

# White Mock Jurors' Moral Emotional Responses to Viewing Female Victim Photographs Depend on the Victim's Race

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**Objective:** Jurors often see both pre-mortem photographs of female murder victims before death and post-mortem photographs after death. Post-mortem photographs are often probative but might prejudicially heighten jurors' other-condemning emotions, such as anger and disgust. Pre-mortem photographs are often not probative and might prejudicially heighten jurors' other-suffering emotions, such as sympathy and empathy. We examined how victim race changes the impact of pre- and post-mortem photographs on participants' moral emotions and, in turn, their verdicts. **Hypotheses:** We hypothesized that seeing post-mortem (vs. no) photographs would increase convictions through other-condemning emotions for White, but not Latina or Black, victims. We also hypothesized that seeing both pre- and post-mortem (vs. only post-mortem) photographs would further increase convictions through other-suffering emotions, again for White, but not Latina or Black, female victims. **Method:** White participants ( $N = 1,261$ ) watched a murder trial video. We manipulated the victim's race (White, Black, or Latina) and whether participants saw no victim photographs, pre-mortem photographs of a female victim, post-mortem photographs of a female victim, or both pre- and post-mortem photographs. Participants reported the emotions they felt during the trial and chose a verdict. **Results:** Seeing post-mortem (vs. no) victim photographs increased White participants' guilty verdicts through other-condemning emotions when the female victim was White or Latina but not when she was Black. Seeing the combination of pre- and post-mortem photographs increased White participants' convictions through other-suffering emotions when the victim was a White woman but not when she was Latina or Black. **Conclusions:** Attorneys and judges should consider that jurors' emotional reactions to victim photographs are felt selectively depending on the victim's race and could exacerbate racial biases in jurors' judgments.

## Public Significance Statement

Rather than closing racial empathy gaps and increasing mock jurors' moral emotional responses for all victims, presenting pre- and post-mortem photographs of victims might exacerbate racial bias because White mock jurors selectively felt moral emotions on behalf of other White victims but not on behalf of Black and Latina victims. Although policies that allow for jurors to see pre-mortem photographs of victims might be intended to humanize all victims, those policies might have the unintended consequence of increasing the disparities in the treatment of White victims and victims of color.

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*continued*

Jurors in murder trials are routinely exposed to horrific stories and gruesome imagery of victims. These photographs are often key pieces of evidence used to demonstrate the cause and nature of death (*State v. Harding*, 1984). They might also result in heightened moral emotions ranging from anger and disgust toward the perpetrator of the harm that the jurors have witnessed to sympathy and empathy for the victim. Across every state and in the federal court system, judges must decide whether these intense emotional responses to gruesome victim photographs might prejudice jurors against the defendant and whether that prejudice outweighs the probative value of the photographs. The likelihood of victim photographs producing prejudicial impact that outweighs their probative value is even more concerning when prosecutors present photographs depicting the victim before they died, given that what a victim looked like when alive typically holds no relevant probative information about the crime or whether the defendant committed a murder.

However, several states have recently adopted victim life photograph acts, which function to automatically permit prosecutors to present premortem photographs of murder victims to the jury during the guilt phase of a trial (for a review, see *Rychlak*, 2016). And although victim advocates argue that the admission of premortem photographs of the victims can help give the victim a voice, we have no empirical tests of the impact of seeing premortem living victim photographs—or perhaps even more impactful, the contrast of seeing photographs of a vibrant and happy living person along with photographs of a corpse—on jurors' emotions and verdicts in a case.

Victim photographs might pose an additional problem: They might exacerbate differences in emotional responses and verdicts based on victim characteristics—such as their race or similarity to the jurors. White jurors might have selective moral emotional responses to seeing a racial ingroup member harmed, which might be related to downstream motivation to blame and convict the defendant. Previous research has demonstrated that gruesome photographs of a White victim, compared with no photographs, increase anger (*Bright & Goodman-Delahunty*, 2006) and disgust (*Salerno*, 2017), which in turn predicts greater likelihood of convicting a murder defendant—but this research has primarily focused on White female victims. This focus on White female victims is particularly problematic, given that U.S. juries continue to be predominately White (*Gau*, 2016), whereas only 53% of female murder victims are White (*Statista*, 2021). In many cases, White jurors will be making judgments about cases involving non-White murder victims, but current research provides little insight into how photographs depicting those non-White victims might impact their judgments. That is, although White jurors might have a strong moral emotional response to seeing photographs of White female victims, they might not have the same response to non-White female victims. It is critically important (*Hunt & Shepherd*, 2023) to investigate how victim race might moderate a relatively well-established effect that

has, to this point, been primarily investigated using photographs of a White victim.

In this experiment, we tested whether White mock jurors have selective moral emotional responses to seeing photographs of a White female murder victim before, after, or both before *and* after she died—but less intense emotional reactions if the victim is Latina or Black. We also tested whether these selectively heightened moral emotional responses might be related to greater likelihood of blaming a defendant for her murder.

### Moral Emotional Reactions to Victim Photographs

Research in moral psychology suggests that people respond to moral violations—such as murder, violent crime, or suicide—with two types of moral emotions (*Haidt*, 2003). The first type is “other-condemning” emotions, which are directed at the perpetrator of the harm, such as anger, disgust, and moral outrage. The second type is “other-suffering” emotions, which are directed at the victim of the harm, such as sympathy and empathy (*Haidt*, 2003). Viewing photographs of a victim of violence in court, either self-inflicted (*Rottman et al.*, 2014) or inflicted by another person (*Chapman & Anderson*, 2014), is definitionally an example of seeing evidence of a moral violation and therefore is likely to elicit both other-condemning and other-suffering emotions.

### Postmortem Victim Photographs


Seeing photographs of a potential moral violation can increase other-condemning emotions, such as anger and disgust, which are then associated with changes in attitudes. For example, when people see gruesome photographs of an aborted fetus (*Wisneski & Skitka*, 2017) or of animal experimentation (*Nabi*, 1998), they feel increased disgust, which increases the strength of their moral conviction about abortion and animal experimentation, respectively. In legal settings, exposing mock jurors to gruesome, postmortem photographs of White murder victims increases other-condemning emotions such as anger (*Bright & Goodman-Delahunty*, 2006) and disgust (*Salerno*, 2017; *Salerno & Phalen*, 2019). We expected to replicate previous research demonstrating that gruesome postmortem photographs of a White murder victim increase White mock jurors' other-condemning emotions on behalf of White victims. We also expected to find an important boundary condition of this prior research—that seeing postmortem photographs of a non-White victim would not increase White mock jurors' other-condemning emotions.


### Premortem Victim Photographs

Legal actors have long recognized that gruesome postmortem photographs have some relevance in court, and many have argued

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 The preregistered design and analysis plan (transparent changes notation) are accessible at [https://osf.io/zqxm/?view\\_only=251692c6ecff423bac55d8effc257e05](https://osf.io/zqxm/?view_only=251692c6ecff423bac55d8effc257e05).

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that the prosecution should not be required to present a sterile case without any visual evidence simply because gruesome photographs might bias jurors (*Arizona v. Chapple*, 1988)—hence, the need to balance the probative value and potential prejudicial impact of these photographs per Evidence Rule 403 in each case.

In contrast, premortem photographs of a murder victim before they died typically contain no relevant information about the nature of the crime or the likelihood that the defendant is guilty of that crime. Traditionally, premortem photographs were generally not admissible because of their lack of probative value. There are rare occasions when courts recognize the potential probative value of premortem victim photographs. For example, a premortem photograph of the victim wearing a fur coat and jewelry might be admitted to establish the prosecution's theory that the defendant killed the victim during a robbery (*People v. Zapien*, 1993). Premortem victim photographs have traditionally been inadmissible unless they are material to proving guilt and are not outweighed by their prejudicial effect.

Further, premortem photographs might also heighten moral emotions in prejudicial ways. For these reasons, these photographs are often excluded from evidence because their probative value is outweighed by the danger of unfair prejudice that they might produce (*Federal Rules of Evidence* 403; Rychlak, 2016). However, state legislatures have enacted victim life photograph acts, as the result of lobbying by victim advocacy groups, that circumvent judicial discretion about excluding premortem living victim photographs from evidence (e.g., Okla. Stat. tit. 12, § 2403, 2019; Or. Rev. Stat. Ann. § 41.415, 2019; Tenn. Code Ann. § 40-38-103[c], 2015; Utah Code Ann. § 77-38-9[7], 2014). These acts override judicial discretion about shielding jurors from information whose prejudicial value outweighs its probative value. Instead, these statutes mandate that judges permit prosecutors to present premortem photographs of murder victims to the jury during the guilt phase of a trial to humanize the victim and elicit emotions such as sympathy and retribution (Rychlak, 2016). Even when attorneys are not permitted to present these premortem photographs in court, jurors are often exposed to these photographs in newspapers, on social media websites, or even on T-shirts and buttons worn by the victim's family in the courtroom (*Carey v. Musladin*, 2006).

Although we could find very little research testing the specific impact of seeing premortem photographs of a victim in court, other areas of research suggest that these photographs are likely to elicit other-suffering emotions. First, the identifiable victim effect posits that people are more willing to help an identified victim, compared with an anonymous victim (Jenni & Loewenstein, 1997). Further, the more identified a victim is, the more people are willing to help. That is, research suggests that seeing photographs of the victim, compared with a silhouette, increases other-suffering emotions and, in turn, helping behavior (Genevsky et al., 2013; Kogut & Ritov, 2005). Indeed, a meta-analysis of the identifiable victim effect demonstrated that the effect is strongest when a photograph is used to identify the victim (Lee & Feeley, 2016). When jurors do see premortem photographs, the victim might be more identifiable than when jurors do not see premortem photographs. However, in one test of the impact of premortem photographs, this was not the case. Specifically, seeing premortem photographs on their own, compared with no victim photographs, did not significantly impact mock jurors' emotions and judgments (Adamoli et al., 2020).

Second, research on emotional reactions to victim impact statements, which give surviving relatives the chance to humanize and make murder victims more identifiable (Nadler & Rose, 2002) in the sentencing phase of legal cases, might provide some insight into how premortem photographs might elicit moral emotional reactions on behalf of the victim. Mock jurors exposed to victim impact evidence reported more other-suffering emotions, such as sympathy and empathy for the victim (Paternoster & Deise, 2011), as well as more other-condemning emotions, such as anger (Boppre & Miller, 2014; Nunez et al., 2016). Thus, we predicted that viewing premortem photographs of the victim in conjunction with postmortem photographs might make the victim more identifiable and, as a result, elicit more other-suffering emotions, such as sympathy and empathy—and perhaps also further heighten other-condemning emotions, although there is currently less evidence for that prediction.

### Selective Moral Emotional Responses Based on Victim Race

Thus, emotionally evocative photographs of victims of violent crime might heighten both other-condemning and other-suffering emotions. Whereas current research on the impact of emotionally evocative photographs of victims on emotions has focused primarily on the impact of seeing photographs of a White victim, several psychological theories suggest that these emotional responses might be selectively elicited for crime victims who are perceived to be of high value or are similar to the jurors, such as belonging to their own racial ingroup (Bandes & Salerno, 2014; Salerno, 2021).

Social psychological research has demonstrated that people are more emotionally reactive on behalf of people who are similar to themselves (Batson et al., 1995; Brown et al., 2006; Loewenstein & Small, 2007). This effect, the ingroup empathy hypothesis, suggests that people experience more positive emotions, such as empathy and sympathy (i.e., other-suffering emotions), for members of their ingroup than for members of their outgroup. There is also evidence that people are more likely to be angry (i.e., an other-condemning emotion) on behalf of ingroup members than outgroup members (Yzerbyt et al., 2003). Of particular relevance to viewing victim photographs in court, people experience increased psychophysiological responses to viewing both pleasant and unpleasant photographs of members of their ingroup, compared with members of their outgroup (Brown et al., 2006). There are, however, limited tests of selective moral emotional responses in legal settings. A rare example, however, demonstrated that White participants reported more empathy for a White defendant (relative to a Black defendant) and, in turn, made more situational attributions and recommended more lenient punishments (Johnson et al., 2002). These studies demonstrating selective moral emotional responses to racial ingroup members suggest that White jurors who view victim photographs might have moral emotional reactions to White victims but not toward victims from other racial groups.

Other social psychological research also suggests that it is possible that jurors might selectively feel other-suffering and other-condemning emotions for White victims. For example, research suggests that Black and Latina victims are generally viewed less positively than White victims (Esqueda & Harrison, 2005; Slakoff, 2020) and that their murders receive less attention in the media (Slakoff & Brennan, 2023). Other research suggests that people

dehumanize Latinx (Santa Ana, 2002) and Black (Goff et al., 2008) people and that dehumanization can predict a decrease in empathy for members of those dehumanized groups (Utych, 2018). Taken together, several different areas of research suggest that mock jurors might selectively feel moral emotions for White victims—but not Black and Latina victims—and that these selective emotional responses might be particularly evident when the mock juror is White.

This theory is important to test directly, however, because some identifiable victim effect literature suggests a potential competing hypothesis in line with victim advocates' hope that living victim photographs might humanize victims and even close racial empathy gaps. More specifically, some research shows that people might feel increased emotion for more identifiable victims, regardless of the victim's group membership (Duclos & Barasch, 2014; Erlandsson et al., 2015, Study 1), which could result in premortem or postmortem photographs closing racial empathy gaps between White and non-White victims. In contrast, other research suggests that the identifiable victim effect is more powerful for members of a person's ingroup (Erlandsson et al., 2015, Studies 3 and 4; Kogut & Ritov, 2007), which could result in premortem living victim photographs exacerbating racial empathy gaps.

### Moral Emotional Responses to Victim Photographs and Blame

Selective moral emotional responses to both pre- and postmortem victim photographs depending on victim race are important to investigate because moral emotional responses might be related to how jurors will decide the case—specifically, their likelihood of blaming and convicting a defendant. Holding all other aspects of a case constant, both other-condemning and other-suffering emotions resulting from viewing victim photographs might be associated with greater likelihood of convicting a defendant—albeit potentially through different psychological routes, described next.

### Other-Condemning Emotions and Blame

Research has demonstrated that feeling other-condemning emotions, such as anger and disgust, is associated with the need to blame and punish someone (Bastian et al., 2013; Salerno & Peter-Hagene, 2013)—even if those emotions are unrelated or “incidental” to the case (e.g., Ask & Pina, 2011). Some psychologists have described the impact of anger on decision making, for example, as turning “intuitive scientists” keen on engaging in an impartial review of evidence into “intuitive prosecutors” who have lowered their guilt threshold and are hunting for evidence to support blaming and punishing someone (Goldberg et al., 1999). Several theoretical models explain how feeling negative emotions can affect decision-making processes in ways that increase blame (e.g., Alicke, 2000; Forgas, 1995) and the harshness of legal judgments (Feigenson & Park, 2006; Salerno, 2021). A similar thread running through these models is the idea that when someone's negative emotions are heightened by a stimulus (e.g., by viewing gruesome postmortem photographs), they might engage in a biased review of other information that is consistent with their emotions and/or justifies blaming someone.

In the legal realm, there is evidence that feeling other-condemning emotions is associated with a biased processing of

other case evidence, such as giving more attention and weight to incriminating evidence, downplaying or ignoring exculpatory circumstances, judging ambiguous evidence as more inculpatory, and convicting more often (for reviews, see Phalen et al., 2021; Salerno, 2021). Thus, seeing victim photographs depicting gruesome harm or violence might elicit other-condemning emotions, which in turn might be associated with greater motivation to evaluate evidence in support of blaming someone (i.e., convicting the defendant).

### Other-Suffering Emotions and Blame

Other-suffering emotions, such as empathy and sympathy, might also influence blame attributions, albeit through a desire to help the victim rather than a desire to punish the defendant (Aderman & Berkowitz, 1970; Yamauchi & Lee, 1999). For jurors, the only opportunity available to them to “help” the victim is through their verdicts and case judgments. Mock jurors who feel greater sympathy and empathy (other-suffering emotions) for the victim blame the victim less and the defendant more, which in turn is associated with increased damage awards in civil cases (Bornstein, 1998) and convictions in criminal cases (Adolfsson & Strömwall, 2017; Jones et al., 2020). Thus, if mock jurors see premortem photographs of the murder victim and feel heightened other-suffering emotions as a result, they might be more motivated to help the victim by convicting the defendant (thereby potentially opening him or her up to harsher punishment). This desire to help the victim might be particularly problematic in a guilt phase because jurors are supposed to base their guilt judgments on the case facts and not the sympathy that they feel for the victim (*People v. Fields*, 1983; *People v. Wise*, 1984).

### Combined Impact of Other-Condemning and Other-Suffering Emotions and Blame

In murder trials, jurors are very likely to see gruesome postmortem victim photographs (Schweitzer & Nuñez, 2018). What happens when you add premortem living victim photographs? Viewing the contrast of both pre- and postmortem victim photographs might have an even stronger effect on emotions and blame than gruesome postmortem photographs on their own. This might be an example of a contrast effect: Judgments of a target are more extreme when it is presented with a contrasting stimulus compared with seeing the target alone, such as evaluating a less attractive person as even more unattractive when presented in contrast with an attractive person (Cyprianska et al., 2012; Pepitone & DiNubile, 1976). Similarly, a gruesome photograph might be even more emotionally disturbing when presented in contrast with a happy, living person than it would have been on its own.

Additionally, seeing both pre- and postmortem photographs of victims might elicit more complex emotional responses. Viewing both (a) gruesome postmortem victim photographs (predicted to heighten other-condemning emotions because they depict the harm a perpetrator caused) and (b) premortem victim photographs (predicted to heighten other-suffering emotions because they might make the victim more identifiable) might result in both types of moral emotional reactions. The combination of feeling other-suffering emotions for the victim (because of premortem photographs) and other-condemning emotions toward the perpetrator

(because of gruesome postmortem photographs) might, therefore, predict increased blame toward the defendant even more than gruesome postmortem photographs alone because blaming the defendant might satisfy their other-suffering need to help the victim as well as their other-condemning need to blame the defendant simultaneously.

Most research into the combined effects of other-condemning and other-suffering emotions has investigated situations in which the two types of moral emotions will have opposite effects on decision making, for example, contexts in which other-suffering emotions predicted increased support for pro-refugee policies and other-condemning emotions predicted decreased support for those policies (e.g., Parrott et al., 2019; see also Iyer et al., 2014). However, it is also important to examine situations in which other-condemning and other-suffering emotions might have an additive effect, potentially increasing blame even more than feeling only one type of emotional response. In other words, if seeing pre- and postmortem photographs increases both other-condemning and other-suffering emotions toward White victims but not toward Latina and Black victims, seeing the combination of pre- and postmortem photographs might increase the racial gap in verdicts, over and above seeing postmortem photographs alone.

### Research Overview and Hypotheses

We tested the impact of viewing photographs of a female victim of violence before death, after death, or both before and after she died on White mock jurors' moral emotional responses (i.e., other-suffering, other-condemning) and their likelihood of blaming someone accused of the murder. White participants watched a video of a murder trial in which the defendant was accused of murdering his wife, whereas the defense argued that she committed suicide. The trial video was designed to present extensive evidence from both sides on which they could make their blame judgments, which was confirmed to be ambiguous enough to produce a roughly even split in verdicts in pilot testing (e.g., 44% guilty verdicts; Salerno et al., 2022). During the trial video, each participant was randomly assigned to view either (a) no victim photographs, (b) three photographs of a female victim before she died, (c) three photographs of a female victim after she died, or (d) all six pre- and postmortem photographs. Using a stimulus-sampling approach, we also manipulated whether they saw a White, Latina, or Black female victim. Trial transcripts, data, analysis code, preregistered methods, and hypotheses are available on the Open Science Framework at <https://osf.io/y6as8> (Phalen et al., 2023). Trial videos and the photographic stimuli were not posted publicly, out of respect for the woman depicted in the postmortem photographs, but they are available on request.

#### Hypothesis 1: Postmortem Photographs Will Increase Convictions Through Increased Other-Condensing Emotions for White, but Not Latina and Black, Female Victims

First, we hypothesized that we would replicate prior research (Bright & Goodman-Delahunty, 2006; Salerno, 2017). Specifically, in the absence of premortem photographs of the victim when she was alive, we hypothesized that White mock jurors would feel increased other-condemning emotions (e.g., disgust, anger) when

they saw gruesome postmortem photographs of the White victim compared with no postmortem photographs of the White victim. In turn, other-condemning emotions would be associated with an increased likelihood that participants would blame and convict the defendant.

In contrast, we hypothesized that, because of selective emotional responses, the effect of gruesome postmortem photographs on other-condemning emotions found in prior research would not be replicated when the victim is Latina or Black because White participants would feel increased other-condemning emotions only when they viewed photographs of a White female victim.

#### Hypothesis 2: Viewing Both Pre- and Postmortem Photographs Would Increase Convictions Compared With Postmortem Photographs Alone, Through Increased Other-Suffering Emotions—but Only for White, Not Latina and Black, Female Victims

We hypothesized that the addition of premortem photographs to postmortem photographs would exacerbate the indirect effect of gruesome postmortem photographs on verdicts through increasing not only White mock jurors' other-condemning emotions but also their other-suffering emotions (e.g., their sympathy and empathy for the victim). Specifically, we hypothesized that, in the context of also seeing premortem photographs of the White female victim, White participants who saw gruesome postmortem photographs would feel increased other-condemning as well as other-suffering emotions compared with when they did not see the gruesome photographs. In turn, we hypothesized that both other-condemning and other-suffering emotions would be associated with increased likelihood that participants would blame and convict the defendant.

In contrast, we hypothesized that, again because of selective emotional responses, the effect of seeing both premortem and gruesome postmortem photographs on White mock jurors' other-condemning and other-suffering emotions would not be replicated when the victim is Latina or Black.

### Method

#### Participants

A power analysis using G\*Power (Version 3.1; Faul et al., 2007) indicated that 320 participants were required to be powered at 90% to detect an effect size ( $\eta_p^2$ ) of .032 (the effect size of gruesome postmortem photographs found in a meta-analysis; Grady et al., 2018). Given that we were proposing moderated mediation (i.e., the interactive effect of pre- and postmortem photographs on verdicts through emotional responses), we followed recent recommendations for ensuring that interaction tests are well powered (see Giner-Sorolla, 2018; Simonsohn, 2014). Because we were predicting that our hypothesized effect of victim photographs would be eliminated when the victim is not White, we increased our sample size to 127 participants per cell (1,524 participants total). We then oversampled to account for likely rates of participants failing our data quality checks (Goodman et al., 2013) and to ensure that we had enough White participants.

We recruited 2,414 adults from Amazon's Mechanical Turk (MTurk). A total of 793 (32.85%) participants were excluded on the basis of one (or more) of the following criteria: failing an attention

check ( $n = 34$ , 1.40%), failing to report that they saw victim photographs when they were shown the photographs ( $n = 490$ , 18.20%), failing a victim race manipulation check ( $n = 209$ , 8.70%), indicating that they had previously participated in a study involving this case ( $n = 28$ , 1.20%), self-reporting that they would not be eligible to serve on a jury ( $n = 48$ , 1.99%), or taking less than 30 min to complete the survey, given that the trial video alone was 27 min long ( $n = 409$ , 16.90%).

We also initially preregistered that we would exclude control participants who failed to correctly report that they had not seen victim photographs. Unfortunately, we discovered that some participants “incorrectly” reported seeing the postmortem photograph when they were in the no-photograph control condition. This was because in the trial video, during the pathologist’s testimony, he held up photographs of the victim to ostensibly show the jury. The camera was angled such that participants in the no-photograph control condition could see that photographs existed but saw only the back of the photograph as he showed it to the jury. Therefore, these participants were technically correct that they did see the back of the gruesome photograph—even if they could not see what it depicted. Thus, we did not exclude the 50 (2.07%) participants who we originally thought failed the manipulation check but we realized were technically correct that they had seen the back of the postmortem photographs presented by the pathologist. Our results did not change when these participants were excluded (see the [online Supplemental Materials](#), pp. 22–25).

Next, we examined whether we had enough non-White participants to conduct an exploratory analysis with respect to participant race. Participants were 77.79% White, 11.84% African American, 0.86% Native American, 4.44% Asian, 0.25% Pacific Islander, and 4.81% selected “other.” Because only 22.21% ( $n = 360$ ) of the sample were not White and only 11.84% ( $n = 192$ ) were Black, we did not have enough participants for an adequately powered test of the impact of victim photographs on non-White participants. Thus, we excluded non-White participants ( $n = 360$ , 22.21%).

The remaining 1,261 White participants were 64.87% women, 33.94% men, and 1.19% nonbinary and had a mean age of 39.12 years ( $SD = 11.91$ ), which nearly met our power analysis goal (1,524). Because the sample of 1,261 participants did not meet our power analysis goal of 1,524, we conducted a sensitivity analysis to determine the minimal detectable effect size, given the achieved sample. We used WebPower (Zhang & Yuan, 2018) to calculate the minimal detectable effect size for a structural equation model. The sample of 1,261 participants yields power of .95 to detect small effects (i.e.,  $\delta < .04$ ). Specifically, the sample yields power of .80 to detect effects as small as  $\delta > .014$ , power of .90 to detect effects of  $\delta > .018$ , and power of .95 to detect effects of  $\delta > .021$ .

## Design and Procedure

The institutional review board at Arizona State University approved this research (Protocol 1211008502), and this study was preregistered on the Open Science Framework (<https://osf.io/y6as8>). The study conformed to a 2 (premortem photographs: absent or present)  $\times$  2 (postmortem photographs: absent or present)  $\times$  3 (victim race: White, Black, or Latina) between-subjects design. Participants first read background information about the trial, which included demographic information about the victim. Then they

watched a trial video, during which we manipulated which victim photographs they saw. Finally, they completed verdict and emotion measures, the order of which was counterbalanced. On average, the study took 46 min to complete.

## Materials

### Trial Stimulus

Participants began by reading background information about the trial video that they were about to see, which included basic demographic information about the victim. Within this background information, we manipulated the victim’s race (White, Black, or Latina). Specifically, participants read a description that said, “Stacy Stevens was a 25-year-old White/Latina/Black woman who was found dead in her bedroom. The defendant, Michael Stevens, was arrested later that day and is now charged with her murder.” Thus, in all conditions—even when they did not see any victim photographs—participants knew the race of the victim.

Given that research has shown interactive effects of defendant and victim race on case judgments (e.g., Bottoms et al., 2004; Lynch & Haney, 2000), we would have ideally manipulated defendant race as well. However, doing so would have created a design that was far too complex to adequately power. Therefore, we decided to leave the defendant’s race ambiguous by not disclosing any information about the defendant’s race. However, 881 participants (70%) guessed that the defendant was the same race as the victim. Given that research shows that most intimate partner violence is intraracial (McCormack & Hirschel, 2021; Zimmerman et al., 2021), this assumption coheres with real-world data.

In pilot testing, we realized that many participants who were assigned to a no-photograph condition in which the victim was either Black or Latina reported that the victim was White and thus failed our race manipulation check—perhaps failing to notice the relatively subtle description of the victim’s race, which was mentioned only once and embedded in a description of other case facts before the trial video. To strengthen the manipulation, after participants read the brief background information but before they viewed the trial video, we told participants, “We want to test your memory of what you just read. Before you watch the trial video, please write down everything you remember from the previous page,” hoping that participants would encode and remember the information better (without making it obvious that we were asking about victim race). We also repeated the information after the trial video by starting the jury instructions with “The defendant, Michael Stevens, is charged with the murder of Stacy Stevens, a 25-year-old White/Latina/Black woman” (for additional details, see [online Supplemental Table S1](#)).

Next, participants watched a 27-min trial video, which was adapted from transcripts from a real case in Australia (*R v. Valevski*, 2000). However, the video started with an American case name to imply to participants that it happened in the United States and so that the participants would not be able to look the case up during their participation. The prosecution argued that the defendant killed his wife after a fight, and the defense argued that the victim committed suicide. The video included selections from the prosecution and defense opening and closing statements, testimony from four witnesses (the defendant’s sister, a locksmith, a pathologist, and the defendant’s neighbor), and jury instructions. The defendant’s sister

testified about the fight between the defendant and his wife. The locksmith testified that the defendant would have been able to maneuver the lock on the bedroom door so that it appeared locked from the inside after the murder. The pathologist testified that the victim's injuries were consistent with homicide. Finally, the defendant's neighbor testified about the victim's depression and the defendant's state of mind the morning after his wife's death. The jury instructions were modified from Illinois pattern jury instructions for first-degree murder and were similar to the pattern instructions used in most other U.S. states. The instructions included a brief description of how a juror should decide a case, a request to act in an unbiased manner, and a detailed description of the charges. The instructions are available, along with other materials, on the Open Science Framework at <https://osf.io/y6as8>.

We filmed the trial video with real trial lawyers playing the attorneys and with closing statements using language taken directly from the real case. Because participants were not provided with information about the defendant's race, we did not want to provide participants with the defendant's sister's race (to avoid the assumption that the defendant and his sister would be the same race). Therefore, participants were told that the video of the defendant's sister's testimony was unavailable. They instead heard the audio of the testimony but did not see the video.

During the trial video, each participant was randomly assigned to one of the photograph conditions. That is, participants saw either (a) no photographs, (b) only premortem photographs, (c) only postmortem photographs, or (d) both pre- and postmortem photographs.

### ***Presentation of Victim Photograph Stimuli***

In conditions that contained victim photographs, the photographs were superimposed on the right side of the screen at relevant points in the video, with the attorneys and witnesses toward the left side of the screen. We filmed the video knowing that we would need to superimpose images on some parts, so witnesses and attorneys were placed in the frame so that they could still be fully seen in the conditions in which victim photographs were superimposed over empty space on the right side. Whereas some empty space depicting more of the room behind the witness was not visible when the photographs were on screen, the witnesses and attorneys themselves remained entirely on screen, were the same size, and took up the same amount of space on the screen in all conditions (see screenshots in the [online Supplemental Materials](#), pp. 6–9).

The videos were filmed as if from the gallery of a courtroom, and when the expert referenced the photographs, he held up photographs as if he were presenting them to a jury off stage right. When the prosecutor referenced the photographs, he gestured as if the photographs were displayed on a screen that was off camera. Thus, participants in all conditions knew that the photographs existed, but the content of the photographs was never visible in the video to keep everything about the video constant with the exception of our manipulation. That is, the videos were the same except that victim photographs were superimposed on the screen when participants had been randomly assigned to see them.

When participants saw premortem photographs, the three photographs were shown one at a time during the opening statements (1 min, 30 s) and closing statements (2 min, 50 s),

for a total of 4 min, 20 s. When participants saw postmortem photographs, the three photographs were shown one at a time during the pathologist's testimony (1 min, 20 s) and the closing statement (2 min, 50 s), for a total of 4 min, 10 s. When participants saw both types of photographs, they saw the three premortem photographs during the opening statement (1 min, 30 s), the three postmortem photographs during the pathologist's testimony (1 min, 20 s), and three pairs of pre- and postmortem photographs alongside each other during the closing arguments (2 min, 50 s), for a total of 5 min, 40 s. That is, we paired each premortem photograph with a postmortem photograph and showed the pair at the same time, with the premortem photograph on the right, the postmortem photograph in the middle, and the prosecutor on the left (for a screenshot example, see [online Supplemental Figure S2](#)). Thus, we held the total amount of time that premortem (4 min, 20 s) and postmortem (4 min, 10 s) photographs were shown approximately constant across conditions.

### ***Premortem Photograph Stimuli***

We used stimulus sampling to ensure that the effects we might find were not due to the specific characteristics of any one woman. To do this, we recruited three White, three Black, and three Latina volunteers from our department to pose as the victim in photographs. All of the volunteers were in their 20s and were smiling. We took three photographs of each woman, each in the same three locations in the same three poses, to keep the number of photographs consistent with the gruesome photographs (i.e., we had three premortem and three postmortem photographs). In the photographs, the woman was smiling broadly, sitting at a table with a laptop in front of her, and in conversation with another woman (e.g., photographs, see [online Supplemental Figure S1](#)).

We conducted a pilot test in which 53 participants were asked to guess the race of each volunteer. The majority of participants correctly identified the race of each volunteer: 91% of participants correctly identified the White volunteers as White, 86% of participants correctly identified the Black volunteers as Black, and 64% of participants correctly identified the Latina volunteers as Latina. For Black volunteers, the next most common response was multiracial (11%). For Latina volunteers, the next most common response was Native Hawaiian (18%). Although some participants did not guess the specific race correctly, 100% of participants correctly identified the Black victim as non-White and 96% of participants correctly identified the Latina victim as non-White. We have included a more detailed breakdown of the pilot test results in [online Supplemental Figure S3](#). As described in more detail in the measures section, we included a victim race manipulation check in the main study and excluded anyone who failed it.

### ***Postmortem Photograph Stimulus***

Because we wanted to control both the legally relevant information in the postmortem photographs and the level of gruesomeness shown in the photographs, we were somewhat restricted in our choice of postmortem photographs. Therefore, we used the same gruesome photographs in all conditions. Participants saw three postmortem photographs that showed the victim lying on an autopsy table. The photographs showed a gaping knife wound in the victim's neck from three different angles.

Facial features were cropped out to make race more ambiguous and to allow us to use a variety of premortem photographs without worrying that the volunteers did not look like the woman who was ostensibly murdered. Consistent with prior research that digitally altered skin tone for a race manipulation (Dixon & Maddox, 2005; Gilliam et al., 1996; Maddox & Gray, 2002, Study 1), in conditions in which the victim was Black, we used Photoshop to darken the luminosity of the victim's skin in the gruesome postmortem photographs (for more details about this procedure, see the [online Supplemental Materials](#), p. 1).

## Measures

Participants completed a dichotomous verdict measure (guilty or not guilty) and reported how they were feeling when hearing the evidence of the victim's injuries on 17 emotion measures designed to determine their level of anger, disgust, fear, sympathy, and sadness. The emotion measures were 5-point items that included the labels *not at all*, *slightly*, *somewhat*, *moderately*, and *very much*. Participants also completed demographic information. Additional continuous measures of blame (likelihood of voting guilty and likelihood that the defendant committed the crime) that were conceptually redundant with the verdict (and showed the same pattern of results) are included in [online Supplemental Tables S10 and Figures S14–S17](#).

We originally preregistered a plan to analyze the five separate emotion scales (anger, disgust, fear, sympathy, sadness) but instead decided to analyze them as two scales (i.e., other-condemning, other-suffering) for several reasons. The first was theoretical: After reviewing the data, we realized that Haidt's (2003) theoretical distinction of other-condemning and other-suffering emotions was a better and more parsimonious fit for our hypotheses and that our comparison of the difference between the distinct emotion scales within these two broader categories (e.g., the differential effect of anger vs. disgust or sympathy vs. empathy) would have been exploratory. The second was about measurement: Research shows that negative moral emotions generally operate within two broad categories (Haidt, 2003) and that people have trouble distinguishing between highly correlated but distinct moral emotions, such as anger and disgust (Nabi, 2002; Salerno & Peter-Hagene, 2013). Thus, we instead combined the measures into two emotion scales: other-condemning emotions (eight items measuring participants' anger and disgust;  $\alpha = .93$ ) and other-suffering emotions (five items measuring sympathy and sadness;  $\alpha = .90$ ). We had originally included two additional emotions that we thought could maybe be classified as other-suffering emotions (depression and unhappiness), but these two items had lower item-total correlations ( $r = .15$  and  $r = .30$ , respectively) and we saw an increase in alpha when removing these items (from  $\alpha = .64$  to  $\alpha = .90$ ). Because fear is not clearly an other-condemning emotion or an other-suffering emotion, we did not include the fear measures in either scale. Other-condemning and other-suffering emotions were positively correlated ( $r^2 = .63$ ,  $p < .001$ ) but not redundant. Although we believe the two-factor models are more concise and interpretable, for transparency we have included all the emotion measures and the original, preregistered analyses with the five distinct emotion scales in [online Supplemental Table S4 and Figures S4 and S5](#). The results reported below and the results using the five distinct emotion scales are conceptually similar to each other.

After completing all other measures, participants also completed two manipulation checks. In one manipulation check, we provided participants with a list of evidence that they might have seen during the trial and asked them to select all of the evidence that they saw. As discussed above, we excluded participants who failed to report that they saw a victim photograph when they did see the photograph. In the second manipulation check, participants were asked whether the victim was White, Black, or Latina. We excluded participants who failed to correctly report the victim's race. Participants also self-reported whether they were eligible to serve on a jury by confirming that all four of the following were true of themselves: (a) U.S. citizen; (b) older than 18 years; (c) never been convicted of a felony; and (d) can speak, read, and write fluent English.

We deviated from the preregistered plan in the following ways. First, participants were preregistered to be compensated \$2 ( $n = 478$ ), but we increased compensation to \$4 ( $n = 783$ ) because of problems with recruitment and data quality. The results did not differ on the basis of participant pay (see [online Supplemental Table S11 and Figures S18 and S19](#)). Second, as noted above, we had originally hypothesized a plan to analyze five separate emotion scales (anger, disgust, fear, sympathy, sadness) but instead decided to analyze them as two scales (i.e., other-condemning, other-suffering) for the reasons described above. We report these preregistered analyses in [online Supplemental Table S4 and Figures S4 and S5](#). Third, we preregistered a plan to break down the moderated mediation in multiple ways. In the main text, we report the preregistered model that examined whether the indirect effect of seeing postmortem photographs on verdicts through other-condemning and other-suffering emotions was moderated by seeing premortem photographs and race. We also discuss the preregistered alternative model that swapped the independent variable for the moderator (i.e., a model testing whether the indirect effect of seeing postmortem photographs on verdicts through other-condemning and other-suffering emotions is moderated by seeing postmortem photographs and by victim race) in the Alternative Models section and report the full results in [online Supplemental Table S6 and Figure S8](#). Thus, all preregistered analyses that do not appear in the main text are detailed in the [Supplemental Materials](#). All preregistered models are conceptually consistent with the models reported below.

## Results

We found that there were no significant effects of the order of the measures (i.e., emotion measures and then verdict compared with verdict and then emotion measures) on (a) other-condemning,  $F(1, 1072) = 0.48$ ,  $p = .49$ ,  $\eta^2 = .0004$ , 95% confidence interval [CI: 0.00, 1.00], and other-suffering,  $F(1, 1072) = 1.47$ ,  $p = .23$ ,  $\eta^2 = .001$ , 95% CI [0.00, 1.00], emotion scale scores or (b) conviction rates,  $\chi^2(1, N = 1,261) = 2.26$ ,  $p = .13$ ,  $OR = 1.20$ , 95% CI [0.95, 1.53]. Therefore, we collapsed across order for all analyses. Descriptive statistics for all dependent measures by experimental condition are provided in [Table 1](#).

We conducted preregistered moderated mediation models to test our hypotheses. More specifically, we conducted conditional process analyses testing whether the indirect effect of seeing postmortem photographs (compared with no photographs) on verdicts through other-condemning and other-suffering emotions



**Table 1**  
*Descriptive Statistics of All Dependent Measures*

Victim race	Photograph type	Verdict	Other-condemning emotions	Other-suffering emotions
White	No photos ( <i>n</i> = 108)	49 (45.37%)	2.37 (1.08)	3.69 (1.10)
	Premortem photos only ( <i>n</i> = 105)	55 (52.38%)	2.54 (1.1)	3.74 (1.07)
	Postmortem photos only ( <i>n</i> = 117)	65 (55.56%)	2.95 (1.16)	3.92 (0.87)
	Both photos ( <i>n</i> = 94)	49 (52.13%)	3.03 (1.04)	4.09 (0.95)
Black	No photos ( <i>n</i> = 112)	57 (50.89%)	2.64 (1.06)	3.78 (1.11)
	Premortem photos only ( <i>n</i> = 111)	55 (49.55%)	2.75 (1.21)	4.03 (0.96)
	Postmortem photos only ( <i>n</i> = 93)	48 (51.61%)	2.87 (1.19)	3.90 (1.06)
	Both photos ( <i>n</i> = 87)	40 (45.98%)	2.79 (1.19)	3.88 (0.98)
Latina	No photos ( <i>n</i> = 103)	54 (52.43%)	2.42 (1.04)	3.71 (1.03)
	Premortem photos only ( <i>n</i> = 110)	55 (50.00%)	2.57 (1.17)	3.87 (1.07)
	Postmortem photos only ( <i>n</i> = 103)	67 (65.05%)	2.90 (1.14)	3.99 (0.93)
	Both photos ( <i>n</i> = 118)	67 (56.78%)	2.83 (1.08)	3.85 (0.97)
	Total ( <i>N</i> = 1,261)	661 (52.31%)	2.72 (1.14)	3.87 (1.01)

*Note.* Verdict indicates the number and percentage of guilty verdicts in each condition. For each continuous dependent measure, the means are reported with the standard deviation in parentheses. Emotions were assessed on 5-point scales ranging from 1 (*not at all*) to 5 (*extremely*).

was moderated by the inclusion of premortem photographs and victim race. In other words, we used Model 11 of the Hayes (2017) PROCESS macro to conduct two conditional process models to test the indirect effects of postmortem photographs (either alone or with premortem photographs) of White, Black, and Latina victims on verdicts through (a) other-condemning emotions (see Figure 1A) and (b) other-suffering emotions (see Figure 1B).

### Hypothesis 1: Postmortem Photographs Will Increase Convictions Through Increased Other-Condemning Emotions for White, but Not Latina and Black, Victims

#### White Victims

First, we examined whether we replicated prior research on the effect of gruesome postmortem photographs (relative to no postmortem photographs) of White victims on verdicts through the emotion measures when participants did not see premortem photographs (see Figure 2A). We report all hypothesized indirect effects and conditional effects here and the full regression tables that make up these process models in online Supplemental Tables S2 and S3. When participants did not see premortem photographs, there was an indirect effect of seeing gruesome postmortem photographs (compared with no postmortem photographs) of a White victim on verdicts through other-condemning emotions ( $\beta = 0.30$ ,  $SE = 0.09$ , 95% CI [0.14, 0.48]), consistent with prior research and Hypothesis 1. That is, seeing gruesome postmortem photographs

of a White woman significantly increased other-condemning emotions such as anger and disgust, and in turn, these heightened other-condemning emotions were associated with greater likelihood of voting guilty (see Figure 2A).

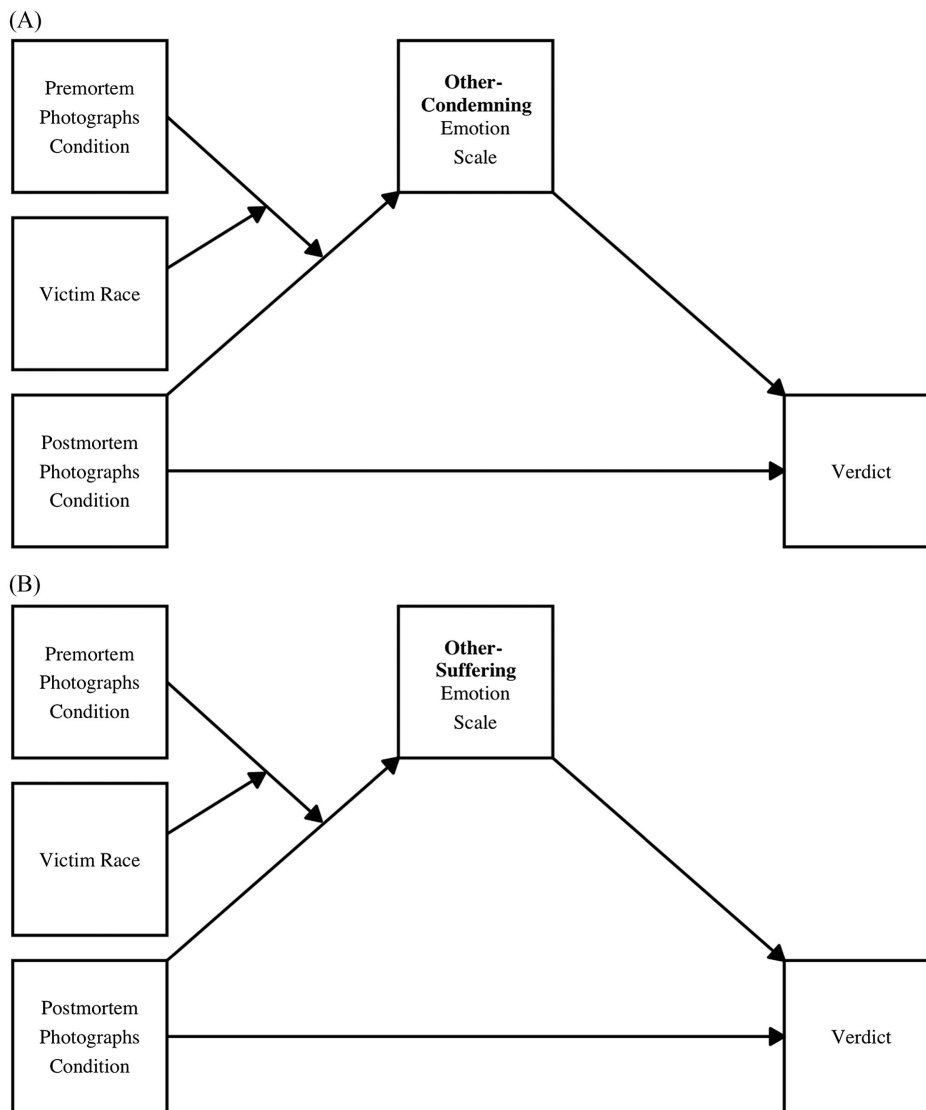
In contrast, there was no indirect effect of seeing these postmortem photographs (compared with no postmortem photographs) of a White victim on verdicts through other-suffering emotions ( $\beta = 0.03$ ,  $SE = 0.02$ , 95% CI [-0.003, 0.09]). This was because seeing the gruesome postmortem photographs did not significantly increase other-suffering emotions compared with the control condition—although to the degree mock jurors did feel other-suffering emotions such as sympathy and empathy for the victim, they were associated with greater likelihood of voting guilty (see Figure 2A).

#### Non-White Victims

Next, we describe the indirect effect of seeing gruesome postmortem photographs (compared with no postmortem photographs) on verdicts through moral emotions when the victim was Latina (see Figure 2B) or Black (see Figure 2C).

**Latina Victims.** Contrary to Hypothesis 1, when the victim was Latina, we saw the same pattern of results as when the victim was White. Specifically, when there were no premortem photographs, there was a significant indirect effect of seeing gruesome postmortem photographs of a Latina victim on verdicts through other-condemning emotions ( $\beta = 0.25$ ,  $SE = 0.09$ , 95% CI [0.09, 0.43]).

**Figure 1**  
*Conceptual Diagrams of the Two Conditional Process Models*



*Note.* Figure 1(A) shows the conceptual diagram for the conditional process model when other-condemning emotions is the mediator. Figure 1(B) shows the conceptual diagram for the conditional process model when other-suffering emotions is the mediator.

That is, seeing gruesome postmortem photographs of a Latina woman, similar to White victims, significantly increased White participants' other-condemning emotions such as anger and disgust, and in turn, these heightened other-condemning emotions were associated with greater likelihood of voting guilty (see Figure 2B).

There was not a significant indirect effect of seeing gruesome postmortem photographs of a Latina victim, similar to a White victim, on verdicts through other-suffering emotions ( $\beta = 0.04$ ,  $SE = 0.03$ , 95% CI  $[-0.001, 0.10]$ ) because postmortem photographs did not increase other-suffering emotions (see Figure 2B).

**Black Victims.** In contrast, when the victim was Black, there were no significant indirect effects of seeing the gruesome postmortem photographs on verdicts through either other-condemning emotions

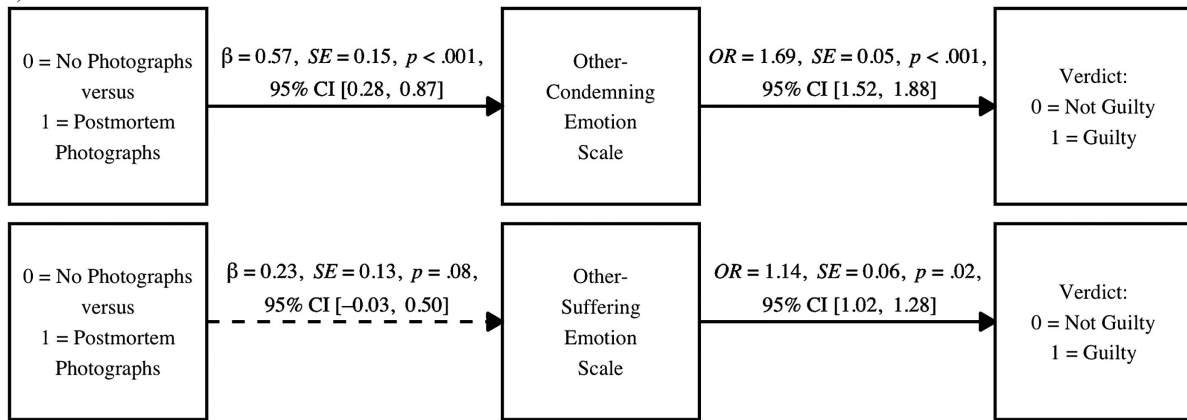
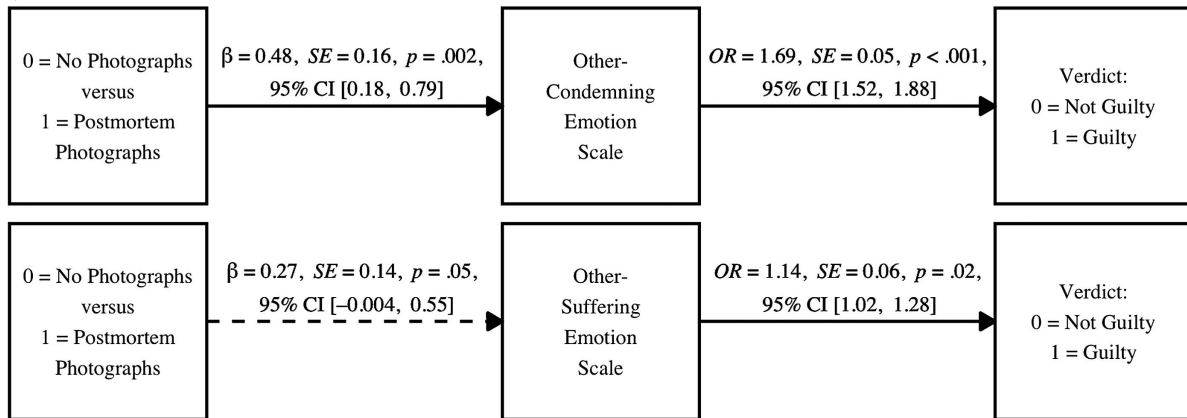
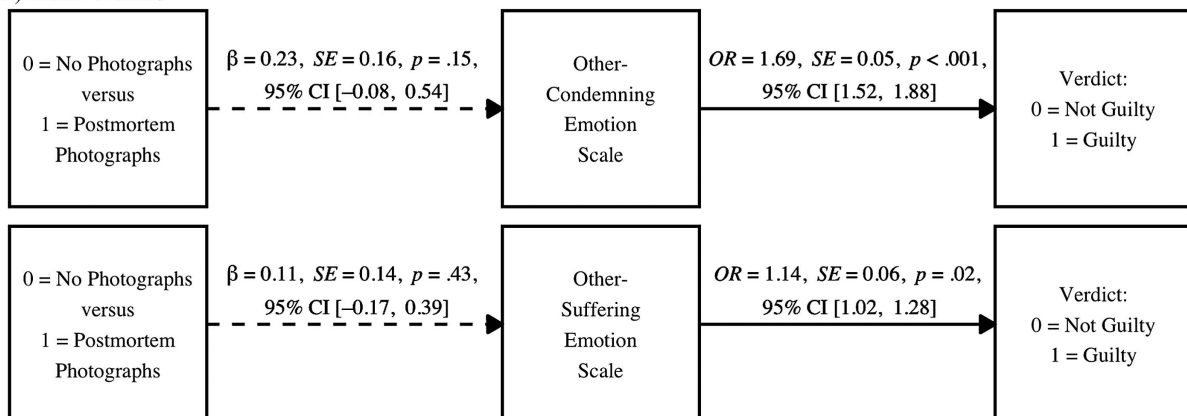
( $\beta = 0.12$ ,  $SE = 0.09$ , 95% CI  $[-0.05, 0.29]$ ) or other-suffering emotions ( $\beta = 0.02$ ,  $SE = 0.02$ , 95% CI  $[-0.03, 0.07]$ ), consistent with Hypothesis 1. This was because the gruesome postmortem photographs of Black victims failed to elicit other-condemning emotions in White participants (see Figure 2C).

### **Hypothesis 1: Summary**

In summary, in the absence of premortem photographs, we replicated the gruesome photo effect for White and Latina victims but not Black victims. When White mock jurors saw gruesome postmortem photographs alone, they reported heightened other-condemning emotions selectively for White and Latina—but not

**Figure 2**

*Indirect Effect of Gruesome Postmortem Photographs on Verdict Through Moral Emotions for White, Latina, and Black Victims (in the Absence of Premortem Photographs)*

**(A) White Victims****(B) Latina Victims****(C) Black Victims**

*Note.* The moderated mediation model was tested using PROCESS (Hayes, 2022) in the R programming environment (R Code Team, 2023). Solid lines indicate significant pathways, and dotted lines indicate nonsignificant pathways. CI = confidence interval; SE = standard error.

Black—victims, which in turn were associated with increased likelihood of blame and convicting the defendant. Regardless of victim race, seeing postmortem gruesome photographs alone, compared with no photographs, did not elicit other-suffering emotions from White mock jurors.

## **Hypothesis 2: Viewing Both Pre- and Postmortem Photographs Would Increase Convictions Compared With Postmortem Photographs Alone, Through Increased Other-Suffering Emotions—but Only for White, Not Latina and Black, Victims**

### *White Victims*

We then examined whether the addition of premortem photographs of White victims changed the effect of seeing postmortem photographs (vs. no postmortem photographs) on verdicts through the moral emotion measures (see Figure 3A). When participants saw the premortem photographs of White victims, there was a significant effect of also seeing gruesome postmortem photographs (relative to no postmortem photographs) on verdicts through both other-condemning emotions ( $\beta = 0.26$ ,  $SE = 0.08$ , 95% CI [0.10, 0.43]) and other-suffering emotions ( $\beta = 0.05$ ,  $SE = 0.03$ , 95% CI [0.003, 0.12]), consistent with our hypothesis. That is, in the context of also seeing premortem photographs of White victims, seeing (vs. not seeing) gruesome postmortem photographs significantly increased both other-condemning and other-suffering emotions. In turn, both other-condemning and other-suffering emotions were associated with greater likelihood of voting guilty. Specifically, the odds of conviction increased by 69% with a one-unit increase in other-condemning emotions and by 14% with a one-unit increase in other-suffering emotions.

### *Non-White Victims*

Finally, we examined whether the effect of seeing both pre- and postmortem photographs on verdicts through other-condemning and other-suffering emotions that we found when the victim was White was replicated when the victim was Latina (see Figure 3B) or Black (see Figure 3C). When participants saw premortem photographs, there were no indirect effects of seeing gruesome postmortem photographs (compared with no postmortem photographs) of Latina victims on verdicts through either other-suffering ( $\beta = 0.12$ ,  $SE = 0.09$ , 95% CI [-0.05, 0.29]) or other-condemning ( $\beta = -0.002$ ,  $SE = 0.02$ , 95% CI [-0.04, 0.04]) emotions, consistent with this hypothesis.

Further, we found the same effect for Black victims: When participants saw premortem photographs, there were no indirect effects of seeing gruesome postmortem photographs (compared with no postmortem photographs) of Black victims on verdicts through either other-suffering ( $\beta = 0.12$ ,  $SE = 0.09$ , 95% CI [-0.05, 0.29]) or other-condemning ( $\beta = -0.02$ ,  $SE = 0.02$ , 95% CI [-0.07, 0.02]) emotions.

### *Hypothesis 2: Summary*

In summary, seeing the combination of pre- and postmortem photographs increases White mock jurors' other-condemning and other-suffering emotions selectively for White—but not Latina or

Black—victims relative to seeing gruesome postmortem photographs alone. In turn, feeling increased other-condemning and other-suffering emotions is associated with increased likelihood of blame and convicting the defendant.

### **Alternative Models**

To provide additional support for the hypothesized model, we ran several alternative models, which we summarize here and present in detail in the [online Supplemental Materials](#).

First, we tested a model that swapped the independent variable (postmortem photographs) and one of the moderators (premortem photographs) to determine the impact of seeing premortem photographs on their own compared with seeing no victim photographs at all. We found no significant indirect effects of seeing premortem photographs alone (relative to no premortem photographs) on verdicts through other-condemning emotions or other-suffering emotions for any victims, regardless of race, consistent with our hypothesis. That is, seeing premortem photographs of White, Black, or Latina victims, compared with no premortem photographs, did not significantly increase either other-condemning or other-suffering emotions. The full model results for this alternative model can be found in [online Supplemental Table S6](#) and [Figure S8](#). This finding supports our interpretation that it is the *combination* of premortem and gruesome postmortem photographs driving our results rather than premortem photographs on their own.

Next, we tested whether reversing the order of the mediators (i.e., emotion scales) and the dependent variable (i.e., verdict) would also produce significant indirect effects of our manipulation. We found that the indirect effects of the photographs on emotions through verdicts were not significant. Further, we conducted a model comparison and found that the original hypothesized models reported in the main text were a better fit for the data than this alternative model. These results are reported in [online Supplemental Tables S7 and S8](#) and [Figures S9 and S10](#). This finding supports our original theoretical model of victim photographs affecting verdicts through emotional responses as being a better fit for our data than a model that reverses the order of the mediator and verdict.

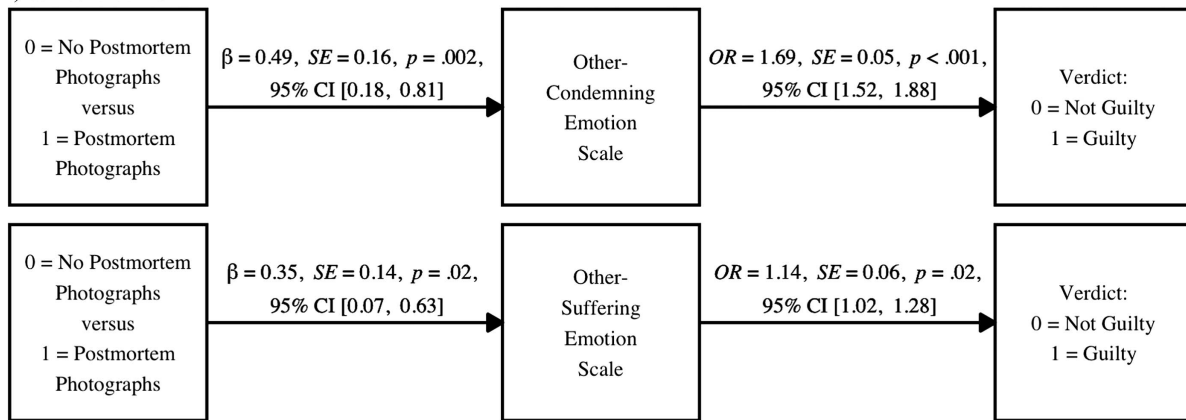
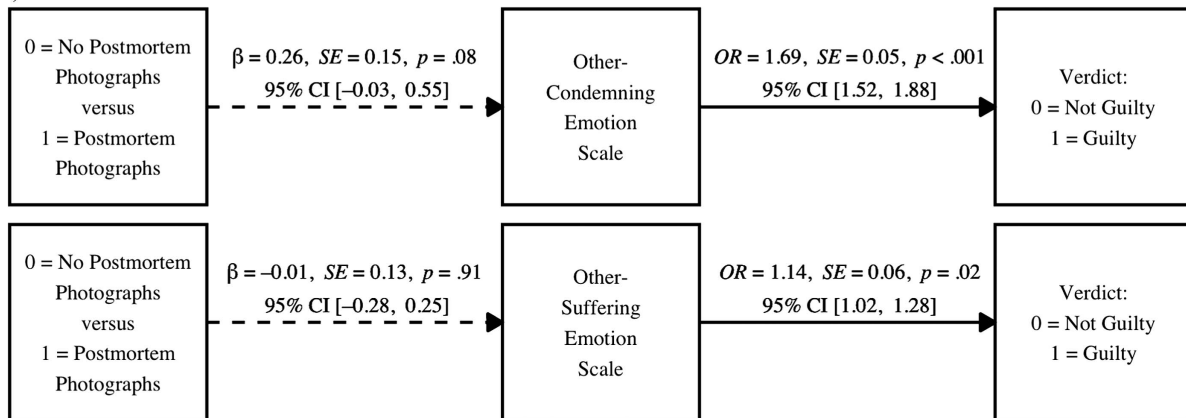
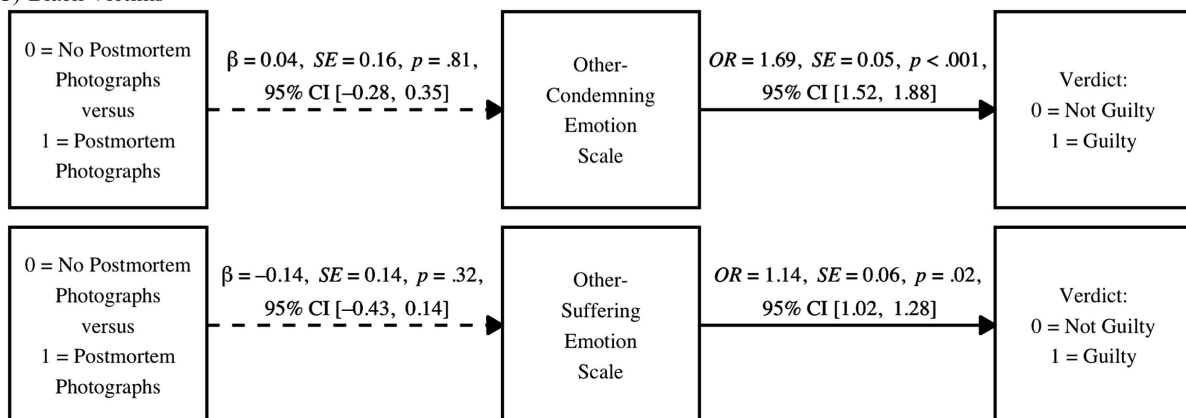
Finally, we tested whether the victim race findings were driven by one specific woman rather than generalizing across the three women composing each racial victim group. Specifically, we tested whether participants' emotional responses and, in turn, verdicts within a victim race condition differed by which of the three women was shown in the premortem victim photographs. In each of the three victim race conditions, we found no significant indirect effects of which woman the participants saw on verdicts through either other-condemning or other-suffering emotions (see [online Supplemental Table S9](#) and [Figures S11–S13](#)). That is, participants' emotional responses to seeing a premortem victim photograph, and in turn, their verdicts, did not depend on which woman was depicted in the photographs. This finding supports our argument that our findings are due to victim race, rather than being driven by one specific woman in each victim race condition.

### **Discussion**

The admissibility of photographs of victims of violence in trials will always be contentious. The probative value of gruesome photographs of victims' injuries will always need to be weighed

**Figure 3**

*Indirect Effect of Postmortem Photographs on Verdict Through Moral Emotions for White, Black, and Latina Victims (in the Presence of Premortem Photographs)*

**(A) White Victims****(B) Latina Victims****(C) Black Victims**

*Note.* The moderated mediation model was tested using PROCESS (Hayes, 2022) in the R programming environment (R Code Team, 2023). Solid lines indicate significant pathways, and dotted lines indicate nonsignificant pathways. CI = confidence interval; SE = standard error.

against the potentially prejudicial impact of the other-condemning emotions, such as anger and disgust, that they are likely to stir. Victim advocacy groups have lobbied to mandate the admission of photographs of murder victims before they died to humanize them. The hope was that the other-suffering emotions that the premortem photographs might stir, such as sympathy and empathy, might help jurors identify with the victim—despite a long-established rule against the admission of evidence designed solely to arouse sympathy and empathy toward the victim in the guilt phase (*People v. Fields*, 1983; *People v. Wise*, 1984). Living victim photograph advocates and psychologists researching the identifiable victim effect might even argue that premortem photographs have the potential to close racial empathy gaps and lead people to empathize more with racial outgroups rather than only those similar to themselves. However, these arguments rely on the assumption that people feel moral emotions for victims across racial lines. Unfortunately, our findings do not support this assumption.

Our research demonstrates that White people might feel moral emotions selectively for female victims who are also White but less so (or not at all) for victims of color. We found that the gruesome photograph effect is evident for White and Latina victims, but not Black victims, because White mock jurors felt increased other-condemning emotions, such as anger and disgust, on behalf of a White or Latina victim who had been harmed, but not for a Black victim who had been harmed in the exact same manner. We found that seeing the combination of photographs of the victim happy and alive and then seeing that victim with a slit throat on an autopsy table was even more emotionally impactful than seeing the gruesome postmortem photograph alone—but this was limited to only White victims. When White mock jurors saw this combination of pre- and postmortem photographs, they felt more other-condemning emotions such as anger and disgust toward the perpetrator but also other-suffering emotions such as sympathy and empathy toward the victim. These moral emotional responses were again selectively felt on behalf of White female victims but not Latina or Black female victims. And these selective moral responses mattered: The differential impact of victim photographs on mock jurors' moral emotions was associated with an increased likelihood of blaming and convicting the defendant.

### Theoretical Contributions

This research advances our understanding of how different types of victim photographs can impact different kinds of moral emotions. We built on other studies that have demonstrated that people feel increased other-condemning emotions when they see gruesome photographs depicting harm (e.g., anger; Bright & Goodman-Delahunty, 2006; e.g., disgust; Salerno, 2017; Salerno & Phalen, 2019) by examining an important boundary condition: whether these emotional responses depend on the race of the person who was harmed. Indeed, we found that White mock jurors reported increased other-condemning emotions only when they saw photographs of White and Latina victims and not when they saw photographs of Black victims.

It is possible that this effect is due to a widespread devaluing of Black female victims in American culture. Research shows that Black female victims are underrepresented in the media, relative to White female victims, and that Black female victims are more likely than White female victims to be portrayed as partially to blame for the harm inflicted against them (Slakoff & Brennan, 2023).

Similarly, research has found that intimate partner violence is the least likely to result in an arrest when the victim is Black, relative to when the victim is from any other racial category (McCormack & Hirschel, 2021), and mock jurors suggest harsher penalties for juvenile sex offenses when the victim is White compared with Black (Stevenson et al., 2009). Research also shows that people are more likely to dehumanize Black people (Goff et al., 2008), which might, in turn, reduce the level of empathy that they feel for Black victims (Utych, 2018). Our findings are consistent with this prior research and suggest a potential explanation: White mock jurors might have muted moral emotional reactions to evidence of harm (e.g., gruesome photographs) against a Black female victim compared with a White female victim. Additionally, we found that White mock jurors responded similarly to gruesome postmortem photographs of White and Latina victims, although we are hesitant to draw strong conclusions on the basis of this finding for reasons discussed below in the limitations section.

It is also possible that people do not have the same emotional reactions to seeing gruesome photographs of a Black female victim because they perceive the injuries as less harmful and graphic on a Black victim, compared with a White or Latina victim. Research has shown that both physicians and laypeople estimate that Black people feel less pain than White people (Cintron & Morrison, 2006; Wandner et al., 2012). If people are devaluing the pain felt by the Black victim, they might, in turn, feel less anger and disgust because other-condemning emotions are closely linked with perceptions of harm (Carlsmith et al., 2002) or less sympathy and empathy for the victim. It is also possible that participants felt less disgust when they saw photographs of the Black victim, relative to the White or Latina victim, because there was less contrast between the victim's skin and the injuries because of Black victims' skin being darker. This is consistent with research finding that bruising is seen as less severe in intimate partner violence survivors of color relative to White survivors, which in turn impacts the success of legal cases (Deutsch et al., 2017). Our findings add to that research by identifying another way in which Black victims might be treated differently from White or Latina victims: Depictions of their injuries might elicit muted moral emotional responses. In sum, the combination of a systematic devaluing of Black victims, the tendency to underestimate the pain that they experience, and the different ways in which injuries might appear on darker skin might diminish White individuals' emotional reactions to depictions of harm because those individuals might not perceive the harm to be as severe when the victim is Black instead of White. Unfortunately, research on perceptions of Latina victims' pain or injuries is rare, so it is not clear whether these kinds of phenomena generalize beyond Black victims—an important area for future research.

We also built on prior research by demonstrating that the effect of seeing gruesome postmortem photographs on moral emotions is exacerbated when the gruesome photograph is shown in combination with a premortem photograph of the victim while she was alive. This difference was primarily driven by an increase in other-suffering emotions such as sympathy and empathy for the victim. In other words, seeing gruesome photographs of White victims alone increased other-condemning emotions but not other-suffering emotions, compared with only hearing a description of the photographs, which is consistent with prior research. However, in the context of premortem photographs, the gruesome photographs of the White victim also increased other-suffering emotions, compared with hearing the description alone. This suggests

that the effect of gruesome photographs on other-condemning emotions found in prior research is driven by seeing the gruesome photographs but that the contrast of photographs of a happy, smiling woman and photographs of her brutal murder is necessary to rouse other-suffering emotions.

However, we again explored an important limitation to the generalizability of this finding: White jurors felt more other-suffering emotions only when they saw premortem photographs of White female victims but not when the premortem photographs depicted a Latina or Black female victim. This finding provides some support for the idea that mock jurors might have different emotional responses depending on the victim's race. We expanded on prior research by demonstrating that White mock jurors not only failed to react to the combination of pre- and postmortem photographs of Black and Latina victims with other-suffering emotions but also failed to react with other-condemning emotions, such as anger and disgust, like they did in reaction to victim photographs of White female victims. Thus, living victim photographs might, in fact, achieve victim advocacy groups' goal of encouraging jurors to see the victim as a person and empathize with her suffering after also seeing the gruesome postmortem photographs—but only when she is White. Because these moral emotions predict convictions, showing jurors both pre- and postmortem photographs of female victims might exacerbate unequal treatment of White versus non-White victims when the jury is predominantly White.

These results are consistent with the ingroup empathy hypothesis. Seeing the combination of pre- and postmortem photographs of White female victims selectively elicited moral emotional reactions from White mock jurors. However, this study was not designed to enable a full test of alternative explanations for this effect (such as a general tendency to devalue or dehumanize non-White female victims). We hope this first step will prompt future research testing whether our findings would generalize to non-White jurors or whether an ingroup effect would be found such that Latina and Black samples would feel more moral emotions on behalf of their racial ingroup but not on behalf of White victims.

This research also has important implications for the identifiable victim effect literature. Some research on identifiable victims might suggest that providing jurors with a more identifiable victim (through showing photographs of her when she was alive) might have closed racial empathy gaps between White and non-White victims by increasing other-suffering emotions (Duclos & Barasch, 2014; Erlandsson et al., 2015, Study 1). However, our data were consistent with other identifiable victim research (Erlandsson et al., 2015, Studies 3 and 4; Kogut & Ritov, 2007) that found that White participants felt increased other-suffering emotions only for more (vs. less) identifiable victims when the victim was White. Further, our research suggests an important addition to the identifiable victim literature: The identifiable victim effect might be strongest when people see the contrast between a living, happy White victim before the harm (e.g., before her death) and a gruesome victim after the harm (e.g., after her death).

Finally, this research builds on our understanding of how moral emotions are related to blame judgments. We found that increased other-condemning emotions, such as anger and disgust, predicted an increase in the likelihood that participants would find the defendant guilty, consistent with a number of previous studies. But we also found that increased other-suffering emotions toward the victim can also predict an increase in guilty verdicts. Although different stimuli

might be required to rouse other-condemning versus other-suffering emotions, the emotions themselves have similar relationships with blame judgments (i.e., convictions).

However, research suggests that the effect of these moral emotions on blame judgments might be driven by different mechanisms; that is, a desire to punish the defendant might mediate the relationship between other-condemning emotions and guilt judgments, but a desire to help the victim might mediate the relationship between other-suffering emotions and guilt judgments. We found that the relationship between other-condemning emotions and verdicts was stronger than the relationship between other-suffering emotions and verdicts, in line with that research. It is possible that, in this case, the connection between punishing the defendant and conviction was stronger than the connection between helping the victim and conviction, which would explain why the relationship between other-condemning emotions and verdicts is stronger than that of other-suffering emotions. Future research should attempt to test these potential mediating mechanisms by examining scenarios in which the opportunity to punish a defendant is separate from the opportunity to help the victim to better understand how other-condemning and other-suffering emotions impact judgments differently. For example, in a civil case, other-suffering emotions toward the plaintiff might increase the likelihood of finding that a plaintiff was injured (thereby helping the plaintiff), but other-condemning emotions might increase the likelihood of awarding punitive damages (thereby punishing the defendant).

## Legal Implications

Our research extends past research on the impact of gruesome photographs in the legal system in several ways. First, we extended the literature on gruesome photographs—which has primarily focused on White victims—to White mock jurors' reactions to photographs of victims of color. It is critically important to begin considering the ways in which intersectional identities impact mock jurors' emotional responses to a victim because the intersection of racism and sexism that is unique to women of color suggests that they might not have the same access to justice as their White counterparts (Collins, 2017; Hunt & Shepherd, 2023). Given that the majority of murder victims in the United States (60%) are not White (Statista, 2021) but the majority of jurors in the United States are White (Gau, 2016), cases that involve a non-White victim often will be judged by a jury that is made up (mostly, if not entirely) of White jurors. And we confirmed that White people respond emotionally to gruesome photographs differently based on the race of the female victim. This suggests that these photographs might have a more insidious prejudicial effect than previously thought. More specifically, even though gruesome photographs might provide some probative information, they not only might heighten moral emotional responses in ways that could motivate them to blame and punish the defendant. But they might do so to different degrees, depending on the race of the victim, and in ways that exacerbate racial disparities for female victims who are White versus female victims of color. In other words, in addition to impacting verdicts directly (Baldus et al., 1998), the race of the victim might indirectly impact verdicts by eliciting different emotional reactions to seeing victim photographs based on the victim's race and, in turn, different levels of motivation to convict. Whereas this research is an important first step for examining the impact of victim photographs in the legal

system, we also hope that it will encourage future research on how intersectional identities moderate the impact of victim photographs on emotions and verdicts by testing whether these findings extend to male victims and among non-White mock jurors.

Second, this research has important implications for our understanding of how mock jurors might respond to Latina victims in a unique way relative to both White and Black victims. There is relatively little research in psychology and law on mock jurors' perceptions of Latina victims specifically. In the research that has been done, the ethnicity manipulation has tended to compare only Latinx victims and White victims (e.g., [Schwartz & Hunt, 2011](#)), but that research has not addressed how Latinx victims might be perceived differently from Black victims. In this research, we have expanded the relatively small body of literature about mock jurors' responses when the victim is Latina by comparing White, Black, and Latina female victims. More research in this area is critical, given that we found that sometimes White mock jurors respond to Latina victims in the same way that they respond to White victims (e.g., by reporting stronger other-condemning emotions in reaction to gruesome postmortem photographs) but sometimes White mock jurors respond to Latina victims in the same way that they respond to Black victims (e.g., by failing to report heightened other-suffering emotions in reaction to victim photographs).

Finally, the gruesome photograph effect documented in previous research might be even stronger when the gruesome photographs are presented in the context of living victim photographs. Gruesome postmortem photographs and living pre-mortem photographs rouse different types of moral emotional responses (other-condemning and other-suffering emotions, respectively), which are both associated with greater likelihood of conviction. This finding provides a very important insight into the debate regarding the admissibility of living victim photographs. Although the alternative model suggests that seeing pre-mortem photographs alone does not impact mock jurors' emotions, these pre-mortem photographs are generally shown in combination with postmortem photographs. And this research suggests that seeing the combination of postmortem and pre-mortem photographs specifically predicts an increase in convictions through moral emotions when the victim is White but not when the victim is Black or Latina. Admitting pre-mortem photographs of White female victims might achieve the goals of the victims' advocacy groups that argue for the admissibility of these photographs: Seeing the combination of pre- and postmortem photographs of White victims does increase sympathy and empathy for that victim. However, this might be problematic because, although these photographs offer no probative information about the defendant's guilt, seeing these photographs might increase convictions by inciting jurors' other-suffering emotions, which is impermissible in the guilty phase of trial. Further, this is true only for White female victims and not for Black or Latina female victims. Finally, this finding might also help explain why there are disparities in how defendants are treated when the victim is White compared with when the victim is not White ([Balduz et al., 1998](#)), which has important implications in broader discussions of the racial disparities in the U.S. legal system.

### Strengths, Limitations, and Future Directions

Although mock juror studies can never entirely mimic a real jury trial, we designed this study to be as generalizable and ecologically valid as possible. We used stimulus sampling to ensure that we can

conclude that our findings regarding racial bias can generalize across different victims and are not due to the appearance of one specific woman. Further, we used the same postmortem photographs in every condition, only varying the luminosity of the skin when participants were told that the victim was Black. In other words, the postmortem photographs depicted the same probative information about injuries and other legally relevant information across all three victim race conditions. This allowed us to conclude that the differences were due to the victim's race and not due to a change in the nature or severity of the injury (or any other legally relevant information depicted in the photographs). We created a trial video based on a real case and recruited real trial attorneys to best recreate the experience of a real juror. Finally, we conducted this research in a jury-eligible nonstudent sample, which is important, given the possible differences between student and nonstudent samples ([Wiener et al., 2011](#)) and that almost all previous gruesome photographs research (cf. [Salerno, 2017](#); [Salerno & Phalen, 2019](#)) has been conducted only in student samples.

There are, however, several limitations that impact the potential generalizability of our findings. First, mock jurors did not deliberate, and it is possible that deliberation might impact both mock jurors' perceptions and verdicts in cases like this—although we would argue that the emotionally disturbing nature of the photos would be even more impactful in real life. Second, although MTurk is more representative of the general population than other convenience samples, MTurk workers tend to be more White, educated, and Democratic than the population ([Henrich et al., 2010](#)). Although research has demonstrated that MTurk, and Cloud Research specifically, is a reliable and generalizable sample for jury research ([Hauser et al., 2022](#); [Irvine et al., 2018](#)), participants on MTurk may be motivated to appear unbiased. Recent research suggests that the majority of mock jurors are aware of the purpose of studies on racial bias and that awareness predicted a tendency to respond in a less biased manner ([Salerno et al., 2023](#)). Given that racial bias against Black individuals in legal settings is greater in naturalistic studies than in experimental work ([Smalarz et al., 2023](#)), the racial biases we found might be even stronger in the real world. Additionally, a majority of our sample (65%) identified as women. Given that there is mixed research about the impact of participant gender on decisions in cases involving intimate partner violence (e.g., [Maeder et al., 2013](#); [Stanziani et al., 2018](#)), future research should examine how participant gender might affect emotional reactions to evidence. We fell a little short of the preregistered sample size, although a sensitivity analysis indicated that our study was well powered to detect small effects.

Our study is also limited in that we analyzed a sample of only White jurors. Because juries continue to be predominantly White ([Gau, 2016](#)), it is important to test whether White jurors have similar emotional responses to seeing photographs of women of different races. However, a very important next step in this research is to investigate whether the effects that we have found here generalize to jurors of other races. This would also enable us to tease apart the effects of ingroup/outgroup bias versus general devaluing of victims of color.

Further, although it is possible that the emotional impact of these stimuli online might be diminished relative to a real juror, we would argue that the pattern of results is likely to be similar and perhaps would be even stronger in the case of a real juror given that real jurors often note gruesome photographs as one of the most stressful



parts of homicide trials and that being exposed to graphic evidence predicts trauma and clinical depression (for a review, see Salerno, 2021). Participants saw photographs in the combined conditions for a slightly longer amount of time than in the single-photograph conditions (80 s), which could contribute to the experimental effect of seeing both types of photographs on emotions. Future research should examine whether longer exposure duration influences mock jurors' emotional reactions.

Although we used stimulus sampling in the premortem photographs to ensure that differences were not due to something specific to one woman, we used only one set of postmortem photographs. Although this allowed us to control for the gruesomeness and probative aspects of the crime in the photographs, it required us to artificially change the luminosity of the victim's skin when the victim was identified as Black. Because we used the same (unedited) postmortem photographs when the victim was White or Latina and an edited version of the photographs when the victim was Black, we hesitate to draw strong conclusions from our finding that mock jurors had similar reactions to seeing gruesome postmortem photographs on other-condemning emotions when the victim was White or Latina. This might have been because we used the same gruesome postmortem photograph for both White and Latina victims, and it is important to replicate this finding by using other gruesome photographs of a Latina victim. Although the method of changing the luminosity of the victim's skin has been validated in past research (Dixon & Maddox, 2005; Gilliam et al., 1996; Maddox & Gray, 2002, Study 1), and we believed it was a necessary first step to test the causal impact of victim race while holding aspects of the injury and crime constant, ideally next steps would be to use real photographs. This would require, however, a very large set of real victim gruesome photographs to stimulus sample enough Black, White, and Latina victims to overcome the noise of all the different types of injuries and crimes.

Additionally, in pilot testing, the Latina woman was misidentified (typically as Hawaiian) around 35.85% of the time. We believe this had a minimal effect on our findings because we told participants their race and excluded anyone who failed the victim race manipulation. It is possible, however, that our findings could differ depending on when a victim presents as more or less phenotypically Latina.

Our research was not designed to distinguish between several possible explanations for the selective gruesome photographs effect that we found for White/Latina victims but not Black victims (i.e., whether the effect was due to ingroup bias, general devaluing/dehumanization, or the perception that the injury was less severe when the victim was Black). Future research could test these possible alternative or complementary explanations.

This research used all female victims—even though the majority of victims of violence are men (Statista, 2021). Mock jurors' emotional responses to victims of different races might be further moderated by victim gender. Research suggests that people differentiate between White men and women more than they differentiate between Black men and women (Coles & Pasek, 2020). Therefore, White women might be viewed as the prototypical victim who is "worthy" of sympathy and compassion (Reynolds et al., 2020), whereas men and Black women are viewed less sympathetically. Future research should test our effects among male victims.

We did not manipulate the defendant's race; instead we left defendant race ambiguous. Most of our participants assumed that the defendant was the same race as the victim, which is in line with

real-world data on the racial composition of the offender–victim dyad in intimate partner violence (McCormack & Hirschel, 2021; Zimmerman et al., 2021). Given that research indicates that mock jurors are the most punitive in cases in which the defendant is Black and the victim is White (Baldus et al., 1990; Stevenson et al., 2009), the racial bias we report might be even stronger in interracial crimes—another important question for future research.

Finally, we found a significant relationship between moral emotions and blame judgments, but this research manipulated emotions via the photograph manipulation. Although our findings are supported by several theoretical models that suggest that people's negative emotions impact their later judgments in a way that is consistent with their emotions (e.g., Alicke, 2000; Feigenson & Park, 2006; Salerno, 2021) and by experimental research that has incidentally manipulated mock jurors' emotions (e.g., Ask & Pina, 2011), future researchers should continue to build on this research to evaluate and empirically test a causal model (Rohrer et al., 2022) of the link between mock jurors' emotions and blame judgments—perhaps by measuring emotions throughout several points of the trial to establish temporal order.

## Conclusion

Prior research has suggested that non-White victims are valued less than White victims (Bottoms et al., 2004). One might hope that seeing photographs of these victims might help close those racial disparities by humanizing these victims and helping mock jurors better empathize with victims of other races. And in fact, victims' rights advocates have argued that jurors should be allowed to see photographs of victims while they were alive to help jurors understand who they were and to give victims a voice.

Unfortunately, we did not find evidence to support this idea. Instead, we found that White people who saw the powerful combination of a happy, living victim and then gruesome evidence of that victim's murder selectively felt moral emotions on behalf of other White victims. They felt more other-condemning emotions such as anger and disgust and more other-suffering emotions such as sympathy and empathy for the victim, which in turn were both associated with greater likelihood of convicting the defendant. White mock jurors did not, however, have the same emotional responses to Latina and Black victims—despite their injuries and circumstances surrounding their death being exactly the same. Our results suggest that rather than closing racial empathy gaps, presenting the combination of pre- and postmortem photographs of victims has the potential to exacerbate them. When it comes to the admissibility of these photographs, attorneys and judges should consider the possibility that victim photographs might selectively rouse jurors' moral emotional responses in ways that affect their verdicts for White but not Latina or Black victims—exacerbating racial bias in the legal system.

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