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Systematic Review

A Systematic Review and Meta-Analysis of the Effects of Race in the Criminal Justice System with Respect to Forensic Science Decision Making: Implications for Forensic Anthropology

An-Di Yim [1,2,3,*] and Nicholas V. Passalacqua [4]

[1] Department of Health and Exercise Sciences, Truman State University, Kirksville, MO 63501, USA
[2] Department of Biology, Truman State University, Kirksville, MO 63501, USA
[3] Department of Anthropology, University of Illinois Urbana-Champaign, Champaign, IL 61801, USA
[4] Department of Anthropology and Sociology, Western Carolina University, Cullowhee, NC 28723, USA; nvpassalacqua@wcu.edu
* Correspondence: andiyim2@gmail.com

Abstract: Instances of racial disparities are well documented in the United States' criminal justice system. This study reviewed the literature and conducted quantitative analyses on the role of race in forensic decision making among practitioners and other stakeholders in the criminal justice system. We hypothesized that Black, Indigenous, and People of Color (BIPOC) individuals will be significantly more likely to be associated with adverse outcomes than White individuals. A search strategy was developed and registered before the study commenced. Quantitative data were extracted from eligible studies to estimate the pooled effect size (odds ratio) for the effects of race. A final sample of 11 data sources (published study or dataset) was identified. Decision making by all stakeholders in the criminal justice system, including forensic practitioners, case investigators, and juries were evaluated in these studies. Two datasets evaluated the decision-making process involving forensic psychology or psychiatry, three focused on forensic evidence, four on forensic pathology, one involved forensic anthropology cases, and one involved clinical forensic medicine cases. The pooled odds ratio was estimated to be 1.10 (95% confidence interval: 0.67–1.81), indicating a trivial or negligible effect of race (i.e., BIPOC individuals were no more likely to be associated with adverse outcomes given the current evidence). Importantly, the results of this study do not indicate that bias or disparity related to race does not exist in forensic decision making in the criminal justice system. More research into systemic bias in forensic decision making, especially in relation to race, is needed. Forensic anthropologists are uniquely positioned to study and address racial disparities in the criminal justice system involving forensic science because of its interdisciplinary and multidisciplinary nature. This study highlights the need for further research and advocates for forensic anthropologists to be more involved in the study of the science and the impacts of forensic science rather than focusing on methodological advancement.

Keywords: racial disparity; bias; meta-analysis; forensic decisions; forensic sciences

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1. Introduction

Instances of racial disparities are well documented in the United States' criminal justice system (see [1] for a review). In particular, past studies or reports from various nonprofit organizations have highlighted racial inequalities in the three components of the criminal justice system: (1) policing, including traffic stops [2,3], stop-and-frisk searches [4], use of force [5–8], and arrests [9–11]; (2) court, including pretrial release [12–14], prosecutorial discretion [15–18], and sentencing [16,19–21]; and (3) corrections (prison populations) [22,23].

Forensic science is integral to the criminal justice system. Of the three components of the criminal justice system, forensic scientists primarily and routinely interact with the police and the courts. Julian and Kelty [24] outlined the following forensic processes in

the criminal justice system: the collection of evidence from the crime science, the analysis of evidence, the use of forensic evidence in the investigation, the presentation of forensic evidence in courts, and the perception and interpretation of forensic science information by stakeholders (including the police, lawyers, prosecutors, juries, and judges). In the United States, forensic evidence is mostly collected during violent crime investigations [25] and used in subsequent court cases.

Earlier studies are contradictory in terms of their conclusions on the values of forensic evidence in the criminal justice system. Some studies found that forensic science has a very limited role in police investigations and case resolution [26], as evidence is seldom collected and analyzed. In contrast, other studies found that forensic science contributes greatly to case resolution by the police [27], has limited roles in the pretrial or trial stages of criminal cases [28], but has some effects in the sentencing stage [28]. More recent research, indicates that forensic evidence plays an important role in solving crimes [29,30], and is predictive of arrests and sentencing length [31,32].

Regardless of forensic sciences' impact, forensic scientists interact with the criminal justice system extensively at different stages of case progression. Therefore, as racial disparities are present throughout the criminal justice system and forensic science is integral to this system, it is reasonable to assume that racial disparities exist within the interactions between forensic science and the criminal justice system. However, there is currently no research that systematically examines how race impacts forensic science decisions at various levels within the criminal justice system.

Past scholarship has largely demonstrated that racial disparities in the criminal justice system are a result of implicit cognitive bias (e.g., [33–37]), which is itself a result of systemic racism [38]. Implicit cognitive bias in forensic science has been a focal point of research since the 2009 National Academy of Science report *Strengthening Forensic Sciences in the United States: A Path Forward* [39] identified implicit cognitive bias research as a needed area in order to improve the practice of forensic science (e.g., [40–43]). Cooper and Meterko [44] conducted a systematic review of implicit cognitive bias research in different subdisciplines of forensic science and found a total of 29 studies published between the 1980s and 2018. Most of the studies showed that contextual information regarding cases can lead to confirmation bias amongst practitioners, trainees, students, and the general public. However, they also pointed out that most studies had relatively small sample sizes and were unclear in their methodology. Similarly, Curley et al. [45] reviewed the literature and concluded that the experimental settings in most studies do not reflect the actual working environments of forensic scientists. Therefore, the implicit cognitive bias in real-life forensic decisions is still largely unknown. More rigorous experimental design and interdisciplinary collaboration were proposed as ways to improve our understanding of the effects of implicit cognitive bias in forensic science [46]. It is also worth noting that most of the implicit cognitive bias studies focused on how contextual information will affect investigators [41–43], and most of the contextual information provided is unrelated to race. Therefore, the effects of information about race on forensic decision making are unclear.

As noted by Roux et al. [47], a social science and holistic perspective to evaluate forensic science in a broader framework is beneficial in improving the criminal justice system and answering the question: what is the value of forensic science in relation to other processes in the criminal justice system? Recent calls to address racial disparities and systemic racism in the criminal justice system [48,49] also highlighted the importance of social science research. As an interdisciplinary discipline rooted in the social sciences but leaning towards the natural sciences, forensic anthropology is uniquely positioned to study and address racial disparities within forensic-science-based decision making in the criminal justice system.

The ongoing debate and reckoning about whether or how the practice of estimating ancestry in forensic anthropology contributes to racial stereotypes and systemic racism [50–52] opened new avenues for forensic anthropology research beyond the science itself and the methodology practiced, with myriad research efforts (e.g., [53–55]) highlighting forensic

anthropology's critical engagement with race. In this study, we contribute to this critical engagement and ask: what are the effects of race in different forensic processes in the criminal justice system? The aims of this study are to review the literature and extract data on biases/disparities related to race in the criminal justice system with a specific focus on forensic processes, and conduct a meta-analysis to analyze the effects of race at different levels of case progression (e.g., when cases enter the criminal justice system, decision making in courts, etc.). Ultimately, we wish to contribute to the existing literature and provide a more comprehensive picture of racial disparities in the criminal justice system with a specific focus on forensic science.

2. Materials and Methods

2.1. Background of Analysis

In examining the effects of race in forensic science decision making, it is important to define "race". Throughout this study, "race" refers to the socially constructed race categories recognized in the United States, reflective of an individual's physical traits, ancestry, ethnic heritage, national origin, and/or sociocultural groups. This is consistent with the definition of social race from the United States Census Bureau [56]. Although the use of these racial categories in data collection, reporting, and research has been criticized by various scholars (e.g., [57–60]), they nonetheless provide a standardized way to track inequality and disparity [57,61], and are the most commonly used approach in published studies.

Systematic reviews and meta-analyses are powerful tools to summarize and synthesize the collective knowledge of a specific topic (see [62] for an overview). Systematic reviews use well-defined, explicit inclusion and exclusion criteria to conduct extensive searches of the literature, locate studies that address a particular research question, extract and code relevant data, and provide detailed reports of the methodology and the results [63]. Because search strategies and selection criteria are pre-defined, systematic reviews minimize subjectivity and researcher bias. A meta-analysis is a set of statistical methods that further summarizes the quantitative data extracted from the systematic review in terms of a weighted mean effect size, as well as the effect sizes of individual studies [63]. Effect sizes put the outcomes of different studies on the same scale for comparison, taking into account factors such as sample size, uncertainty in sampling error, and study design [62,64]. In essence, a meta-analysis summarizes the repeated tests of a hypothesis using different data structures and varied study designs to produce meaningful findings, since a single study is often not adequate in testing any hypothesis.

The analyses presented in this study seek to understand how race affects forensic science decision making among practitioners and stakeholders in the criminal justice system. Specifically, we adapted the parameters of the PICO strategy originally developed to define research questions and guide research design in clinical contexts [65]. The PICO parameters include populations (P), intervention or exposure (I), comparison (C), and outcome (O). For the current study, we hypothesized that Black, Indigenous, and People of Color (BIPOC) individuals will more likely be associated with adverse outcomes in the criminal justice system than White individuals.

This hypothesis is based on the evidence of systematic racism and bias in the United States' criminal justice system generally, as well as the parameters of the PICO strategy as follows: populations (P), forensic practitioners or stakeholders in the criminal justice system; intervention or exposure (I), BIPOC offenders, defendants, patients, or other individuals examined; comparison (C), white offenders, defendants, patients, or other individuals examined; outcome (O), adverse outcomes in the criminal justice system.

2.2. Study Protocol

We followed the guidelines established by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement [66,67]. The study was registered in the

Open Science Framework (OSF) under the following https://doi.org/10.17605/OSF.IO/XWQK4 (accessed on 16 March 2023).

Literature searches were conducted independently by the first author and one undergraduate student assistant in three databases: PubMed, Scopus, and Web of Science. The following keywords were used: (racial disparities OR racial differences OR racial bias) AND (forensic). In conducting our searches and screening studies for inclusion, the following criteria were used:

1. The study or its dataset was observational in nature and was published in a peer-reviewed journal or an edited volume.
2. The study focused on a forensic science discipline.
3. The study took place in the United States.
4. Race was a factor considered in the study.
5. A decision had to be made (e.g., to hospitalize, to report, to declare incompetent, etc.) by practitioners or by stakeholders in the criminal justice system (e.g., police, jurors, lawyers, judges) based on the forensic information presented to them.
6. The study or its dataset recorded percentage and/or count differences among the racial categories. The data was presented in a way that percentage and/or count differences associated with different outcomes in the same racial category could be reasonably determined.

Given the criteria, no disagreements between the two study reviewers were noted. The data extracted from eligible studies included author and year of publication, study characteristics (i.e., what forensic decision/process was evaluated), forensic science discipline evaluated, criminal justice system component (the police, the court, corrections), type of data, the adverse outcome, and sample characteristics (e.g., total sample size, racial composition). We collapse racial categories reported in various studies into two main groups: White and BIPOC individuals. This is because in the United States, the inherent hierarchy of racial categories and the overemphasis on whiteness is what created and maintained the inequality and disparity [49]. Furthermore, race data reported from different studies varied in the categories they used and whether it was self-identification or assigned/perceived race that was operationalized. Although research has shown that these different aspects of race affect disparities differently (e.g., [68–70]), analyzing the nuances and complexities of these different components is beyond the scope of this study.

Quality assessment was performed using the National Institute of Health (NIH) Study Quality Assessment Tool for observational study [71]. The quality assessment tool consists of 14 items to evaluate risk of bias. Each item addresses an aspect of the study design and reviewers rate the items as dichotomous variables (yes, no, or other). An overall score is calculated for each study to classify the paper as poor (0–5), fair (6–9), or good (10–14). The two authors of this study critically assessed the quality of the included studies independently.

2.3. Statistical Methods

The meta-analysis was carried out in the R programming language (version 4.1.0) [72] using the 'meta' package [73]. A random effects model was used because the "true effects" of race were assumed to vary among forensic decisions at different levels of criminal justice system components [74], or that race has no effect [75]. It is also considered best practice to employ the random effects model routinely to minimize bias [76].

The effect size for each individual study or dataset was calculated as an odds ratio (OR) with a 95% confidence interval [64]. Pooling of ORs from different studies was performed using the Mantel–Haenszel weighting [77,78] with a Sidik–Jonkman estimator [79] for the between-study variance. Knapp–Hartung adjustments [80] were applied to the calculation of the confidence interval around the pooled effect size. We interpreted the ORs based on the suggestions made by Olivier and Bell [81], with ORs greater than or equal to 1.22 as small effect, ORs greater than or equal to 1.86 as medium effect, and ORs greater than or equal to 3.00 as large effect. An OR less than 1.22 is considered negligible or trivial [75,82].

Homogeneity was evaluated using the I2 statistic [83] and the τ statistic. I2 represents the proportion of variability in the effect sizes that is not a result of sampling error, while τ represents the standard deviation of the "true" effect sizes. A prediction interval of the true effect size is also reported, following recommendations made by IntHout et al. [84]. Prediction intervals estimate a range into which the effects of new studies will fall into given the evidence at hand. A 95% prediction interval was calculated using the between-study variance and the standard error of the pooled effect [64]. A funnel plot and Egger's regression test [85] were used to evaluate and test for publication bias (i.e., only one particular type of result is published).

3. Results

3.1. Description of Studies

The initial search strategy identified 1092 studies, of which the titles and the abstracts were reviewed based on the six criteria outlined in the Material and Methods. Of these, a further 32 studies were subject to full-text review and data extraction. Active searches, i.e., a review of the references cited within the 32 studies, were carried out to identify more potential studies to include. A total of 11 data sources were identified, and quality assessment showed all data sources were of fair quality (see Supplementary Materials Table S1 for detailed scoring). No significant disagreements between the two reviewers were noted. A final sample of 11 data sources (published study or dataset) with 13 datasets were collected, from which 13 effect sizes were extracted. Figure 1 summarizes the search process, while Table 1 shows the characteristics of the included studies.

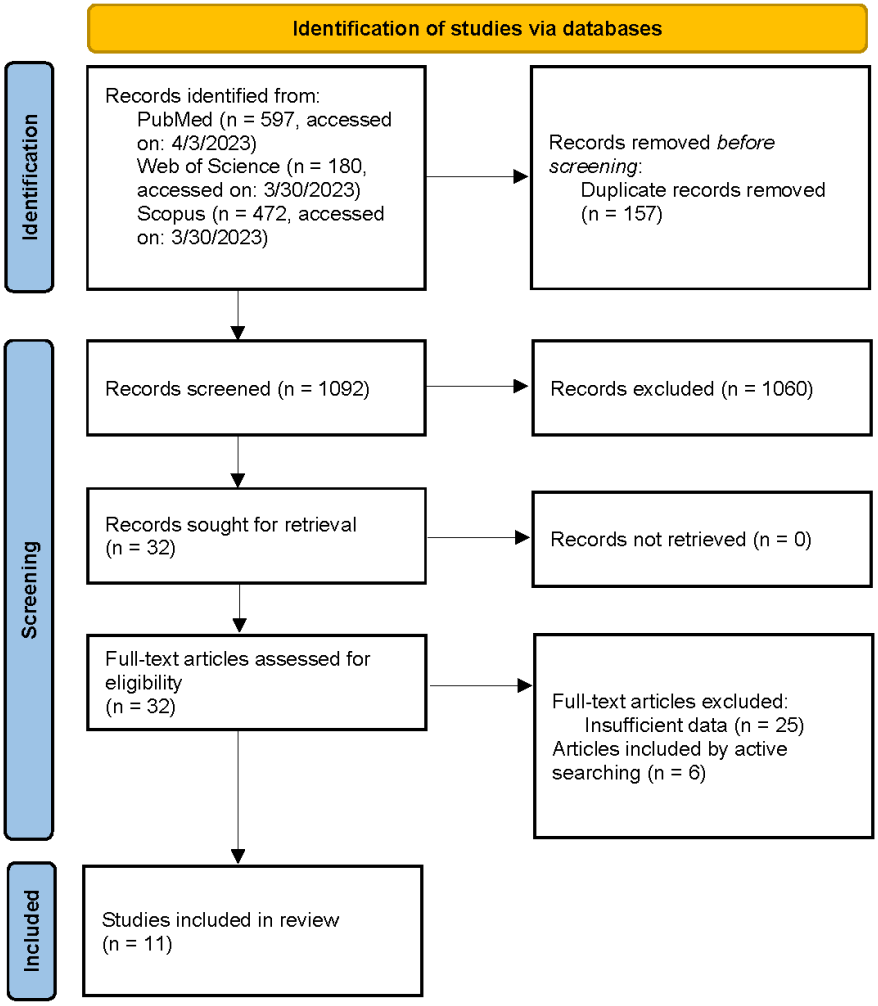

Figure 1. Flowchart of the literature survey and study selection process.

The 11 data sources were published as early as 1997, though most of the studies or datasets were published within the last decade (2013–2023, n = 7). The sample sizes of the datasets varied between 244 and 386,936. Decision making by all stakeholders in the criminal justice system, including forensic science practitioners, case investigators, and juries were evaluated in these studies. Two datasets evaluated the decision-making process involving forensic psychology or psychiatry [86,87], three focused on forensic evidence [88–90], four on forensic pathology [91–94], one involved forensic anthropology cases [95], and one involved clinical cases [96]. The criminal justice system components involved in these decision-making processes evaluated by the data sources were split between the police (investigation, n = 7) and the court (n = 4). Most studies reported significant differences among racial categories associated with different outcome measures, with the exception of two [91,95] where the effects of race were reported to be minimal. Three data sources did not report the statistical effects of race [88–90].

Table 1. Summary of the studies and datasets included in the current study.

Studies	Forensic Science Discipline	Description	Sample Size	Participants (Decision Maker)	Outcomes	Criminal Justice Component
Sorenson et al. (1997) [94]	Forensic pathology	Death certificates issued in California from 1969 to 1991.	386,936	Coroners or medical examiners	Manner of death ruled as undetermined.	Police (investigation)
Pinals et al. (2004) [87]	Forensic psychiatry and psychology	Forensic psychiatric evaluation cases of competence to stand trial and/or criminal responsibility in Massachusetts.	9363 3041	Forensic psychologists and psychiatrists	Referred for inpatient evaluation. Referred for inpatient evaluation at high-security institution.	Court
Warren et al. (2004) [86]	Forensic psychiatry and psychology	Forensic psychological evaluation cases of sanity at the time of offense in Virginia.	5175	Forensic psychologists and psychiatrists	Declared to be insane.	Court
Rockett et al. (2010) [93]	Forensic pathology	Death statistics for individuals 15 years or older in the U.S. from 2003 to 2005.	105,946	Coroners or medical examiners	Manner of death misclassified as injury from undetermined intent.	Police (investigation)
Patterson and Campbell (2012) [90]	Forensic evidence	Sexual assault kit collection and submission in a large Midwestern county.	244	Case investigators	Sexual assault kit not submitted.	Police (investigation)
Garrett (2017) [88]	Forensic evidence	False or misleading forensic evidence was determined to be credible and used in DNA-exonerated wrongful conviction cases.	367	Jury	False or misleading forensic evidence was used.	Court
Hymel et al. (2018) [96]	Clinical forensic medicine	Pediatric patients with acute, closed, traumatic head injuries.	500 500 109	Physicians	Further evaluated for abuse. Reported as suspected abuse. Declared not guilty by reason of insanity based on depression diagnosis.	Police (investigation)
Dror et al. (2021) [91]	Forensic pathology	Death certificates issued in Nevada for children under the age of six.	1024	Forensic pathologists	Manner of death ruled homicide.	Police (investigation)
Kawano et al. (2022) [92]	Forensic pathology	Firearm deaths in the United States.	257,799	Forensic pathologists	Case did not advance to autopsy.	Police (investigation)
The National Registry of Exonerations (2023) [89]	Forensic evidence	False or misleading forensic evidence was determined to be credible and used in all exonerated wrongful conviction cases.	3394	Jury	False or misleading forensic evidence was used.	Court
Hughes et al. (forthcoming) [95]	Forensic anthropology	Forensic identification cases from three agencies where anthropological analyses were needed.	988	Case investigators	Individual was not identified.	Police (investigation)

3.2. The Effects of Race in Forensic Science Decision Making

Figure 2 summarizes the results of the meta-analysis for the effects of race in forensic science decision making in the criminal justice system in a forest plot. Effect sizes were ordered based on their magnitudes. The pooled OR was 1.10 (95% confidence interval: 0.67–1.81), indicating a trivial or negligible effect. As was expected, there is a great deal of heterogeneity between datasets (I2 = 100%, indicating 100% of the variation in effect size estimates across datasets is due to real differences and not sampling error). The statistical test for heterogeneity based on the τ statistic is also significant ($p < 0.0001$). Given that a high degree of heterogeneity can be caused by one or more data sources or datasets with extreme effect sizes and lead to a biased pooled effect size estimate [64], an outlier analysis was performed. Outliers are defined as datasets for which the effect size confidence interval does not overlap with the pooled effect size.

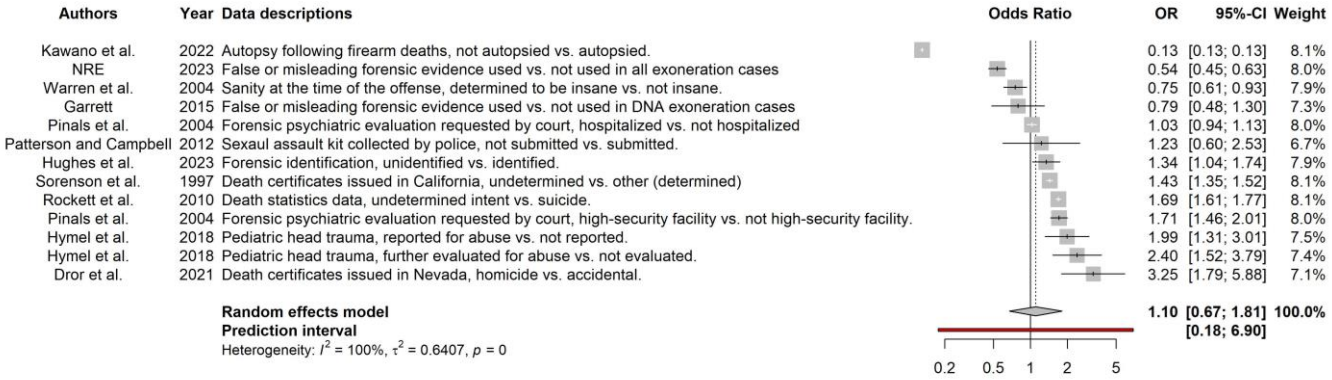

Figure 2. Forest plot of meta-analysis for the effects of race in forensic science decision making in the criminal justice system [86–96].

Figure 3 shows the results of the meta-analysis with outliers (estimated 95% confidence interval does not overlap the confidence interval of pooled OR) removed [89,92]. The summary effect was that the OR equals 1.43 (95% confidence interval: 1.07–1.91), indicating a small effect. A notable, statistically significant heterogeneity can still be detected (I2 = 94%, $p < 0.01$). The 95% prediction interval for the OR is 0.56 to 3.68. No publication bias was detected (Figure 4; Egger's regression test, $p = 0.1872$ for all datasets, $p = 0.5629$ with outliers removed).

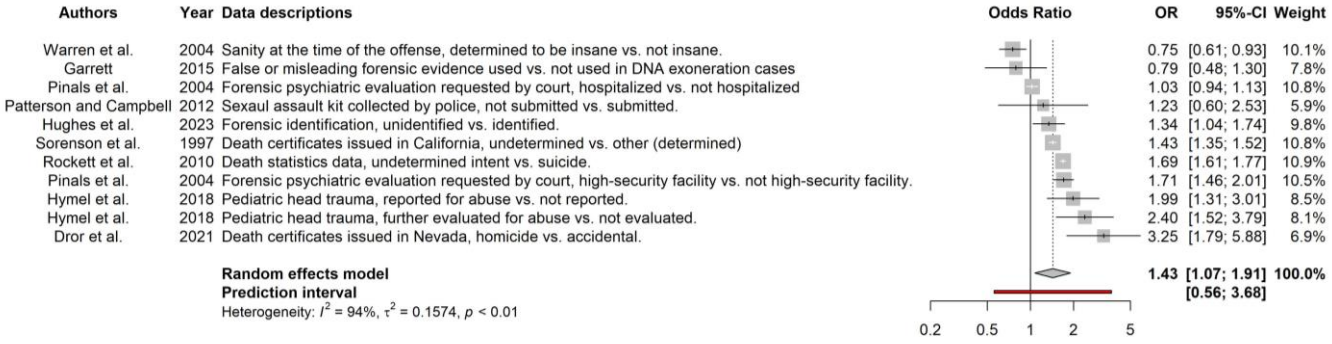

Figure 3. Forest plot of meta-analysis for the effects of race in forensic science decision making in the criminal justice system with outliers removed [86–88,90,91,93–96].

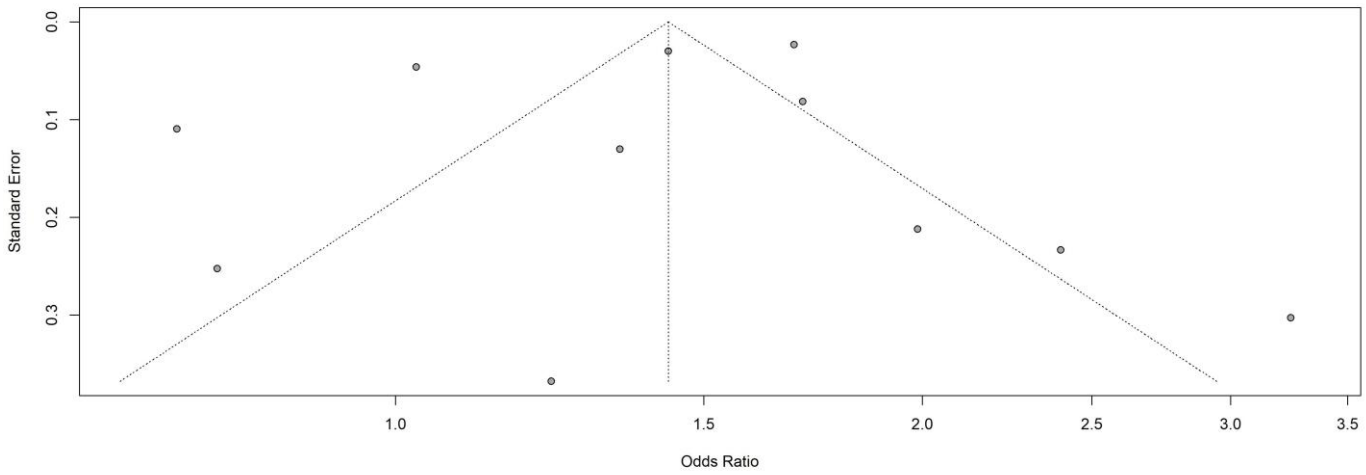

Figure 4. Funnel plot of meta-analysis for the effects of race in forensic science decision making in the criminal justice system with outliers removed. No evidence of publication bias can be observed.

4. Discussion

This study investigated the effects of race on forensic science decision making in the criminal justice system using a systematic review and meta-analysis framework. After an extensive literature search, a total of 13 datasets from 11 data sources (including published journal articles, a chapter in an edited volume, and an online database) were identified. We found that, based on the selected studies, race has a small to negligible cumulative effect on adverse outcomes in forensic science decision making in the criminal justice system. BIPOC individuals were no more likely to be associated with adverse outcomes than White individuals for the forensic-based decisions of different stakeholders (e.g., forensic practitioners, investigators, jury, etc.) at different levels of case progression in the criminal justice system. Importantly, the results of this study do not indicate that bias or disparity related to race does not exist in forensic science decision making in the criminal justice system. First, the prediction intervals for effect size ranged from no effect to large effect, indicating a wide range of possibilities for the effects of race. Second, given the substantial heterogeneity found among different datasets, the averaged, pooled effect size estimate may not be informative. Furthermore, while it may seem like decision-making processes involving forensic pathology are more biased than other disciplines (i.e., race has an effect in forensic pathology decision making, Figures 2 and 3), there is no consistency in the direction of the effects, as the effects detected range from negative (BIPOC individuals were less likely to be associated with adverse outcomes than White individuals) to positive (BIPOC individuals were less likely to be associated with adverse outcomes than White individuals). These statistics showed, if anything, that more evidence is needed before a more holistic understanding can be reached.

Furthermore, different components of the criminal justice system are interconnected, and racial bias in forensic science decision making, if it exists, only represents one aspect of the larger criminal justice system. A recent publication [97] showed that the COVID-19 pandemic had exacerbated the racial disparity in the prison population, a reversal of the recent trend that reduced the disproportionate numbers of incarcerated BIPOC individuals relative to White individuals. The results show that racial disparity and bias are fluid and subject to the influence of changing environmental conditions.

This study may not fit the traditional framework of systematic review and meta-analysis [98], as the focus of the study is more generalized rather than specialized. However, the central goal of this study is an attempt to address and identify an under-researched area with limited available data [62]. The heterogeneity identified among studies is not surprising given that there has been no systematic, well-designed research that specifically examined the effects of race in forensic science decision making. As reviewed previously, most current research on implicit cognitive bias in forensic science disciplines other than

forensic psychology and psychiatry focused on contextual information and confirmation bias [44,45], with a few exceptions (e.g., [91]). We echo the recent call [99] for more research into systemic bias in forensic science decision making, especially in relation to race. For example, if there were more studies addressing racial disparities in the manner of death determination [91,93,94], both at the national and regional levels, these studies could then be analyzed together to produce a more robust and specific effect size estimate of the effect of race on decisions in forensic pathology. Furthermore, research has demonstrated that there are individual-level and institutional-level differences in forensic science decision making [100–102], while the growing body of research into implicit cognitive bias in forensic science is certainly promising, clearly much work needs to be performed.

We acknowledge that the meaning of race is nuanced and racial identity is fluid. Some racial groups are clearly more marginalized than others [103]. In collapsing all BIPOC groups into one group, the "true" effects of race, as well as the differing effects across social race categories (i.e., some races may be more impacted than others) may be minimized. Furthermore, as multiple scholars (e.g., [104,105]) have pointed out, individuals possess identities across multiple social dimensions (including gender, race, ethnicity, sexuality, socioeconomic class, and nationality). Different identities intersect with one another and can contribute to marginalization, as some identities are valued more than others by society. The current models used in this study are unable to detect this intersectionality. Another notable methodological limitation is that by using a binary outcome measure, we were unable to account for other confounding factors. For example, the inclusion of data on false or misleading forensic evidence presented was determined by the jury to be credible in known exonerated cases; Refs. [88,89] highlighted this issue. These data sources were included because forensic evidence such as DNA is often presented and interpreted in court alongside or in the context of the defendant's race [106]. However, neither of the data sources included [88,89] examined or controlled for other confounding or contributing factors. While claims that BIPOC defendants were disproportionately influenced by flawed forensic evidence [88] may be true, it is also possible that testimonies or other pieces of information presented in court biased the jury and not the forensic evidence by itself. To improve on these two limitations, future studies should consider examining the effects of other social dimensions, expanding the eligibility criteria to include different types of data, and performing a more statistically advanced analysis to control for the confounding factors. The intense public discourse that followed the publication of Dror, Melinek, Arden, Kukucka, Hawkins, Carter, and Atherton [91] serves as a primary example of how confounding factors may be conflated as racial bias [107–115], but due to research design, the "true effects" of racial bias are difficult to parse out.

Previous studies have identified several ways forensic scientists or forensic sciences can contribute to the miscarriage of justice, including lack of awareness and financial resources, ineffective laboratory processing, miscommunication (usually by forensic experts) and misinterpretation (usually by nonexperts) of forensic findings [116,117], and overt misconduct. Of these, miscommunication and misinterpretation of forensic findings represent perhaps the greatest challenge. A recent study [118] reviewed challenges and strategies to effectively communicate forensic findings to the jury but pointed out future research should take a multidisciplinary and interdisciplinary approach, as different forensic evidence is perceived differently in the eyes of the jury [119], convicted criminals [120], and the general public [121]. The lack of racial and ethnic diversity in jury participation also contributes to disparity, as does the lack of diversity in practitioners. The benefits of a diverse jury in interpreting evidence are well documented [122–124], and the benefits of having diverse practitioners are also well documented in the field of medicine [125–127], where communications and trust play a similarly critical role in outcome measures. A recent study showed that most, if not all, forensic science disciplines are less diverse than the general public in the U.S. [128], therefore, perhaps one of the more straightforward ways to reduce bias related to race in forensic science decision making is simply to diversify forensic practitioners.

Forensic anthropology is uniquely positioned to further study the effects of various social dimensions on forensic decision making because of its interdisciplinary nature. For example, studies showed that anthropologists have a more nuanced understanding of race [129,130], while many geneticists [131], healthcare professionals [132,133], and members of the general public [134,135] still hold the false belief that race is biologically or genetically meaningful. These incorrect beliefs have no doubt contributed to systemic racism, racial disparity, and extreme ideology [53,136]. Scholars propose that biological anthropologists should be at the forefront of educating other professionals and the general public [137,138]. In parallel, forensic anthropologists should be at the forefront of educating stakeholders in the criminal justice system [52,55,139,140]. Forensic anthropology is also becoming increasingly involved in using interdisciplinary and multidisciplinary approaches in casework [141,142] and research [143,144]. As the recent call for forensic anthropologists to adapt an antiracist framework in their practice and research [140] demonstrated, the attempts to understand bias in the criminal justice system is a research direction that should be embraced by forensic anthropologists. We echo this sentiment and hope this study serves as an example of such efforts.

Supplementary Materials: The following supporting information can be downloaded at: https://www.mdpi.com/article/10.3390/humans3030017/s1, Table S1: Study quality assessment results.

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