



Is it Black and White? Testing racial framing effects of public reactions to newspaper vignettes of fatal officer-involved shootings

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Abstract

Objectives To investigate how race shapes public perceptions of a fatal officer-involved shooting of an armed male citizen depicted in a scenario without racial identifiers, intraracial, and interracial.

Methods We distributed an online survey whereby respondents indicated justification, measured by four questions about the fatal officer-involved shooting, after being randomly assigned to three conditions that differed by the racial composition of the officer and armed male citizen. The control condition omitted racial identifiers, and two conditions depicted an interracial and intraracial deadly encounter between a White officer and a White or Black citizen.

Results White and non-White respondents similarly perceived the intraracial shooting, but White respondents perceived the control condition and the interracial shooting as more justified than non-White respondents.

Conclusions An identical news article of a fatal officer-involved shooting can be perceived differently when altering the race of the officer and armed male citizen.

Keywords Attitudes · Deadly force · Experiment · Officer-involved shooting · Race and policing · Survey · Use of force

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Introduction

Significant media attention is devoted to the coverage of fatal officer-involved shootings of citizens. While numbers from the Centers for Disease Control and Prevention (CDC) indicate that the population death rates of legal interventions by firearms for Black citizens have progressively dropped from the late 1960s to 2016 (CDC, 2023a, b, c), the racial and gender disparities of the decedents of officer-involved shootings (by population rate) continue to be Black and men.¹ Fatal officer-involved shootings from 2012 to 2022 show racial-gender disparities, with Black men three times more likely to be shot by police than White men relative to their representation in the population (Mapping police violence, 2023).²

Scholarly attention to police use of deadly force has grown considerably from 2011 to 2020 (Mora et al., 2022). Correspondingly, scholars have explored how newspapers framed officer-involved shootings and their decedents (Hirschfield & Simon, 2010; Phelps & Hamilton, 2022; Riddle et al., 2020; Smiley & Fakunle, 2016; Stone & Socia, 2019). However, a missing piece in such a prominent issue is how the American public may react and interpret information about a fatal officer-involved shooting when primed with racial details. It is worth noting that national-scale data does not support the narrative of White officers disproportionately killing Black citizens (Legewie & Fagan, 2016; Menifield et al., 2018; Tregle et al., 2019). Public attention to fatal officer-involved shootings is notable as every fourth American city (exceeding 30,000 residents) responded with a Black Lives Matter protest, increasing to nearly every other American city organizing a protest in response to shootings of Black citizens (from January 2013 to August 2014) (Williamson et al., 2018).

This discord of public reactions to fatal officer-involved shooting data is of the study's interest and whether the public's interpretation of the deadly encounter would alter based on the officer's and citizen's racial composition. Given the highly racialized issue of fatal officer-involved shootings, we alter the racial composition of the parties involved in a self-constructed scenario of an officer engaging in deadly force against an armed male citizen. Accrued through online sampling, respondents were randomly assigned to three unique conditions. In keeping with real-life data about fatal officer-involved shootings at the national level, our control condition contains an officer who is not identified by their race (Hirschfield & Simon, 2010; Menifield et al., 2018), as well as the armed male citizen (Mapping police violence, 2023; Menifield et al., 2018). Our next two conditions both contain a White officer, as most police forces are White-dominant (Goodison, 2022), alternating the armed male citizen's race as White and Black. The justification of deadly

¹ The CDC (2023d) defines legal intervention as a death inflicted by "police or other law enforcement agents acting in the line of duty...that occur while arresting or attempting to arrest someone, maintaining order, or ensuring safety."

² We would be remiss not to mention that the ratio of Black to White citizen deaths by police varies by the benchmark used. For instance, the racial disparity of fatal officer-involved by population data is less intense when using arrest data, which reflects the exposure to police, and shows that the rate of death is similar across races (Legewie & Fagan, 2016; Tregle et al., 2019).

force was measured by agreement that the officer's actions were justified, without choice, and the correct response, and whether the citizen was to blame. Generally, White and non-White respondents similarly perceived the White officer shooting an armed White male citizen, but White respondents perceived the scenario absent of race and the White officer shooting an armed Black male citizen as more justified than non-White respondents.

Framing fatal officer-involved shootings

Text can be communicated by constructing information by selecting certain items, otherwise conceptualized as framing (Entman, 1993; Iyengar, 1991). Frames can be devised by pulling from a (cultural) pot of preexisting ideas, which facilitates the organization of immense amounts of information and further helps to expedite a message (Entman, 1993). Thus, the public often reads simplified versions of police use of force incidents that depict them as case studies (Lawrence, 2000). As with the presence of information, omitting information from frames can also be instrumental in its messaging to its receivers. Ultimately, these framing effects, through altering the message communicated to its receivers, can influence the outcomes of their decisions (Entman, 1993; Iyengar, 1991).

The interpretations of these frames can be contributed by claimsmakers (Beckett, 1997). For instance, for newspapers, journalists draw upon a range of viewpoints and discourses, including their own, when contributing to their audiences' media frames (Surette, 2015), but journalists also tend to privilege the official perspective, such as the police (Hirschfield & Simon, 2010; Kochel, 2019; Lawrence, 2000; Stone & Socia, 2019). State actors, like the police, are advantaged as they are considered the most legitimate source; in turn, they become the primary definers, controlling the narrative (Lawrence, 2000). Journalists' reliance on official spokespeople and government representatives is further exacerbated by the pressures of the 24/7 pace of news reporting (Beckett, 1997; Mawby, 2010; Stone & Socia, 2019). Moreover, investigative journalism limits in-depth examinations of social problems, as evidenced by how subsequent news articles of a high-profiled fatal officer-involved shooting in Cleveland, Ohio, had not widely diverged from the initial story packaged by police (Stone & Socia, 2019; however, see Hirschfield & Simon, 2010). The constraints (like time and money) faced by journalists, particularly local journalists who cannot be as critical of police departments as national journalists, generate increased concerns of an unquestionable regurgitation of police-prepared packaged narratives that continually reinforce their viewpoints with no opposition (Beckett, 1997; Lawrence, 2000; Mawby, 2010).

American daily newspapers frame fatal officer-involved shootings in a variety of ways (Hirschfield & Simon, 2010; Phelps & Hamilton, 2022; Riddle et al., 2020; Smiley & Fakunle, 2016; Stone & Socia, 2019). News articles centered on deadly force incidents demonstrated a differential construction of key actors through linguistics, such as legitimizing the fatal officer-involved shooting by syntactically mentioning the decedent as the suspect (Hirschfield & Simon, 2010). Readers are provided with these moral character portraits to actively engage them in the assignment of responsibility among those described in the events that unfolded (Ericson

et al., 1991); alternating terms like decedent and suspect can obscure agency, if not shift readers to be more inclined to blame the suspect (Hirschfield & Simon, 2010). Another strategy routinely evidenced within news articles was the anonymity of police, which can shift the attribution of responsibility onto the citizen while assigning rationality to the police. One original database of a year's total of intentional line-of-duty deaths of citizens by officers at the national level constructed by Menfield et al. (2018) supported the use of this strategy, as one-third of the newspaper articles did not reveal the race of the officer. The significance of omitting officer details, as articulated by Entman (1993), is that readers can pull from preexisting information, such as identifying police as masked vigilantes, oppressors, or professionals (Hirschfield & Simon, 2010), thus imbuing meaning onto the depicted officers.

Race and perceptions of fatal officer-involved shootings

There are racial cleavages in public approval of officers using deadly force against citizens (Culhane et al., 2016; Cullen et al., 1996; Haider-Markel & Joslyn, 2017; Navarro & Hansen, 2023). Inspired by the landmark Supreme Court case *Tennessee v. Garner* (1985), where the US Justices ruled that officers could reasonably use deadly force if the citizen posed a risk to the officer or the public, Cullen et al. (1996) investigated whether racial differences would emerge among respondents based on their reading of an identical scenario but replaced by one of the eight criminal offenses. Results showed that both White and Black respondents supported police use of deadly force if citizens were committing crimes that entailed the (threatened) use of serious physical injuries, such as raping a woman or robbing a convenience store. However, Black respondents were less supportive than White respondents of police use of deadly force for crimes that did not constitute serious physical injury.

Subsequent research invited respondents to a more immersive experience with their engagement in deadly force toward citizens, with results demonstrating mixed support for whether the public would react similarly to officers and would understand the officer's actions. One study tested the reactions of undergraduates to a video game task that entailed pressing a button to indicate "Shoot" or "Don't Shoot" to a pair of armed Black or White robbers after being randomly assigned to read a news article that contained either racial pair (Correll et al., 2007). The undergraduates, on average, reacted more quickly to shooting the pair of armed Black robbers than their White counterparts, supporting the hypothesis of a racial bias that they were primed by the news article describing the string of armed robberies the Black pair of robbers had committed. However, James et al. (2013) argued that when provided extensive practice with the handgun training simulation and feedback by trainers, civilians will react similarly to the displayed individuals, regardless of race, as active-duty police and military members. Each of the three categories of respondents, although predominantly White overall, reacted more slowly in shooting armed Black individuals than White individuals; therefore, the racial bias was against White individuals.

While there is some understanding that the racial composition of the citizens can prime respondents participating in simulation research, there have been calls to

see media portrayals of the officers involved in officer-involved shootings (Dukes & Gaither, 2017). One vignette study pooled an online sample of respondents in two separate time periods (before and after a real-life, high-profiled fatality of an unarmed Black male citizen [Michael Brown] by a White officer) to ascertain their reactions to a fictitious officer-involved shooting scenario between a White individual armed with a knife and a White officer (Culhane et al., 2016). There were no racial differences in the justification of the officer-involved shooting before the real-life death of the unarmed Black male citizen, otherwise known as Study 1. However, Study 2 results demonstrated that non-Whites were more likely to perceive the White officer-White citizen fatal shooting scenario as unjustified than the White respondents when another sample of respondents were surveyed after the Michael Brown shooting. There was also a racial difference in attributing blame for the real-life deadly encounter. White respondents assigned greater blame to the citizen, whereas non-White respondents assigned greater blame to the officer. However, these racial differences identified by Culhane et al. (2016) may be temporal per a 1-year post-study by Culhane and Schweitzer (2017). Although non-White respondents continued to attribute more blame toward the White officer (who shot Michael Brown) than White respondents, even 1 year after the deadly encounter, the scores measuring justification returned to mirror those of Study 1 (Culhane & Schweitzer, 2017; Culhane et al., 2016).

Whereas the studies by Culhane and colleagues (Culhane & Schweitzer, 2017; Culhane et al., 2016) emphasized a White officer-Black citizen fatal shooting scenario, Henderson et al. (2021) designed a 2 (citizen race: White/Black) × 2 (citizen attire: graduation regalia/hoodie) study to measure how respondents rated the justification of a fatal officer-involved shooting that they read as a news story that contained an image of the young male. Emphasizing the decedent's race (instead of the officer's) and alternating their race, ratings by respondents indicate that the justification of the deadly encounter varies by the race of the young male (regardless of attire). Scores indicated that officer-involved shootings of Black young men were more justified than those of their White counterparts. What remains unanswered is whether public interpretations of a fictitious officer-involved shooting are influenced outside of a historical event and whether perceptions alter based on the officer's and citizen's racial composition.

Methods

Data

To study perceptions of fatal officer-involved shootings of armed male citizens by police in the USA, we conducted an original web survey experiment using Qualtrics survey software. The survey was launched on 24 October 2022. Potential survey respondents were adults aged 18 and older residing in the USA. Each submission resulted in a \$0.80 payment, even if the respondents did not answer all the questions. The average time the survey took to be completed by the respondents was 6 min and 12 s, which, if calculated at an hourly rate, would be slightly over the federal

minimum wage. Overall, 989 respondents completed all the questions utilized in the multiple regression analyses. The survey experiment received Institutional Review Board (IRB) approval, and all participants included in this study gave their informed consent.

MTurk provides several advantages for social science scholars to conduct surveys and obtain high-quality and useful data. Despite nearly all samples in social science being convenient (Landers & Behrend, 2015), MTurk samples tend to be demographically more diverse than samples generated from other typical online methods (Buhrmester et al., 2011). Moreover, the attentiveness of MTurk online respondents recruited for research is comparable to that of offline respondents, thus suggesting that online respondents yield reliable, valid data by comparison (Thomas & Clifford, 2017). In a similar vein, MTurk respondents do not differ from popular national population-based surveys in unmeasurable ways (Clifford et al., 2015; Levay et al., 2016). Researchers can advance science using MTurk if they acknowledge and account for how their sample might differ from the population (Landers & Behrend, 2015; Levay et al., 2016).

Our sample does not deviate dramatically from the population as it relates to socio-demographic and attitudinal trends, with two exceptions. The sample had a greater proportion of men than women. Additionally, after coding partisan leaners as partisans, the sample had a noticeably greater proportion of Democratic identifiers. We estimate post-stratification survey weights based on US Census data and aggregated polling data to account for these two disproportionalities in the data. All multiple ordinary least squares (OLS) regression models estimated in the analysis are calculated with the survey weights incorporated using the “survey” packages in R statistical software so that the sample better approximates the population as nationally representative.

Experimental design

Respondents were randomly assigned to one of the three news articles (designed with LaTeX typesetting software and various packages to appear like a brief news article) describing a fatal encounter between an officer and armed citizen, both identified as men (see Fig. 1). We constructed a news story that is similar to a next-day incident report of an officer-involved shooting. Such next-day incident reports garnered the most coverage per Hirschfield and Simon’s (2010) research of 23 major American daily newspapers that reported police-citizen deadly encounters and averaged 396 words in length—the control condition comprised 239 words. The ecological validity of our study is enhanced because respondents are likely exposed to everyday activities like reading stories from media outlets such as newspapers (Correll et al., 2007) as we depicted, coupled with the study’s scenario being brief and episodic as with most news articles reporting on crime and policing (Iyengar, 1991; Lawrence, 2000).

Control	White Officer, White Citizen	White Officer, Black Citizen
<p>Body camera video from a police officer shows they ordered a legally armed citizen to drop a gun before opening fire, killing him. The officer was cleared of wrongdoing by a grand jury in the citizen's death, who had a permit to carry a concealed weapon.</p> <p>Responding to calls from bystanders, the footage from the officer's body camera begins with the police officer rolling up to a fight on a street in the downtown area outside a bar. The officer exits his patrol vehicle, and a man at the scene says several times, "He has a gun on him! He has a gun!" as he points to the armed citizen, who appears to be trying to keep his friend from a fight. The officer grabs the citizen's arm from behind and tells him to back away from the fight. A black object that appears to be a gun is visibly protruding from the citizen's right hip pocket at that moment in the body camera video.</p> <p>The citizen falls to the ground as someone says, "He's got a gun!" The citizen then gets up and turns to face the officer, who shouts at him to drop the gun. The officer stated that the gun was not dropped within a reasonable amount of time, so he fired his duty weapon killing the citizen. It was later uncovered that the citizen had a permit for the gun and completed gun safety training.</p>	<p>Body camera video from a white police officer shows they ordered a legally armed white citizen to drop a gun before opening fire, killing him. The officer was cleared of wrongdoing by a grand jury in the citizen's death, who had a permit to carry a concealed weapon.</p> <p>Responding to calls from bystanders, the footage from the officer's body camera begins with the police officer rolling up to a fight on a street in the downtown area outside a bar. The officer exits his patrol vehicle, and a man at the scene says several times, "He has a gun on him! He has a gun!" as he points to the armed citizen, who appears to be trying to keep his friend from a fight. The officer grabs the citizen's arm from behind and tells him to back away from the fight. A black object that appears to be a gun is visibly protruding from the citizen's right hip pocket at that moment in the body camera video.</p> <p>The citizen falls to the ground as someone says, "He's got a gun!" The citizen then gets up and turns to face the officer, who shouts at him to drop the gun. The officer stated that the gun was not dropped within a reasonable amount of time, so he fired his duty weapon killing the citizen. It was later uncovered that the citizen had a permit for the gun and completed gun safety training.</p>	<p>Body camera video from a white police officer shows they ordered a legally armed black citizen to drop a gun before opening fire, killing him. The officer was cleared of wrongdoing by a grand jury in the citizen's death, who had a permit to carry a concealed weapon.</p> <p>Responding to calls from bystanders, the footage from the officer's body camera begins with the police officer rolling up to a fight on a street in the downtown area outside a bar. The officer exits his patrol vehicle, and a man at the scene says several times, "He has a gun on him! He has a gun!" as he points to the armed citizen, who appears to be trying to keep his friend from a fight. The officer grabs the citizen's arm from behind and tells him to back away from the fight. A black object that appears to be a gun is visibly protruding from the citizen's right hip pocket at that moment in the body camera video.</p> <p>The citizen falls to the ground as someone says, "He's got a gun!" The citizen then gets up and turns to face the officer, who shouts at him to drop the gun. The officer stated that the gun was not dropped within a reasonable amount of time, so he fired his duty weapon killing the citizen. It was later uncovered that the citizen had a permit for the gun and completed gun safety training.</p>

Fig. 1 Newspaper article and experimental design

The general structure of the news story describes an officer being cleared of wrongdoing by a grand jury in a citizen's death.³ It begins by describing an officer responding to a call about a fight occurring outside a bar in a downtown area. When the officer arrived at the scene, they grabbed a citizen (who was discouraging the fight) by the arm. As the citizen falls in response, a bystander yells that the citizen has a gun. The officer orders the citizen to drop the gun as the citizen turns to face the officer. Since the gun was not dropped in a timely manner, the officer fatally shot the citizen. It was later discovered that the citizen had a permit for the gun and had completed gun safety training.

Except for the first sentence that served as our event sentence, the rest of the news story remained identical across the three conditions. Respondents randomly assigned to the control condition received the news story that did not identify the race of the officer or the citizen, thus providing a baseline of the fatal police-citizen shooting scenario whereby race will not shape the interpretation of the news story. The remaining two conditions identified the race of the officer and the citizen. Both conditions reveal that the officer is White. This choice was made for two reasons. One, we did not have any theoretical expectations that identifying the officer as Black might influence respondents' evaluations of the news story.⁴ Two, a common flaw of experimental studies is over-complication; therefore, scholars should be more inclined to prefer fewer treatments firmly supported by theory (Barasko et al.,

³ Except for race, the study's vignette did not mention several individual-level characteristics and background details as they can influence the perceived justification of the shooting. For instance, time of day, the citizen's attire, and the citizen's (past) criminality were excluded from mention as those variables have been identified to influence the citizen's suspicion or respondent approval of excessive or deadly force (Cullen et al., 1996; Phillips, 2020; Smith & Merolla, 2019).

⁴ The survey was conducted prior to the death of Tyre Nichols, a 29-year-old Black male. Five on-duty Black officers have been charged with the beating death of Nichols (Bailey & Honderich, 2023).

2014). Thus, the only difference between the two racial conditions is that the armed male citizen is identified as White (White officer-White citizen), with the second condition identifying the armed male citizen as Black (White officer-Black citizen). The control condition will help identify the degree of difference when compared to responses to the two racial conditions but may not fully nullify the possibility that respondents bring in preconceived beliefs that could influence their interpretation of a deadly officer-involved shooting.

Why this story? We created a story containing a neutral characterization of both the officer and citizen, so there was no stronger inclination to hold either the officer or the citizen as more responsible for the outcome. In the story, we highlighted that the officer shouted for the citizen to drop the gun before shooting and was cleared of wrongdoing by a grand jury. We also emphasized that the citizen was legally allowed to carry the gun and implied that they were a responsible gun owner since they had completed safety training. In addition, the second paragraph, which is the longest paragraph, emphasized the chaotic nature of the situation and indicated that it might be unreasonable for either the officer or the citizen to act in a rational, reasonable manner. Thus, the current story would unlikely garner bias against or in favor of the officer or citizen. Therefore, if we find racial differences across the three conditions, we can be reasonably confident that the study contains internal validity.

Hypotheses

H₁: White respondents will have a higher level of agreement with the statements supporting the officer's actions that resulted in a fatal outcome for the citizen in the control group that is absent of racial identifiers in the depicted scenario.

H₂: There will be no racial differences in the level of agreement with the statements supporting the officer's actions that resulted in a fatal outcome for the citizen in the White officer-White citizen condition.

H₃: White respondents will have a higher level of agreement with the statements supporting the officer's actions that resulted in a fatal outcome for the citizen in the White officer-Black citizen condition.

Dependent variables and method

Respondents were told they would read about a fatal officer-involved shooting that was recently reported in the news and to indicate their agreement to four statements after they read the news article. These four statements tapped into the officer's actions of engaging in deadly force as being justified, without choice, the correct response, and whether the citizen was to blame. After being randomly assigned to one of the three conditions, respondents rated their level of agreement with each of the four statements on a 0–10 scale from 0 = "not at all" to 10 = "a great degree." Higher values indicate greater agreement with the officer's actions to engage in deadly force by firearm, with a five on the scale indicating "neither agree nor disagree."

Independent variables

We utilize several socio-demographic and attitudinal variables as predictors of agreement with the four statements of the fatal officer-involved shooting. First, we include age, gender, race, education, income, and residential environment in the models. Sample size and the number of conditions limited the use of multiple racial categories; thus, race is dichotomous: 0 = non-White and 1 = White. Second, we include political ideology and partisan identification in the models as attitudinal predictors since policing issues have become increasingly politically polarizing (Gallup, 2023). Variable coding and descriptive statistics for all independent variables can be found in the Appendix.

Results

Table 1 shows the descriptive statistics of the four statements that respondents were asked to provide their level of agreement with the officer's actions per condition. Overall, there were no bivariate statistically significant differences in the mean levels of agreement across the three conditions for any of the four statements. Across each condition, respondents scored just above the scale midpoint for all four statements regarding the agreement with the officer's actions in fatally shooting the armed male citizen.

The mean levels of agreement with the four statements support the assertion that we provided a neutral story that did not favor the officer or the citizen. Specifically, the highest support of agreement for two statements is evidenced in the White officer-White citizen (officer justified, citizen to blame) and the White officer-Black citizen (officer no choice, correct response) conditions. On the opposite end of the agreement scale, the control condition respondents reported the lowest support for two statements (citizen to blame, correct response), with the lowest support for the remaining statements reported by respondents in the White officer-White citizen (officer no choice) and White officer-Black citizen (officer justified) conditions. Moreover, the standard deviation statistics are quite large for variables that are measured on a 0–10 scale, which indicates that there is considerable variance worth exploring in the levels of agreement with the statements. Therefore, we estimate multiple OLS regression models to predict the variance of the agreement for each of the four statements. Each of the models utilizes survey weights to account for the representativeness of the sample (see the “Data” section).

The histograms represent the levels of agreement across the four statements for each of the three conditions by sample (see Fig. 2) and race (see Fig. 3). Although the descriptive statistics suggest that the mean level of agreement is statistically similar for the four statements across all three groups, the distribution of responses and mode is not identical across groups. For example, a larger proportion of respondents in the White officer-Black citizen condition indicated “10 = to great degree” for each of the four statements than respondents in the White officer-White citizen condition. Likewise, a larger share of respondents indicated “0 = not at all” across all four statements when the armed male citizen was Black compared to White. These results indicate that there is variance worth further exploration.

Table 1 Descriptive statistics—mean level of agreement by treatment group to statements

Question	Control group (N = 331)	White officer-White citizen (N = 328)	White officer-Black citizen (N = 330)
The officer was justified in using their weapon	5.60 (3.15)	5.77 (2.87)	5.54 (3.06)
The officer had no choice but to harm the citizen	5.07 (3.27)	5.05 (3.03)	5.14 (3.27)
The citizen is mainly to blame for the situation	5.54 (3.04)	5.73 (2.86)	5.65 (3.07)
The officer chose the correct response given the situation	5.47 (3.30)	5.51 (3.06)	5.54 (3.24)

Standard deviations are in parentheses

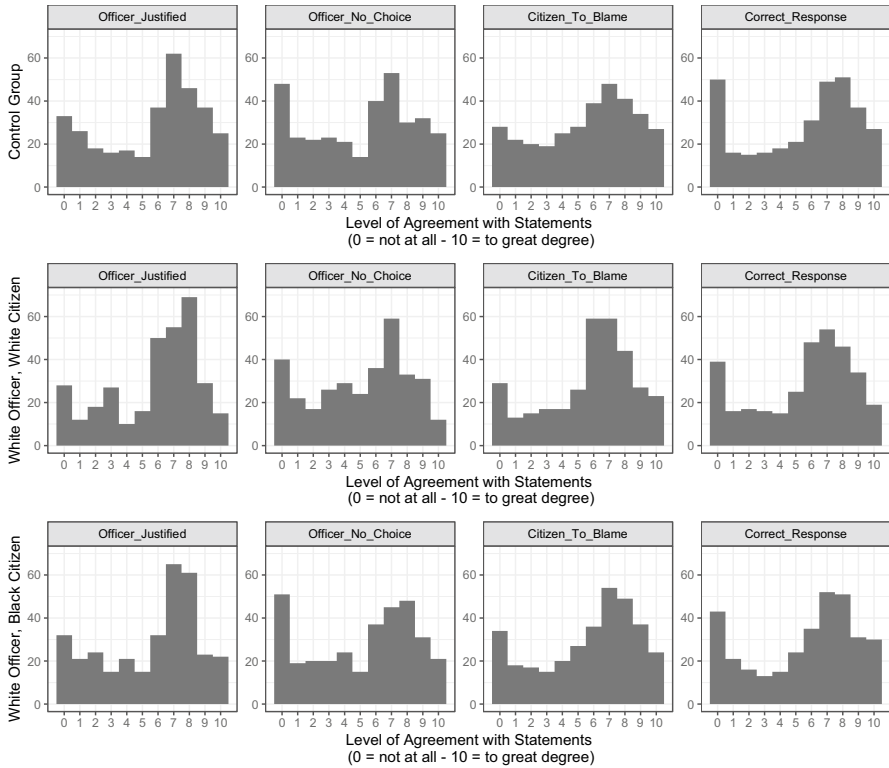


Fig. 2 Descriptive statistics—statement response counts across conditions by sample

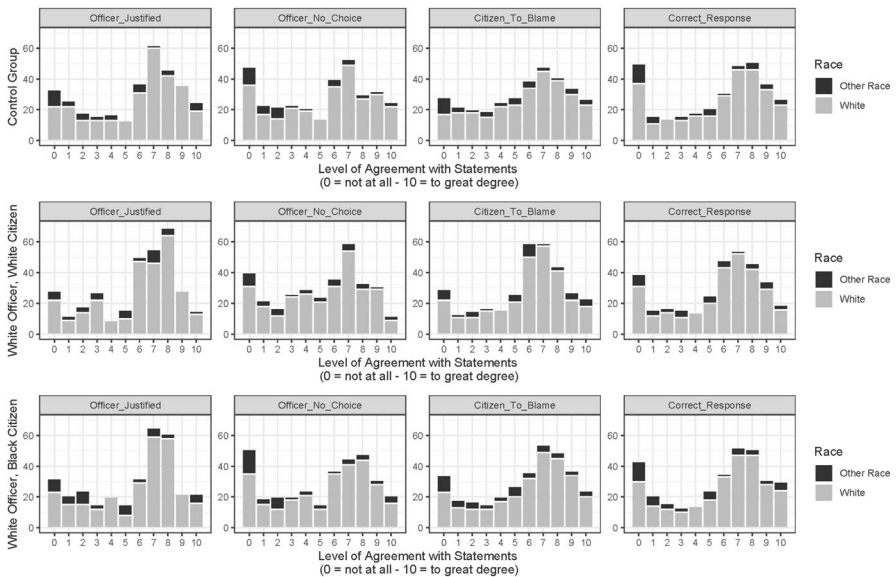


Fig. 3 Descriptive statistics—statement response counts across conditions by race

Models shown in Table 2 predicted levels of agreement with the four statements of the officer's actions against the armed male citizen for each of the three conditions. In partial support of H_1 , White respondents in the control condition, where race is not mentioned, are statistically more likely than non-White respondents to agree with two statements pertaining to the officer's actions. That is, White respondents were more likely to perceive the officer's actions as justified and of greater agreement that the officer had no choice, but there was no racial gap in agreement of the officer's response being the correct one given the situation and that the armed male citizen was to blame for the situation that led to their death. In support of H_2 , there are no racial differences in agreement with the White officer's use of deadly force against an armed White male citizen. In support of H_3 , White respondents, in comparison to non-White respondents, are statistically more likely to agree that when the armed male citizen is Black, the White officer was justified in the use of deadly force, had no choice, and chose the correct response and that the citizen is to blame. Overall, racial differences exist in the perceived agreement of fatal officer-involved shootings. White respondents had a racial bias that was consistently unfavorable toward an armed Black male fatally shot by a White officer. However, regardless of respondent race, they similarly perceived the fatal shooting by a White officer of an armed White male. When no racial identifiers were included in the scenario, racial differences in the control condition continued in a similar direction as that of the White officer-Black citizen condition, in that White respondents perceived the officer's actions as justified and that the officer had no choice; however, there were no racial differences in agreement regarding the officer's actions being the correct response and citizen blameworthiness.

While the focus of our analysis was on the role that race plays in the evaluations of fatal officer-involved shootings, a couple of patterns in Table 2 deserve mention. One variable was a statistically significant predictor for the officer's use of deadly force across all 12 statements for the three conditions: political ideology. Respondents self-reporting a conservative ideology were consistently and strongly related to agreement with the four statements.

Similarly, except for a few statements across the three conditions, two socio-demographics demonstrated consistent relationships for the officer's use of deadly force. Specifically, respondents of higher education were more likely to support the officer-involved shooting, except for no differences in agreement to two statements (officer justified, citizen to blame) in the White officer-Black citizen condition. The second socio-demographic, residential environment, indicated that when compared to suburban residents, rural residents demonstrated greater support for the officer-involved shooting, except where they exhibited no statistically significance differences in the armed White citizen's blameworthiness when fatally shot by the White officer. Noteworthy is the one disagreement between rural and urban residents whereby rural control respondents indicated greater agreement that the officer's actions were without choice when deadly force was toward an armed male citizen.

One variable consistently predicted support for the White officer's actions in engaging in deadly force against an armed White male citizen: partisanship. That is, compared to Independents, Democrats indicated higher levels of agreement that the

Table 2 Models predicting perceptions to statements in the agreement of the officer-involved shooting of the armed citizen

	Control	White	Black	Control	White	Black	Control	White	Black	Control	White	Black
	Officer justified											
Constant	0.198 (1.278)	3.006* (1.246)	3.024* (1.228)	0.094 (1.360)	1.997 (1.261)	1.682 (1.386)	0.818 (1.288)	2.346 (1.300)	2.182 (1.290)	0.148 (1.336)	2.715* (1.308)	1.805 (1.331)
Age	-0.011 (0.015)	-0.017 (0.014)	-0.031* (0.015)	-0.005 (0.015)	-0.019 (0.015)	-0.042** (0.016)	0.009 (0.016)	-0.001 (0.014)	-0.016 (0.016)	-0.012 (0.015)	-0.021 (0.015)	-0.030 (0.016)
Woman	-0.054 (0.330)	0.093 (0.301)	-0.535 (0.304)	0.158 (0.335)	0.263 (0.317)	-0.817* (0.337)	0.341 (0.331)	-0.139 (0.310)	-0.864** (0.310)	-0.066 (0.333)	0.272 (0.323)	-0.368 (0.335)
White	1.503*** (0.577)	0.45 (0.479)	0.961* (0.447)	1.230* (0.554)	0.183 (0.495)	1.097* (0.532)	0.862 (0.470)	-0.012 (0.558)	1.266* (0.490)	0.836 (0.520)	0.142 (0.553)	1.018* (0.517)
Education	1.035*** (0.225)	0.555* (0.249)	0.490 (0.261)	0.881*** (0.223)	0.752** (0.261)	0.881** (0.291)	0.751** (0.242)	0.648* (0.251)	0.446 (0.251)	1.227*** (0.226)	0.727** (0.248)	0.732** (0.274)
Income	0.012 (0.066)	-0.047 (0.060)	-0.061 (0.055)	-0.041 (0.068)	-0.120 (0.064)	-0.100 (0.061)	-0.083 (0.066)	-0.041 (0.060)	-0.072 (0.061)	-0.082 (0.067)	-0.095 (0.063)	-0.071 (0.063)
Political ideology	0.272*** (0.070)	0.335*** (0.054)	0.392*** (0.068)	0.378*** (0.071)	0.388*** (0.055)	0.414*** (0.070)	0.347*** (0.067)	0.331*** (0.054)	0.446*** (0.067)	0.306*** (0.074)	0.343*** (0.059)	0.431*** (0.070)
Party ID—Independent	-0.714 (0.451)	-1.327** (0.416)	-0.281 (0.472)	-0.785 (0.472)	-1.280** (0.408)	-1.052* (0.483)	-0.889* (0.446)	-0.954* (0.417)	-0.171 (0.469)	-0.887* (0.450)	-1.457** (0.440)	-0.736 (0.465)
Party ID—Republican	-0.424 (0.389)	-0.098 (0.321)	-0.433 (0.371)	-0.696 (0.403)	-0.031 (0.337)	-0.785 (0.408)	-0.723 (0.392)	-0.062 (0.342)	-0.789* (0.378)	-0.109 (0.411)	0.164 (0.357)	-0.587 (0.388)
Suburban	-1.633*** (0.422)	-1.106** (0.399)	-1.410*** (0.388)	-1.663*** (0.441)	-1.277** (0.412)	-1.244** (0.420)	-0.992* (0.417)	-0.653 (0.385)	-0.979* (0.405)	-1.331*** (0.445)	-0.890* (0.389)	-1.367** (0.417)
Urban	-0.655 (0.413)	-0.315 (0.369)	-0.151 (0.342)	-1.192** (0.429)	-0.527 (0.374)	0.164 (0.388)	-0.777 (0.421)	-0.614 (0.374)	0.218 (0.350)	-0.716 (0.405)	-0.741 (0.385)	-0.039 (0.371)
Observations	331	328	330	331	328	330	331	328	330	331	328	330

Table 2 (continued)

	Control	White	Black	Control	White	Black	Control	White	Black	Control	White	Black
Log likelihood	-813.1	-775.5	-788.8	-824.7	-785.3	-810.0	-817.1	-783.8	-795.9	-827.2	-796.0	-810.4
R ²	0.264	0.238	0.264	0.271	0.289	0.294	0.210	0.186	0.270	0.261	0.238	0.272

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$. Standard deviations are in parentheses. Condition groups were not significantly different when controlling for the individual-level factors

White officer was justified and was without choice, and the response was correct, as well as the armed White male citizen was to blame for the use of deadly force. There were no statistically significant differences between Democrats and Republicans in their perceptions of the fatal officer-involved shooting, suggesting both partisans viewed the depicted scenario similarly, except for the armed Black male citizen's blameworthiness rated higher by Democrats; however, when calculating the difference between Democrats and Republicans, the effect is minuscule.

Finally, age and gender demonstrated an agreement pattern, relevant only in the White officer-Black citizen condition. Specifically, younger respondents rated the White officer as justified and without choice in fatally shooting the armed Black male citizen. Further, gender differences indicate that men rated that the White officer was without choice and the armed Black male citizen was to blame. Lastly, across the four statements, the *r*-square with the widest range was the agreement to citizen blameworthiness, with the study's variables least sufficient in explaining the blameworthiness of the armed White male citizen in comparison to the more robust models predicting the blameworthiness of the armed Black male citizen.

Discussion

Public interpretations of the officer's actions in deadly force do alter when framing the fatal officer-involved shooting through the omission or inclusion of the race of the officer and armed male citizen. First, White respondents consistently demonstrated greater support for police use of deadly force against an armed Black male citizen than non-White respondents. A racial animus among White respondents may have been elicited when primed with the White officer-Black citizen condition (Smith & Merolla, 2019). However, racial animus is an insufficient explanation for the higher levels of agreement among White control condition respondents, who were more likely to perceive the officer's actions as justified and without choice. Second, and in contrast, the White officer's fatal shooting of the armed White male citizen exhibited no racial differences in agreement. In other words, except when the armed male citizen was White, White respondents generally had higher levels of agreement for the fatal officer-involved shooting. This result can be interpreted as vicarious victimization, and the racial proximity may draw further intrigue and empathy, particularly as the newsworthiness of White victims of homicides is increased due to the perceived statistical rarity (as perceived by White homicide reporters), unlike that described for Black victims of homicides (Pritchard & Hughes, 1997). Third, and in sum, where racial differences occurred, non-White respondents were never in (greater) approval of the fatal shooting of an armed male citizen, an armed White male citizen, and an armed Black male citizen. It is conceivable that these results are partly attributable to how individuals experience their race on a daily basis, including how it impacts their attitudes toward police, personal and vicarious interactions with police, interpretations of officer-involved shootings, and the process of being classified by race.

Future research

These results instill several inquiries for further experimental research on fatal officer-involved shootings. Repeated experiments should be conducted to ascertain reliability as the study's results may be temporal due to public confidence in police being at record lows (Gallup, 2023). We first begin with a discussion on investigating the interactive effects of political ideology and education. Next, we discuss how future work can conduct similar vignette research by alternating (1) the race of the officer and citizen, (2) the ethnicity of the officer and citizen, (3) the gender of the officer and citizen, and (4) the location of the fatal officer-involved shooting.

Persons with politically conservative views unilaterally supported the officer's actions in fatally shooting an armed male citizen, regardless of whether the deadly encounter was racially framed (Navarro & Hansen, 2023). One explanation for this result includes conservatives' higher evaluations of police action (Freelon et al., 2016). Another explanation is that persons who endorse a conservative crime ideology for their law-and-order rhetoric tend to strongly approve of the use of deadly force by police (Cullen et al., 1996). Identifying interactive relationships between race and political ideology may be worthwhile as the study's sample size limits further investigation of these two variables at different levels. For example, it might be the case that White conservatives have a larger agreement with the officer's actions in an officer-involved shooting when compared to White liberals.

A similar approach can be taken by investigating possible interactions between education and satisfaction with police. Work by Dai et al. (2018) shares insight into explaining the study's finding of persons with greater educational attainment broadly supporting the deadly encounter, regardless of race. That is, our sample of persons with higher education may have accrued more satisfactory experiences than dissatisfactory experiences, as the weight of satisfactory experiences with police is greater for the highly educated than dissatisfactory experiences.

It would be of scholarly interest to investigate how the public applies liability per party in deadly encounters when broadening to scenarios entailing other mixtures of racial (e.g., Black officer-Black citizen) and ethnic compositions (e.g., Hispanic officer-White citizen). One can surmise that the frame of a fatal shooting scenario of a Black officer is not as forged into the public consciousness as is the White officer. Incidents like the five Black officers of the Memphis Police Department, who fatally injured an unarmed Black male (Tyre Nichols) (Bailey & Honderich, 2023), give rise to the idea of whether Black officers using deadly force similarly influence public perceptions of the encounter. Studies have found that respondents do differentially judge the actions of White and Black officers, with ratings of violence, illegality, and guilt higher for White officers than Black officers (Levin & Thomas, 1997; Pica et al., 2020). Relatedly, public reactions to a fatal officer-involved shooting may differ between racially/ethnically mixed and unmixed sets of officers.

Do fatal officer-involved shootings with women officers generate similar reactions as with men officers? Evidence shows that gender stereotypes negatively influence public perceptions of how women officers should expect to behave when policing (Pica et al., 2020). The level of guilt assigned by Canadian undergraduates to either gender was contingent on the weapon used in the fictitious case summary detailing

police use of force. On-duty women officers were rated more guilty than on-duty men officers when gloves or a gun were used, while men officers were rated more guilty than women officers when the taser was employed. Thus, women officers who behave uncharacteristically aggressively may incur an aggravating penalty by the public, likely exacerbated by its anomalous statistical nature (Pica et al., 2020; Pritchard & Hughes, 1997).

Finally, the results show that residents of different geographies interpret fatal officer-involved shootings differently. Namely, there is a rural-suburban attitudinal division, but this community type division toward the study's scenario is not as prominent between rural and urban residents. Identifying the factors for this nearly consistent rural-suburban attitudinal division should be an empirical priority, as suburban communities accounted for the largest proportion of all fatal officer-involved shootings recorded from 2013 to 2023 compared to rural and urban communities (Mapping police violence, 2023). Moreover, homicides in areas such as upscale White suburbs may generate more news coverage as it is perceived to be statistically rare (Pritchard & Hughes, 1997); thus, the interpretation of fatal officer-involved shootings by suburban residents may differ from that of rural and urban residents, coupled with variations in local newsmaking styles (Navarro & Higgins, 2023). One explanation for the attitudinal division among rural and suburban residents is that the average suburban respondents—as with liberals—responded to each question around a neutral stance per condition coupled with exhibiting greater variance in agreement compared to their counterparts. Another explanation is the role of political ideology in shaping the interpretation of officer-involved shootings, as rural respondents were more likely to self-identify as conservative than suburban respondents.

By contrast, the study's sample of rural and urban residents share similar viewpoints on fatal officer-involved shootings. Past work has identified that unlike suburban residents, rural and urban residents carry similar stereotypes about certain areas, like cities and neighborhoods (Kahn & Davies, 2017), which can influence how they interpret fatal officer-involved shootings. Education may also shape urban residents to share similar viewpoints on fatal officer-involved shooting persons as their rural peers. The lack of a prominent rural–urban distinction can be attributed to higher educational attainment reported by urban residents than their rural and suburban counterparts, which were similar. Drawing from the work of Dai et al. (2018) demonstrating the interactive relationship between educational attainment and satisfaction with police, the shared attitudes between the sample of rural and urban residents may be related to the highly educated urbanities having more satisfactory experiences with police.

Limitations

Our limitations primarily rest on the interpretations of the study's scenario depicting a fatal officer-involved shooting, in which such deadly encounters are notably rare when considering the millions of police-citizen interactions that occur each year (Tapp & Davis, 2022) but can still brew up intense public reactions (Freelon

et al., 2016; Williamson et al., 2018). First, the medium (i.e., audio, transcript, video) informing the public about a high-profile fatal officer-involved shooting can alter opinion on justification (Culhane et al., 2016); however, this may be a temporal effect (Culhane & Schweitzer, 2017). Second, our findings are limited to armed citizens, and past work has demonstrated that the public may react differently to fatal officer-involved shootings of unarmed citizens (Williamson et al., 2018). Third, while we incorporated post-stratification survey weights, the study dichotomized race due to sample size, so including several racial categories could extrapolate more nuanced findings related to officer-involved shootings. Repeated assessments of larger pools or targeted sampling of diverse racial/ethnic populations should be pursued to ascertain the consistency of the results presented in this study. Fourth, and finally, while police use of force is often portrayed via episodic framing (Lawrence, 2000) and readers are routinized to these events depicted in brevity, the outcomes generated in the current study are limited to that type of framing. In contrast to the simplified stories via episodic framing, thematic coverage explores larger, systemic social conditions and issues (Iyengar, 1991), and exposing readers to such newsmaking via multiple articles on fatal officer-involved shootings can generate agreement, even among ideologues (Freelon et al., 2016; Lawrence, 2000), increasing the inclination to perceive these fatal incidents, at least of (unarmed) Black men, are attributable to the rotten orchard (Haider-Markel & Joslyn, 2017).

Appendix. Variable coding and descriptive statistics

Age—continuous measure, respondent's age at the time of the survey.

Gender—binary measure, 0 = men; 1 = women.

Race—binary measure, 0 = non-White; 1 = White.

Education—continuous measure, 1 = less than high school; 2 = high school/GED; 3 = some college; 4 = bachelor's degree; 5 = graduate/professional degree.

Income—continuous measure, 1 = under \$10,000; 2 = \$10,001–\$20,000; 3 = \$20,001–\$30,000; 4 = \$30,001–\$40,000; 5 = \$40,001–\$50,000; 6 = \$50,001–\$60,000; 7 = \$60,001–\$70,000; 8 = \$70,001–\$80,000; 9 = \$80,001–\$90,000; 10 = \$90,001–\$100,000; 11 = \$100,001–\$150,000; 12 = more than \$150,000.

Party identification—3-category nominal measure (created from 7-point measure with leaners coded as partisans), Democratic; Independent; Republican.

Political ideology—continuous scale from 0 = very liberal to 10 = very conservative.

Residential environment—3-category nominal scale, rural; suburban; urban

Justification questions—continuous measure, respondents were provided four statements regarding the news article and asked their level of agreement. The level of agreement consisted of self-placement on a Likert-scale from 0 = not at all to 10 = to a great degree.

Table 3 Descriptive statistics—
independent variables

Variable	Min	Median	Mean	Max	SD
Age	19	36	39.02	81	11.58
Education	1	4	3.84	5	0.74
Income	1	5	5.81	12	2.72
Political ideology	0	6	5.71	10	3.11
Variable	Rural	Sub	Urb		
Residential environment	31.19%	34.00%	34.80%		
Variable	Dem	Ind	Rep		
Party ID	60.18%	15.55%	24.27%		
Variable	0	1			
Gender	55.77%	44.23%			
Race	14.81%	85.19%			

Table 4 Descriptive statistics—original race variable

Variable	White	Black or Afr. Am	Hispanic/Latino	American Indian or Alaska Native	Asian	Native Hawaiian or Pacific Islander	Other
Race	851 (85.2%)	63 (6.3%)	25 (2.5%)	14 (1.4%)	37 (3.7%)	1 (0.0%)	8 (0.1%)

Author contribution The authors are listed in reversed alphabetical order and contributed equally.

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Data availability The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethics approval—research involving human participants and/or animals The questionnaire and methodology for this study were approved by the Institutional Review Board of [Retracted].

Informed consent Informed consent was obtained from all individual participants included in the study.

Conflict of interest The authors declare no competing interests.

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