents' ratings ( $N = 26$  to  $94$ , per picture) of threateningness and trustworthiness, we selected two groups of six photos (one group for each officer in the team). Within each officer group (officer 1 and officer 2), the six pictures differed on race and sex but were matched as closely as possible on CFD ratings (on a scale of 1-7) of threateningness ( $M_{\text{officer1}} = 2.50$  to  $2.57$ ;  $M_{\text{officer2}} = 2.04$  to  $2.09$ ) and trustworthiness ( $M_{\text{officer1}} = 3.07$  to  $3.38$ ;  $M_{\text{officer2}} = 3.23$  to  $3.52$ ). Next, we photoshopped the heads and necks of the CFD models into officer uniforms of a similar style with arm patches from the same police agency.

[Insert Fig. 1 about here]

The outcome variable in the second experiment was encounter-specific fear. To measure it, we asked respondents how afraid they would be (0 = very unafraid, 4 = very afraid) of experiencing four forms of mistreatment (e.g., excessive force, wrongful arrest) if the pictured officers stopped them. We averaged responses to the four items to construct an index ( $\alpha = .96$ , loadings: .89 to .95), which we rescaled to range from 0 to 100 for the analysis. Encounter-specific fear was strongly correlated with baseline (general) fear ( $r = .72$ ), and thus we controlled for baseline fear in the models to improve the precision of the estimates (Gerber & Green, 2012).<sup>3</sup> We estimated the models using OLS regression with robust standard errors ( $N = 1,100$ ).

<sup>3</sup> Unadjusted results are provided in the online supplement; they are similar but less precise, and two diversity coefficients become non-significant.

## 6. RESULTS

### 6.1. The prevalence of police-related fear

Before turning to the experimental findings, we first use the baseline measures to examine the racial divide in police-related fear. This is important because the strongest existing evidence about Americans' fear of the police comes from a survey conducted in early 2021 (Pickett et al., 2022), less than a year after George Floyd's killing, when BLM protests were active across the country, and before Derek Chauvin, the former officer who killed Mr. Floyd, was convicted. The concern is that these events may have sparked sizable but temporary changes in public opinion (Reny & Newman, 2021). Thus, using the same measure of personal fear of the police used in the earlier study (Pickett et al., 2022), we attempt to replicate the 2021 findings with data collected a year later, in early 2022, with a different sample.

The full results are provided in Fig. 2. They replicate the findings from a year past, demonstrating that the American racial divide in police-related fear is not a temporary artifact of the events of 2020-21, but a persistent social fact in the United States. We find that Black respondents are significantly more afraid than White respondents of the police ( $d = .89$ ,  $t = 13.73$ ,  $p < .001$ ). In terms of magnitude, the Black-White difference in police-related fear exceeds even the well-known and long-studied gender gap in fear of sexual assault ( $d = .89$  vs.  $d = .69$  in our data, both  $p < .001$ ). Black respondents are also significantly more afraid than other racial minorities of the police ( $d = .21$ ,  $t = 2.17$ ,  $p = .031$ ). Additionally, as in 2021, Black respondents are more afraid than their White counterparts of crime ( $d = .39$ ,  $t = 6.08$ ,  $p < .001$ ); however, the magnitude of this divide pales in comparison to that for police-related fear ( $d = .39$  vs.  $.89$ ). Similarly, although Black respondents differ significantly from other racial minorities in their fear of the police, they do not differ significantly in their fear of crime ( $d = .03$ ,  $t = .31$ ,  $p = .754$ ).

Therefore, it is fear of the police more than fear of crime that most sharply distinguishes the emotional world of Black Americans from that of other racial groups in the United States.

It would be a mistake, however, to focus only on differences in group means, overlooking the prevalence of police-related fear and the startling racial divide that exists in it. In our sample, for example, the majority (53%) of Black respondents are afraid or very afraid of being killed by the police, a small minority (14%) of White respondents share this fear, and other racial and ethnic groups fall between these extremes. In fact, nearly half (46%) of Black respondents are more afraid of the police than of crime, a figure that is significantly higher than that either for White respondents ( $d = .53, t = 8.21, p < .001$ ) or for other racial minorities ( $d = .22, t = 2.32, p = .021$ ). This finding is consistent with past experimental evidence showing that many (45%) of Black Americans are so afraid of the police that they would rather be robbed or burglarized by criminals than be stopped and questioned by officers (Pickett et al., 2022). It is also consistent with data from the 2020 Cooperative Election Study (Schaffner et al., 2021), wherein nearly half (49%) of Black Americans said that, on balance, the police made them feel unsafe (see Fig. S1,  $N = 6,931$ ). Reducing Black Americans' fear of the police is thus of critical importance.

[Insert Fig. 2 about here]

## **6.2. Experiment 1: Effects of officer race and sex**

Attention now turns to a key question central to determining the potential effects of police racial and gender diversification: Are Black Americans less afraid of non-White and female officers? To answer this question, we begin by examining the results of our first experiment, a conjoint analysis wherein respondents were shown tabularly-paired profiles of officers and indicated which officer (in each pair) would make them the most afraid. The officers' randomized attributes included race and sex as well as other factors—both observable

(e.g., age, body type) and unobservable (education, prior complaints)—that respondents might assume are correlated with officer race and sex, thereby causing construct confounding (or information leakage) if left unclear. The average marginal component effects from the conjoint analysis are presented in Fig. 3.

Among Black respondents, the officer's race has a significant effect on fear. Net of the other randomized factors, Black respondents are less likely to be afraid of officers who are Hispanic/Latino ( $b = -.078$ ,  $SE = .019$ ,  $p < .001$ ) or Black ( $b = -.164$ ,  $SE = .019$ ,  $p < .001$ ), compared to White. The officer's race does not exert a statistically significant effect among non-Black respondents, although both coefficients are in the same direction ( $b = -.023$ ,  $SE = .020$ ,  $p = .254$  and  $b = -.033$ ,  $SE = .017$ ,  $p = .058$ , respectively). Coefficient equality tests reveal that, in both cases, the negative effects are significantly larger among Black than non-Black respondents ( $Z = 1.99$ ,  $p = .047$  and  $Z = 5.14$ ,  $p = .001$ , respectively). For Black respondents, the effect of the officer being of the same race is sizable, exceeding that of the officer wearing a body camera ( $b = -.067$ ,  $SE = .015$ ,  $p < .001$ ) or having a past complaint for disrespect ( $b = .135$ ,  $SE = .020$ ,  $p < .001$ ), and being about half the size of the officer having a past complaint for excessive force ( $b = .305$ ,  $SE = .020$ ,  $p < .001$ ).

The officer's sex also exerts a statistically significant effect among Black respondents ( $b = -.095$ ,  $SE = .015$ ,  $p < .001$ ), who are less likely to be afraid when the officer is female instead of male. Here, however, the effect is not only in the same direction but is also significant among non-Black respondents ( $b = -.070$ ,  $SE = .017$ ,  $p < .001$ ). Further, the coefficients in the two subsamples (Black vs. non-Black) do not differ significantly in magnitude ( $Z = 1.10$ ,  $p = .271$ ). Thus, the evidence from the conjoint analysis suggests that police gender diversification may

reduce fear to a similar degree among both Black and non-Black Americans, even if police racial diversification most strongly reduces fear among Black Americans.

Before proceeding, it bears noting that the officer's sex is not the only factor that exerts a significant or sizable effect across both subsamples in the conjoint analysis. Most notably, Black and non-Black respondents are both less likely to be afraid when the officer is wearing a body camera ( $b = -.067$ ,  $SE = .015$ ,  $p < .001$  and  $b = -.101$ ,  $SE = .017$ ,  $p < .001$ , respectively) and are both more likely to be afraid when the officer has a prior complaint for being disrespectful, using excessive force, or both, with the likelihood of fear being highest in the latter case ( $b = .369$ ,  $SE = .021$ ,  $p < .001$  and  $b = .408$ ,  $SE = .022$ ,  $p < .001$ , respectively). To the extent, then, that police agencies can increase public awareness of body cameras and communicate to the public their efforts to hold misbehaving officers accountable, civilians' fear of the police may decline.

[Insert Fig. 3 about here]

### **6.3. Experiment 2: Effects of officer race and sex**

In the first experiment, as in past conjoint analyses on other issues (Bansak et al., 2021; Hainmueller et al., 2014), race and sex were described in words, and the outcome was measured as a forced choice. Despite general evidence that this design is externally valid (Hainmueller et al., 2015), it remains possible that the observed effects may not generalize to real-world encounters where officers are seen rather than described. It is also possible that forcing respondents to choose between individual officers—that is, to identify which was the most frightening—may have caused them to focus more on the officers' race and sex than they otherwise would have. To deal with both issues, our second experiment used pictures of police teams and measured encounter-specific fear: how afraid respondents would be of experiencing

mistreatment if the pictured officers stopped them in different locations. Every respondent saw a team of two officers, wherein each officer's race and sex were randomized.

We analyze the data from the second experiment in two ways. First, we test whether more diverse officer teams elicited less fear. Fig. 4 shows the relevant results. Among Black respondents, the coefficients for the diversity indicators are all negative, indicating reduced fear, and most are statistically significant. Black respondents are significantly less afraid when both officers are racial minorities ( $b = -7.547$ ,  $SE = 3.053$ ,  $p = .014$ ) and when one officer or both officers are female ( $b = -6.933$ ,  $SE = 2.426$ ,  $p = .004$  and  $b = -9.587$ ,  $SE = 3.234$ ,  $p = .003$ ). By contrast, among non-Black respondents, none of the coefficients are significant and their direction is inconsistent. Unlike in the first experiment, coefficient equality tests show that the gender diversity of the pictured officer pair (i.e., whether one or both are female) has significantly larger effects among Black respondents ( $Z = 2.25$ ,  $p = .024$  and  $Z = 2.16$ ,  $p = .031$ ).

[Insert Fig. 4 about here]

An alternative way to analyze the data from the second experiment is to test whether each officer's race and sex independently affect fear. Fig. 5 shows the respective results. Again, among Black respondents, the coefficients for the diversity indicators are all negative, indicating reduced fear, although only half are statistically significant. Black respondents are significantly less afraid when the first or second officer is Black ( $b = -5.762$ ,  $SE = 2.461$ ,  $p = .020$  and  $b = -7.818$ ,  $SE = 2.711$ ,  $p = .004$ , respectively), but the effects are smaller and non-significant, though still negative, when the officers are Hispanic/Latino ( $b = -2.604$ ,  $SE = 2.416$ ,  $p = .282$  and  $b = -.514$ ,  $SE = 2.298$ ,  $p = .823$ , respectively). Black respondents are also significantly less afraid when the first officer is a female ( $b = -6.456$ ,  $SE = 2.074$ ,  $p < .001$ ), but the negative effect of the second officer's sex is not significant ( $b = -2.956$ ,  $SE = 2.076$ ,  $p = .155$ ). Among non-Black

respondents, none of the diversity coefficients are significant and their direction is inconsistent. Coefficient equality tests revealed, however, that just one coefficient varied significantly in magnitude across the subsamples—specifically, that for the second officer being Black ( $Z = 3.36$ ,  $p < .001$ ). Thus, while the results from our second experiment provide strong evidence that police racial and gender diversification reduces Black respondents’ fear of the police, they are equivocal about whether diversification has weaker effects among non-Black respondents.

[Insert Fig. 5 about here]

How much does the diversity of the pictured officer pair matter for Black Americans’ encounter-specific fear? Fig. 6 shows adjusted predictions from the models in Fig. 5, setting the diversity indicators to different levels—that is, specifying each officer’s race and sex. (The dependent variable, encounter-specific fear, is scaled to range from 0 to 100.) Among non-Black respondents, predicted encounter-specific fear is similar when both officers are White males (41.61), White females (40.82), Black males (43.36), or Black females (42.57). The story is very different, however, among Black respondents, whose predicted fear is much higher when both officers are White males (72.32) than when they are White females (62.91), Black males (58.74) or Black females (49.33).

[Insert Fig. 6 about here]

#### **6.4. Supplemental analyses**

To better understand the potential effects of officer diversification on public fear, we conduct several exploratory analyses. First, we explore whether, in experiment 1, officer race and behavior (past complaints) interact to affect fear. We find no significant interactions between these attributes, either among Black or non-Black respondents (Fig. S4). We also test whether officer sex interacts with past complaints (Fig. S5). Only one of the six interaction terms is

significant (that between officer sex and past excessive force, among Black respondents).

Therefore, the weight of the evidence suggests that the effect of officer sex emerges regardless of the presence of past complaints.

Next, we explore whether the effects of officer sex vary depending on respondents' sex. In experiment 1 (Fig. S6), the officer's sex exerts a significant and negative effect on fear among both male and female respondents ( $b = -.091, p < .001$  and  $b = -.074, p < .001$ , respectively), and the difference between the coefficients is not significant ( $Z = .72, p = .472$ ). Similarly, in experiment 2 (Fig. S15-16), when the sample is disaggregated by respondent sex, all the coefficients for officer sex are negative ( $b = -.127$  to  $-4.416$ ), indicating that fear is lower when the pictured officers are female, and none differ significantly in magnitude across male and female respondents ( $Z = .060$  to  $.254, p = .799$  to  $.952$ ), indicating no significant interactions. However, likely due to the smaller sample size (compared to experiment 1) and the racially heterogeneous nature of the sex subsamples, most of the coefficients for officer sex in experiment 2 do not reach statistical significance among either male or female respondents.

Finally, we explore whether, in each experiment, the effects of officer race or sex are moderated by respondents' education, income, or past experiences with police mistreatment. To estimate the average treatment moderation effects (ATMEs), we use the parallel estimation framework and control for other respondent-level variables that may confound the interactions (Bansak, 2021). The ATMEs are reported in Tables S2 and S3. We find no consistent evidence, either within or across the experiments, of statistically significant moderation by education, income, or past mistreatment. We also explore whether the effect of body-camera usage is moderated by these respondent-level variables. Again, we find no evidence of statistically significant moderation.

## 7. DISCUSSION

When President Biden issued Executive Order #14074 (Advancing Effective, Accountable Policing and Criminal Justice Practices to Enhance Public Trust and Public Safety) on May 25, 2022—the second anniversary of the murder of George Floyd—he noted that “there are places in America today, particularly in Black and Brown communities and other communities of color, where the bonds of trust are frayed or broken.” Indeed, it has become routine among academics and civil rights activists to stress that there is a police legitimacy crisis in the United States and a dire need for reform (Peyton et al., 2019; President’s Task Force on 21<sup>st</sup> Century Policing, 2015). The clearest indicator that a legitimacy crisis is ongoing, however, and of the need for additional policing reforms, is the prevalence of police-related fear (Graham et al., 2020). As scholars have emphasized, “no one in a just society would need to be fearful of being mistreated by the police” (Pickett et al., 2022, p. 292).

Our data reveal that, nearly two years after George Floyd’s killing, about half of Black Americans remain afraid of police mistreatment. This is true regardless of whether we examine generalized fear (Fig. 2) or situational fear in the experimental vignettes (see Fig. S7). For example, when asked how they would feel if the pictured officers stopped them, 52% of Black respondents said they would be afraid of experiencing excessive force and 51% said they would be afraid of being wrongfully arrested. Our findings mirror those from past years. A 2018 survey found that 69% of Black Americans worried at least a little (and 32% worried “a lot”) about experiencing police brutality (Graham et al., 2020). A 2020 survey found that 49% of Black Americans said the police made them feel somewhat or mostly unsafe (Fig. S1). In short, every poll and every survey question (to our knowledge) has shown the same thing—namely, that police-related fear is widespread in Black America. This finding is concerning for all manner of

reasons, not the least of which is the mounting evidence that police-related fear has extensive social and health costs (Alang et al., 2021; Ang, 2021; Del Toro et al., 2019, 2022; DeVylder et al., 2017; Eichstaedt et al., 2021; Fine et al., 2022; Legewie & Fagan, 2019; Lewis & Wu, 2021).

The good news is that recent experimental research points to several promising policing reforms, including procedural justice training (Weisburd et al., 2022; Wood et al., 2020), knock-and-talks (Peyton et al., 2019), and body-worn cameras (Braga et al., 2022; Lum et al., 2020). Unfortunately, because of barriers to randomizing officer demographics, experimental evidence has been limited for one of the most prominent policy solutions, one that both scholars and Black Americans have been promoting for decades: police diversification (Ba et al., 2021; Weitzer & Tuch, 2006). However, non-experimental research has yielded mixed findings for whether officers' demographic profiles are associated with how they treat civilians (Ba et al., 2021; Hoekstra & Sloan, 2022; Ridgeway, 2020), and there has been no evidence, experimental or non-experimental, about whether diversification can also reduce fear of the police.

Our study adds this evidence to the literature. Across two experiments that differ methodologically, we find that officers' demographic profiles exert causal effects on Black Americans' police-related emotions. Specifically, we demonstrate that Black Americans are less afraid of non-White and female officers than they are of the modal American police officer: a White male. Past survey research shows that while Black Americans are highly supportive of diversifying the police, they are especially concerned with ensuring better representation of Black Americans in police agencies (Weitzer & Tuch, 2006). Our experimental results are consistent with this stated preference: Black respondents are least afraid of Black officers, especially Black female officers.

From the standpoint of representative bureaucracy theory (Ricucci et al., 2014; Ricucci et al., 2018), our findings make sense, suggesting that Black Americans likely perceive that officers' race and gender are both predictive of how they will behave toward civilians and of their support for the interests of social groups (e.g., non-Whites, women) that have historically been subordinated in American society. Importantly, however, the policy theory of police diversification does not hinge on officer behavior (or on the accuracy of civilians' perceptions of it) (Theobald & Haider-Markel, 2009). The theory of representative bureaucracy indicates that beyond any indirect effects of police diversity on public opinion via officers' behavior (active representation), diversification is likely to reduce fear directly (symbolic representation) (Ricucci et al., 2014; Ricucci et al., 2018). In other words, even if officers with different demographic profiles treated civilians similarly, Black Americans may still be less afraid of a more diverse police force. Our finding that diversity mattered independent of officers' past complaints is consistent with this theoretical possibility.

The key policy implication of our experimental findings is that the representation of Black Americans and women in policing should be increased, as doing so may reduce public fear and improve police-civilian relations.<sup>4</sup> Of course, some readers may wonder whether survey experiments can tell us much about policing in the real world. On this point, it bears emphasizing that findings from conjoint and vignette experiments do predict real-world outcomes (Hainmueller et al., 2015). As importantly, findings from survey experiments on police-civilian interactions closely match those from real-world policing experiments—both types of experiments show, for example, that officers' use of procedural justice in traffic stops more

<sup>4</sup> Increased racial and gender diversity alone may not yield desired policing outcomes. Representation may need to reach a critical mass before having positive effects on police-civilian relations (Nicholson-Crotty et al., 2017) and/or may need to occur in conjunction with other accountability reforms (Headley, 2022).

strongly influences civilians' encounter-specific versus general policing attitudes (Johnson et al., 2017; Sahin et al., 2017).

Nevertheless, some readers may question whether the beneficial effects of police diversity documented herein would emerge in encounters where officers behaved aggressively (e.g., shouted, cursed, made threats, used force). Although an answer to this question must await future research, it is crucial to remember three facts. First, the vast majority (>96%) of police contacts do not involve officers shouting, cursing, making threats, or using of force; this is true even of contacts that are police-initiated or traffic-accident-related (Tapp & Davis, 2022). Second, when officers do behave aggressively in encounters, it sometimes happens after fear-related escalation—the pepper-spraying of Army Second Lieutenant Caron Nazario because he was too afraid to get out of his car is but one example (Pickett et al., 2022). Third, as our study and others have demonstrated (Alang et al., 2021; Fine et al., 2022; Graham et al., 2020), fear is not limited to specific encounters. Some Black Americans live their daily lives in the shadow of a generalized fear of the police (Pickett et al., 2022), a fear that can limit their engagement in social life, harm their school performance, and have other adverse consequences (Ang, 2021; Del Toro et al., 2019; Del Toro et al., 2022; DeVylder et al., 2017; Fader, 2021; Legewie & Fagan, 2019; Lewis & Wu, 2021). Therefore, even if the beneficial effects of officer diversity did not emerge in the small percentage (<4%) of police-civilian encounters where officers behave aggressively, the overall social benefits of police diversification could still be quite large.

Given our findings for police-related fear and those reported previously in the most methodologically sophisticated studies for officer behavior (Ba et al., 2021; Hoekstra & Sloan, 2022), it seems advisable to take steps at both the legislative (e.g., earmarked funding) and organizational level (e.g., diversity initiatives) to increase hiring of Black and female officers.

Unfortunately, after a period of growth in the 1980s and 1990s, both groups' trajectory of representation in policing has stalled at about 12%. Still, agencies can and should be more intentional about recruiting qualified minority and female candidates (Donohue, 2021; Morabito & Shelley, 2015). The national 30x30 Initiative, for example, aims to increase the representation of women in policing from 12% to 30% by 2030. To date, more than 170 police departments have signed the pledge, which requires them "to report on their efforts to identify and address the obstacles that women officers face in recruitment and throughout their careers." In less than two years, the first police chief to sign the pledge nearly quadrupled the number of women employed by his agency—from 4 to 15—after revising or eliminating antiquated policies that he believed discouraged women and people of color from applying. In other cases, it has taken lawsuits to motivate police departments to diversify. Hopefully, however, the supporting empirical evidence herein and in other recent work (Ricucci et al., 2018; Peyton et al., 2022) can further stimulate self-directed diversification efforts within police departments.

Recruiting additional Black and female applicants is not enough, however. Agencies must also determine whether current screening practices disproportionately disqualify these applicants (e.g., educational requirements, fitness exams), and, if so, how they might update those practices so as not to impede diversification efforts. Retaining officers once they have been hired is equally critical. Further diversifying policing will not be a simple task against the backdrop of police retention struggles, which date back to the Great Recession and have been exacerbated by the George Floyd protests (Mourtgos et al., 2022). The general obstacles to retention in policing apply to Black and female officers, but there are additional issues that must be considered as well. Racism and sexism within police agencies can make policing an especially hostile work environment for non-White and female officers. Several recent cases are illustrative of this fact.

Sgt. Carla Havard, for example, recently filed a whistleblower complaint against the Denver Police Department, which, among other things, alleges pervasive sexual harassment against female officers (e.g., unwanted touching). In another agency, the Knoxville Police Department, most Black officers reported (in an external audit) that their supervisors and/or peers had discriminated against them. At the University of Washington, Black officers recently filed a lawsuit against the campus police department, alleging racism and citing the regular use of racial slurs. Over the past two decades, hundreds of Black officers have filed similar lawsuits against the U.S. Capitol Police. Obviously, then, besides hiring to increase diversity, police agencies must also take steps (e.g., external audits, serious investigations of complaints) to eliminate racism, sexism, discrimination, and harassment within ranks, which undermine retention by increasing the toxicity of policing as an occupation for female and non-White officers.

Beyond hiring and retention, police diversification should also be pursued at the level of patrol assignments and conveyed through public communication. There is evidence that assignment to beats (in terms of both time and geographic location) varies by officer race and sex (Ba et al., 2021), but it is not clear how (or why) such assignment decisions are made. Our findings suggest that when deciding assignments, one consideration should be ensuring the racial and gender diversity of the officers patrolling a given area at a particular time—for example, by pairing White male officers, the modal group, with non-White and female officers whenever possible, instead of pairing White male officers with each other—because doing so may reduce fear among civilians who encounter the officers. From the standpoint of symbolic representation (Ricucci et al., 2014; Ricucci et al., 2018), and for signaling normative alignment with civilians, it would also be beneficial for police agencies to communicate clearly to the public

(e.g., via official social media posts) that they are committed to racial and gender diversification and are taking specific steps to increase the diversity of their officers.

Before closing, several limitations of our experiments should be mentioned. First, we analyzed self-reported fear in a survey context. Despite the evidence that people are skilled at anticipating the emotions they will feel in situations (Wilson & Gilbert, 2003), and despite the general evidence that survey-based and real-world policing experiments obtain similar findings (e.g., Johnson et al., 2017; Sahin et al., 2017), it remains possible that officers' demographic profiles may have different effects on fear in actual police-civilian encounters or when other characteristics of the situation (e.g., officer demeanor) are varied. Future research should attempt to replicate our findings using virtual reality experiments or by interviewing civilians after real-world interventions (e.g., DUI checkpoints), wherein the racial and gender diversity of the officers involved could be randomized.

Another limitation of our experiments is that, like most experiments, they were conducted once, in a particular year. For example, they were conducted before five Black, male officers beat Tyre Nichols to death. It is possible that such publicized incidents of police violence, depending on the race and sex of the officers involved, may temporarily (or perhaps permanently) decrease or increase the effects of officer racial and gender diversity on fear. It is also possible that diversity effects would be eroded by experienced mistreatment specifically from minority or female officers. Cobbina (2019) found that some Black Americans had been verbally or physically abused by Black officers. Although we measured experienced mistreatment and found that it did not moderate the effects of officers' race or sex, we did not measure experiences with specific types of officers.

Despite these limitations, our findings are important because they provide the first experimental evidence that officer racial and gender diversity may reduce Black Americans fear of the police. There is another important finding from our study that bears emphasizing: Both Black and non-Black Americans are less likely to be afraid when officers are wearing body cameras. Body cameras are now widespread in policing and there is accumulating evidence demonstrating their benefits (Braga et al., 2022; Lum et al., 2020). It does not appear, however, that most civilians are aware of officers' body cameras (White et al., 2017), and most agencies do not require officers to notify civilians that encounters are being recorded (White et al., 2019). Our results suggest a straightforward recommendation: officers should be wearing a body camera when they stop or otherwise interact with civilians in an official capacity, and they should also be required to give notification of the recording. The findings herein suggest that such notification, if combined with officer diversification, may, at the outset of interaction, help to emotionally deescalate police-civilian encounters.

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**Table 1. Examples of Racism in Policing: Officer Quotes and Social Media Posts**

Date	Source	Quote
04-11-23	The Mercury News	“I’ll bury that n****r in my fields.”; “Make these n*****s eat shit.”—Texts between officers in the Antioch police department
10-25-22	News4JAX	“America’s three biggest problems: 1) Marijuana abuse 2) Marijuana abuse 3) Black people.” —Social media post on Sgt. Douglas Howell’s account
09-30-22	BET News	“I’m sick of these Black bastards. I’m going to clean house and be done with it.” —Sheriff Jody Greene
09-23-22	Los Angeles Times	“I was out there with those n*****s.” —Detective Brian McCartin
08-25-22	Los Angeles Times	“Was going to tell you all those n****r family members are all pissed off in front of the station”; “Gun cleaning Party at my house when they release my name??”; “Yes absolutely let’s all just post in your yard with lawn chairs in a [firing] squad.” —Texts among officers after two of them killed a Black civilian
08-16-22	MCIR	“I shot that n****r 119 times, OK?”; “I chased this motherfucker across the field. I got him.” —Police chief Sam Robbins
08-02-22	AL News	“What do y’all call a pregnant slave? BOGO. Buy one, get one free.” —Text from disciplined (but unidentified) police officer
07-26-22	NBC News	“Fucking n*****s, I fucking hate them!” —Officer Rose Valentino
04-05-22	Huffington Post	“When I seize power, ‘hate crimes’ will be encouraged”; “N*****s ruin everything.” —Social media posts on officer Aaron Paul Nichols’s secret account
03-14-22	Daily Record	“They want a race war...ok lets go.” —Text from Sgt. Stephanie Harvey
06-22-21	Detroit Free Press	“Glad I wasn’t born bl&@k. I would kill myself!” —Social media post from officer Anwar Khan’s account
02-01-21	Washington Post	“For the most part, it seems to me like, they furnished them a house to live in, they furnished ’em clothes to put on their back, they furnished ’em food to put on their table, and all they had to do was fucking work.” —Chief Gene Allmond on Slavery
11-13-20	Times Union	“Because bro, they are the worst fucking race.” —Officer David Haupt on Black Americans
09-02-20	NewsOne	“N****r lover”; “Why you got to holler at fucking n*****s when I’m around?” —Sheriff Todd Wright
06-27-20	San José Spotlight	“Black lives don’t really matter.” —Social media post from officer Mark Pimentel’s account
06-24-20	Star News	“We are just gonna go out and start slaughtering them fucking n*****s. I can’t wait. God I can’t wait”; “Wipe ’em off the fucking map.” —Recorded conversation between officers Michael Piner, Jesse Moore, and James Gilmore
07-11-18	First Coast News	“We got the Alabama porch monkeys all contained.” —Lt. Chuck DeShazer
06-01-18	Atlanta Black Star	“Beat that n****r to death with a banana.” —Officer Joshua Braglin
04-22-15	Huffington Post	“I had a wet dream that you two found those n*****s in the VW and gave them the death penalty right there on the spot”; “We are coming and drinking all your beer and killing n*****s.” —Text messages between four officers

OFFICER 1:

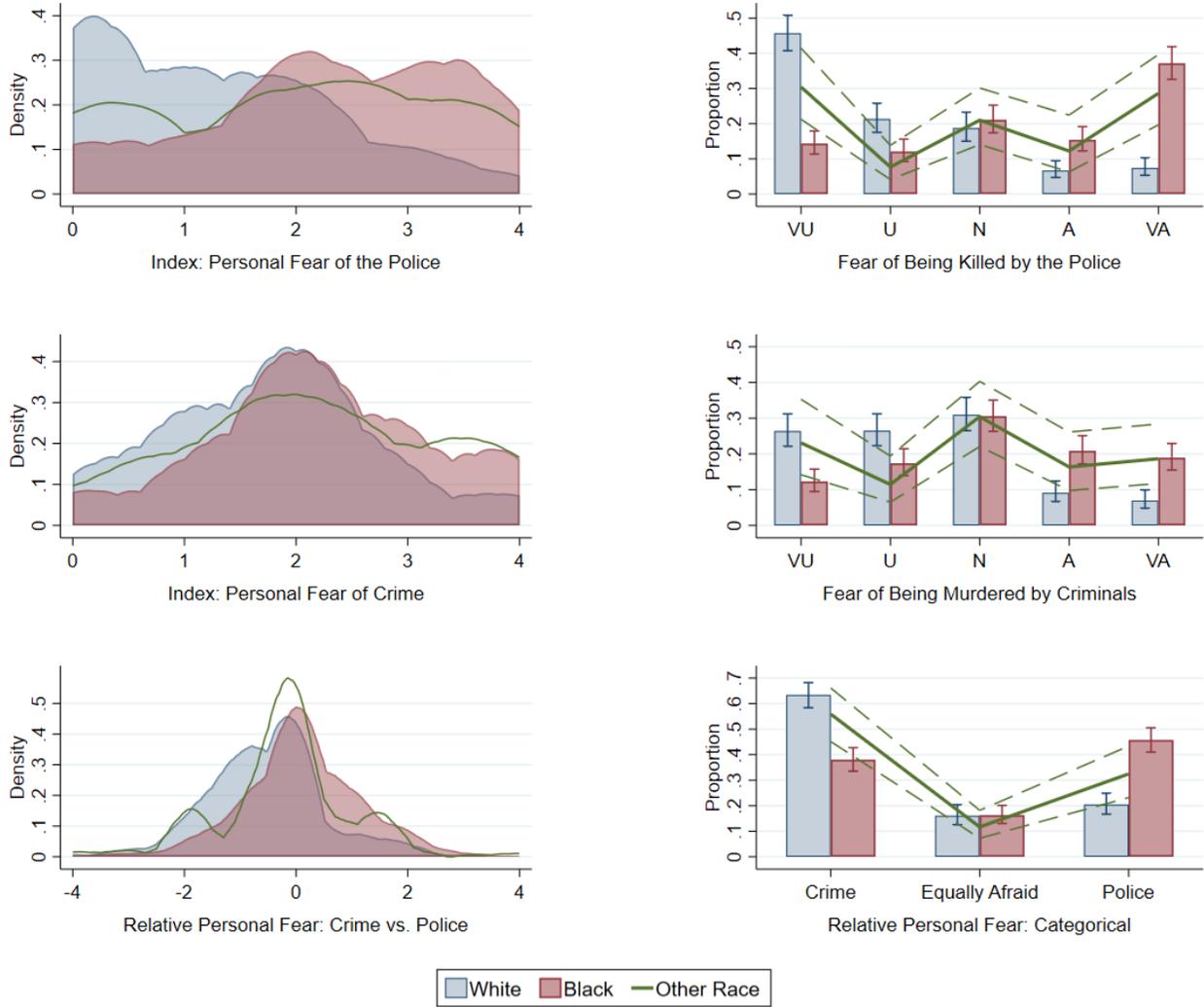


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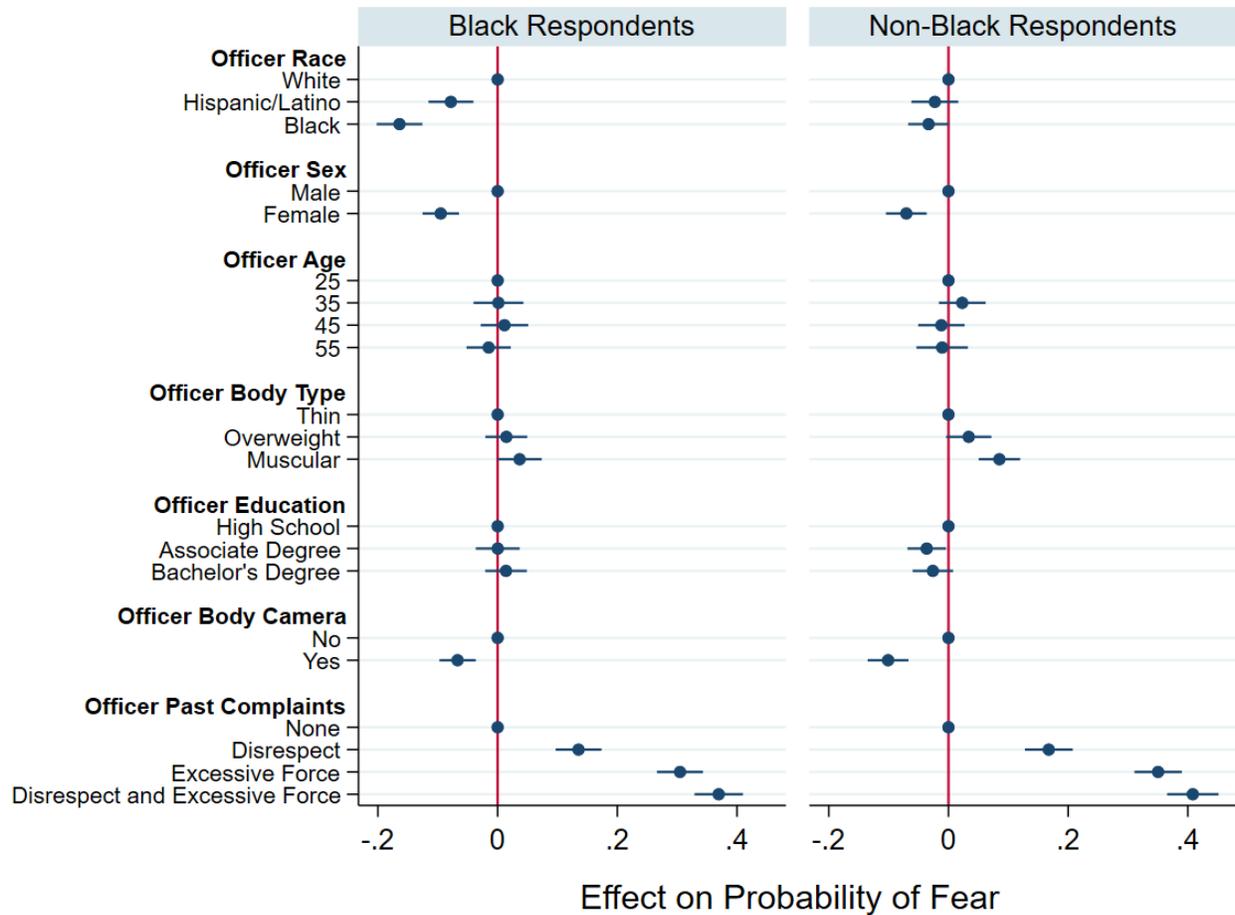


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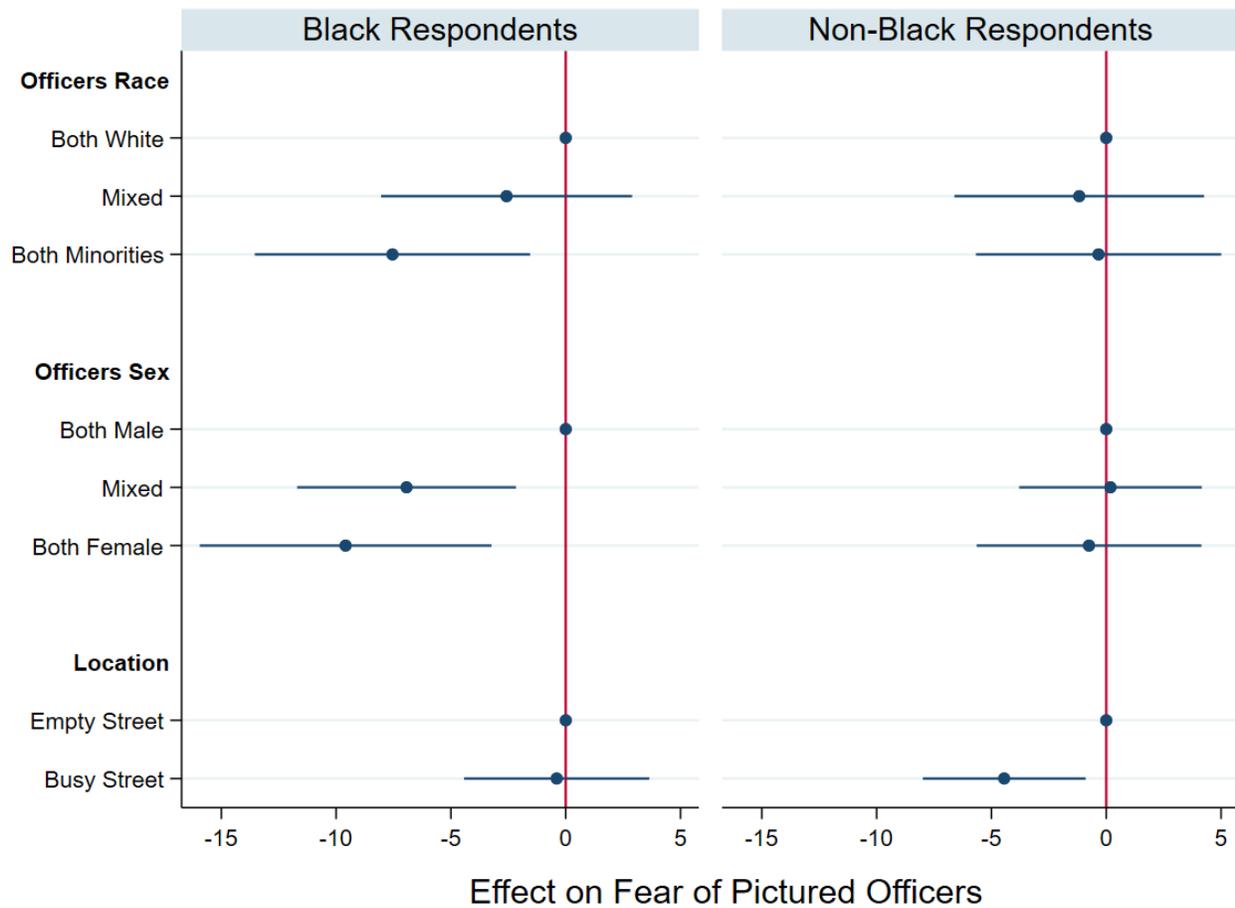
**Fig. 1. Experiment 2: Pictured Used.** Each respondent received a random pairing of the pictures for officers 1 and 2. The pictures were taken from the Chicago Face Database and then photoshopped into officer uniforms.



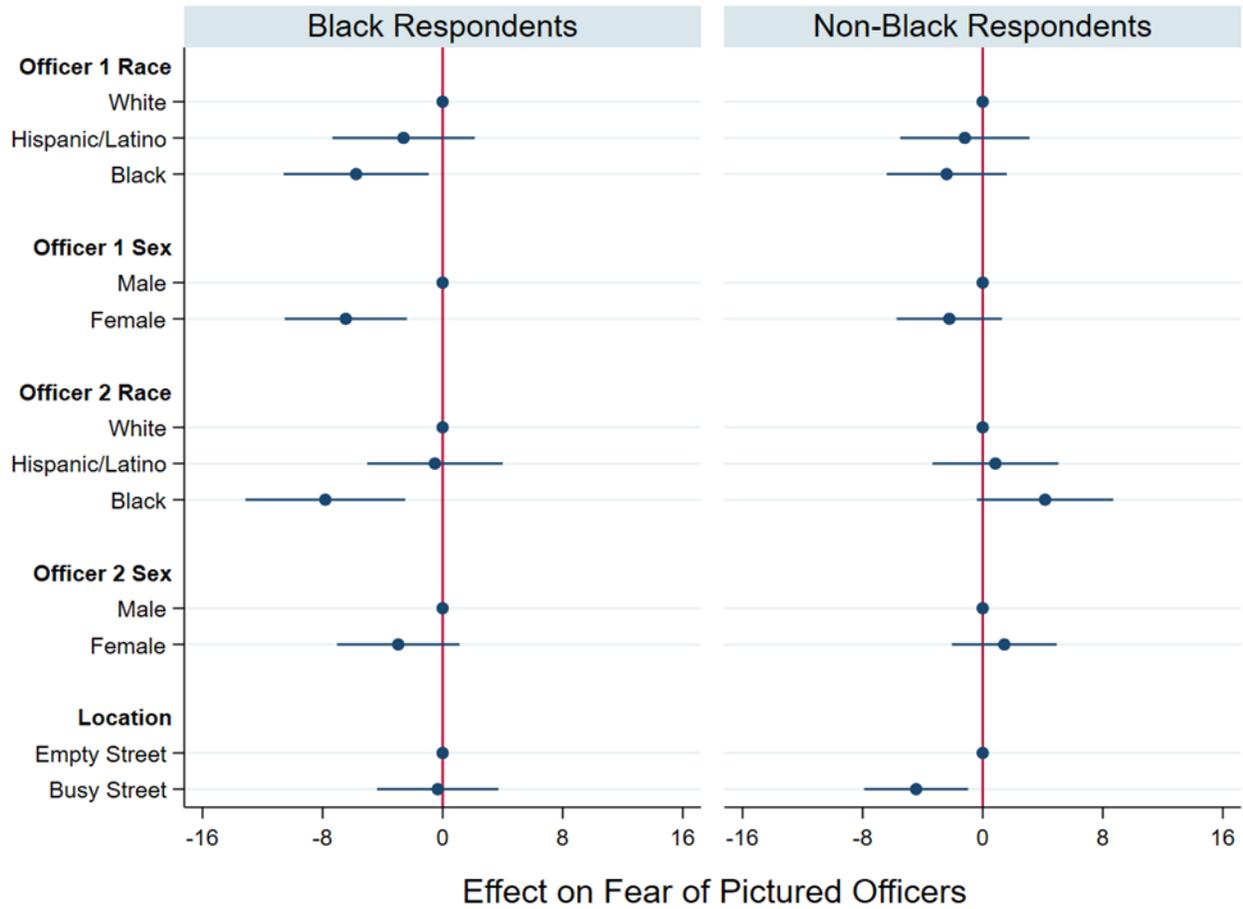
**Fig. 2. General Fear of the Police and Crime, by Race.** The left panels show the kernel densities for the baseline personal fear of police index (average of 10 items) and personal fear of crime index (average of five items). On these two indices (fear of police and fear of crime), a score of 0 equals “very unafraid” and score of 4 equals “very afraid.” For illustrative purposes, the top and middle panels on the right show the distribution for one of the measures used in each index. The relative fear index (bottom panels) is equal to the difference between the two fear indices. VU = very unafraid, U = unafraid, N = neither afraid nor unafraid, A = afraid, and VA= very afraid.



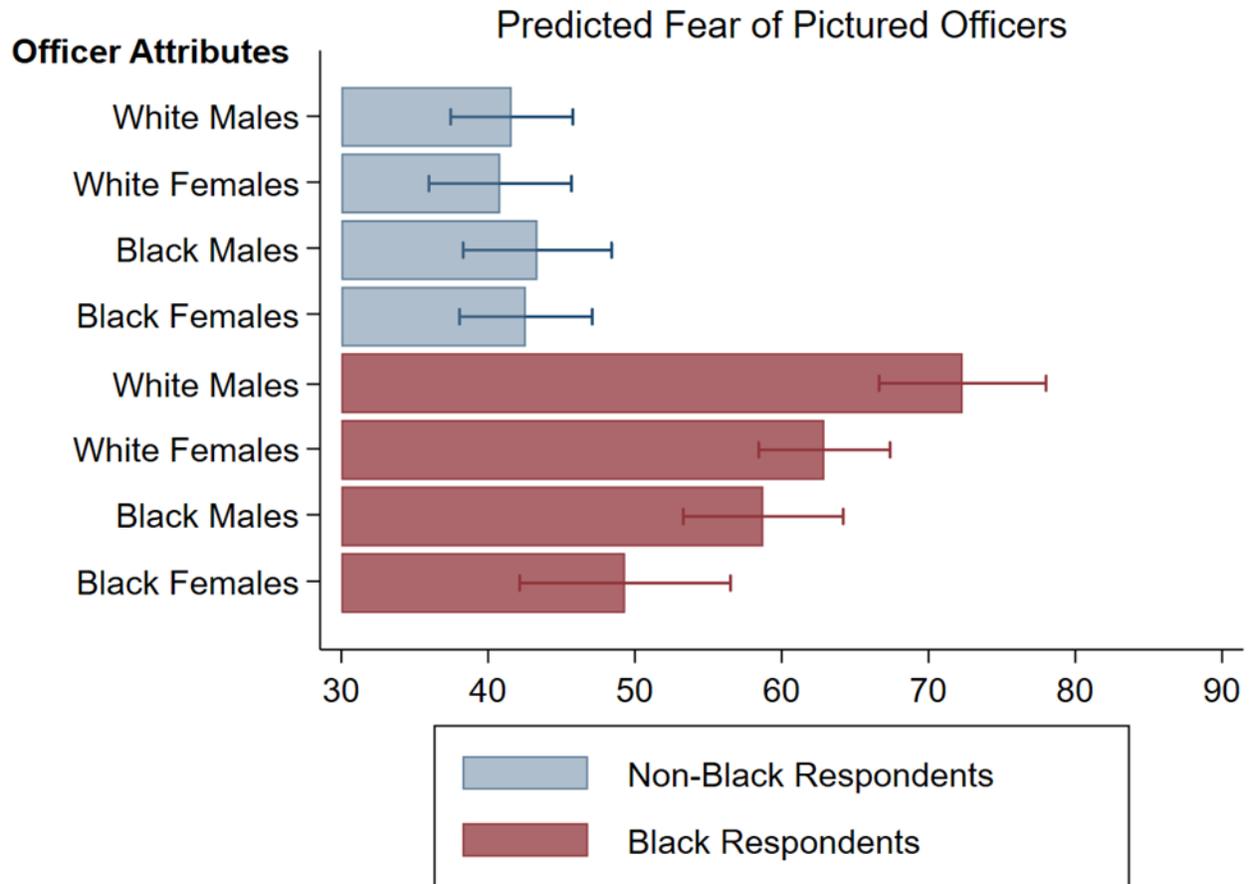
**Fig. 3. Experiment 1: Average Marginal Component Effects of Officer Attributes on Fear of the Police, by Respondent Race.** Models are estimated using linear regression and sampling weights with robust standard errors clustered at the respondent level. AMCE (with 95% confidence intervals) are shown. The sample sizes are: 5,092 profile choices clustered in 510 Black respondents and 5,880 profile choices clustered in 589 non-Black respondents.



**Fig. 4. Experiment 2: Marginal Effects of Officer-Pair Diversity and Encounter Location on Fear of Pictured Police, by Respondent Race.** Models are estimated using linear regression and sampling weights with robust standard errors. Unstandardized coefficients (with 95% confidence intervals) are shown. Estimates are adjusted for baseline (general) fear of the police. The sample sizes are 511 Black respondents and 589 non-Black respondents.



**Fig. 5. Experiment 2: Marginal Effects of Each Officer’s Race and Sex on Fear of Pictured Police, by Respondent Race.** Models are estimated using linear regression and sampling weights with robust standard errors. Unstandardized coefficients (with 95% confidence intervals) are shown. Estimates are adjusted for baseline (general) fear of the police. The sample sizes are 511 Black respondents and 589 non-Black respondents.



**Fig. 6. Experiment 2: Predicted Encounter-Specific Fear, by Officers' Race and Sex.** Figure shows adjusted predictions (and 95% confidence intervals) from models in Fig. 5.

## Appendix. Weighted Descriptive Statistics

Variables	General Population Sample		Black Oversample		Range
	Mean	SD	Mean	SD	
White	.63	.48	—	—	0–1
Other race/ethnicity	.25	.43	—	—	0–1
Black	.12	.33	—	—	0–1
Female	.51	.50	.53	.50	0–1
Age	49.19	18.05	46.62	17.76	19–95
Education					
No high school	.07	.26	.05	.22	0–1
High school degree	.31	.46	.39	.49	0–1
Some college	.20	.40	.20	.40	0–1
Associate degree	.12	.32	.15	.36	0–1
Bachelor's degree	.19	.39	.13	.34	0–1
Graduate degree	.12	.32	.07	.26	0–1
Family Income	5.06	3.65	5.02	3.43	0–15
Unemployed	.09	.28	.14	.35	0–1
Married	.41	.49	.32	.47	0–1
Parent (child < 18)	.21	.41	.30	.46	0–1
Parisian identification					
Strong Democrat	.25	.43	.46	.50	0–1
Not strong Democrat	.13	.34	.18	.39	0–1
Lean Democrat	.09	.28	.09	.29	0–1
Independent	.20	.40	.19	.39	0–1
Lean Republican	.09	.29	.02	.14	0–1
Not strong Republican	.08	.28	.03	.17	0–1
Strong Republican	.15	.36	.03	.17	0–1
Political ideology					
Very liberal	.14	.34	.15	.36	0–1
Liberal	.18	.39	.27	.44	0–1
Moderate	.36	.48	.44	.50	0–1
Conservative	.20	.40	.10	.30	0–1
Very conservative	.12	.33	.04	.18	0–1
Urbanicity					
Rural area	.17	.37	.10	.30	0–1
Small town	.12	.33	.07	.25	0–1
Suburban Area	.35	.48	.37	.48	0–1
Smaller city	.16	.37	.15	.35	0–1
Big city	.19	.39	.32	.47	0–1
Region					
Northeast	.18	.38	.16	.37	0–1
Midwest	.20	.40	.17	.38	0–1
South	.38	.49	.59	.49	0–1
West	.24	.43	.08	.27	0–1

NOTES: For the analysis, we combined the Black respondents who were in the general population sample with those in the Black oversample.