The Effects of Witness Bias on the Identification of Perpetrators in a Photo Lineup

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Abstract: Throughout the history of forensic science, the questioning of the reliability of eyewitness testimony and suspect identification has been prevalent. The purpose of this experiment is to determine the effect of race on the results of suspect identification in a photo lineup when provided with witness descriptions of the suspect. This study was conducted by setting up a mock crime with one white perpetrator and one South Asian perpetrator. 25 mock witnesses of varying races were shown a picture of both perpetrators escaping the crime for 30 seconds. The mock witnesses were instructed to note down any key characteristics to identify these suspects. Two weeks later, the witnesses received an online survey in which they were presented with two photo lineups. One photo lineup consisted of six white men and the other consisted of six South Asian men. These photo lineups also consisted of a cumulative description of what the mock witnesses provided earlier in the experiment. The witnesses were then asked to identify the perpetrator from the lineup. Greater than 70% of the witnesses selected the perpetrator from the suspect lineup. The witness's race did not significantly influence the ability to recall the perpetrator. These results support previous findings that eyewitness testimony can be helpful in a criminal trial when the external factors are minimized.

The accuracy of eyewitness accounts and their relation to race has become a key interest in the field of forensic psychology. Hugo Munsterberg questioned the accuracy of eyewitness accounts in his study "On the Witness Stand: Essays on Psychology and Crime". This study focused on the unreliability of eyewitness accounts as the human mind is prone to making inaccurate conclusions and memory is not always reliable (Munsterberg 1908). Prior to Munsterberg's findings, criminal trials relied heavily on witness testimony. Munsterberg's findings led to the expansion of research on the accuracy of eyewitness testimony. Researchers have determined that external factors, such as interviews, suspect descriptions, and memory, may skew eyewitness accounts (Fisher & Cutler 1995). The validity of eyewitness accounts is essential to court cases, as inaccurately identifying a suspect can present various challenges for investigators and the suspects. Humans tend to more accurately identify faces from members of their own race, known as the cross-race effect (Meissner & Brigham 2001). This experiment aims to determine how racial bias and perpetrator description impact eyewitness accuracy in a photo lineup. We hypothesize that witnesses will accurately identify a perpetrator of the same race more frequently than a perpetrator of a different race and that the overall proportion of correct identification will be higher when provided with the perpetrator description.

Materials and Methods

Twenty-five students from Texas A&M of the

following races were randomly chosen as mock witnesses for this experiment: nine were white, fourteen were South Asian, and two were black. Witnesses were chosen at random to simulate a real trial, as the race of witnesses cannot be predetermined. The witnesses were shown a photo of a crime scene via Zoom depicting two males, one white and one South Asian, fleeing the scene. The photo was shown for 30 seconds, and each witness was instructed to individually write a physical description of the two perpetrators. We combined these individual descriptions into one condensed description to depict the average recollection of the crime and for use in the second part of the experiment. Two weeks after witnessing the mock crime scene, the witnesses were sent a survey via Google Forms. The first question of this survey required the witnesses to provide their race to record possible racial bias. In the second question, the witnesses were provided with the summarized witness description of the white perpetrator and the following six photos: 1 photo of the white perpetrator and five photos of randomly chosen white males, then were instructed to select the photo of the perpetrator. Finally, the third question provided the witnesses with the summarized witness description of the South Asian male and the following six photos: 1 photo of the South Asian perpetrator and five photos of randomly chosen South Asian males, then were instructed to select the perpetrator. The witnesses were provided with a description of the perpetrator to determine the interaction between the cross-race effect and external factors. The proportion of correct identification of each perpetrator was calculated for each witness's race to determine if the witnesses' race impacted their selection of the perpetrator.

Results

From the white male lineup, 72% of the total witnesses correctly identified the suspect (Fig. 1).
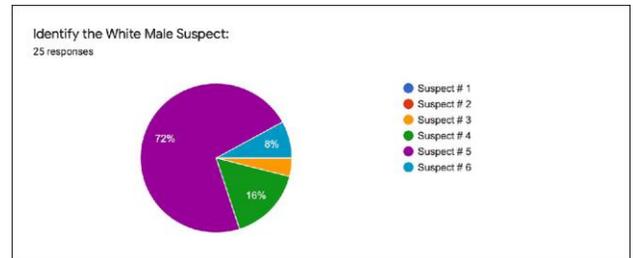

Figure 1. Responses from the white male photo lineup. 72% of the witnesses correctly identified the perpetrator as suspect #5.

Of these correct identifications, 50% of the witnesses were white. From the South Asian male lineup, 84% of the witnesses correctly identified the perpetrator. 62% of the correct identifications were made by South Asian witnesses (Fig. 2).
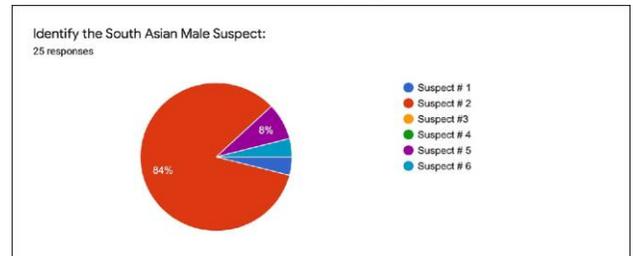

Figure 2. Responses from the South Asian male photo lineup. 84% of the witnesses correctly identified the perpetrator as suspect 2.

Discussion

Race was not a significant factor that affected the witness's recollection of the crime. Since the majority of witnesses identified the correct perpetrator in both lineups, we conclude that providing the witnesses with their description of the perpetrator significantly influences a witness's recollection of the crime. By reminding the witnesses of their previous description, they were able to more accurately recall the perpetrator. Furthermore, the witnesses had the ability to simply compare the provided description to the photo lineup and select who matches the description best,

regardless of their memory. These findings support previous findings that biased instructions, such as providing a description of the perpetrator, can have inconclusive results for target-present lineups (S. E. Clark 2005). Due to the increasing use of DNA testing, many prisoners have been found wrongly imprisoned solely because of witness testimony. Future use of eyewitness reports must forbid providing the witnesses with a description of the perpetrator prior to selection from a lineup, regardless of the witness's race. To prevent wrongful convictions, researchers have suggested system-variable approaches in the criminal justice system. These include special preventative treatment at the time of lineup identification (Wells & Olson 2001). These system variables can be implemented in future studies to find methods of reducing bias in eyewitness testimony (Brigham & Bennett 2007). With numerous studies analyzing the reliability of eyewitness identification, more criminal justice officials are questioning the risks and benefits involved. While changes in the regulation of eyewitness testimony are necessary and can reduce the risk of false conviction of the innocent, the likelihood of correctly identifying the perpetrator could decrease as well (Clark 2012). The University of Michigan Journal of Race and Law claims that jurors are meant to judge the credibility of these identifications, but they may not thoroughly understand the issues surrounding eyewitness testimonies (Connelly 2015). Given the findings of this study, more research is needed to fully conclude the importance of the cross-race effect on eyewitness testimony, particularly suspect identification from a photo lineup, and eyewitness bias as a whole. Future research in this field should investigate the influence of cross-race misidentification in conjunction with other external factors.

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