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Justice Is Not Blind: A Preliminary Evaluation of an Implicit Bias Training for Justice Professionals

Rebecca L. Fix¹

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Abstract

While there are several studies that have tested efficacy of implicit bias trainings, none have tested how working within a justice profession or how one's racial identity impact outcomes following participation in such a training. Additionally, though empathy influences bias, no studies have tested for the effect of implicit bias training on ethnocultural empathy. The present study is a program evaluation of an implicit bias training program that examines the effects of profession and racial identity on outcomes, including ethnocultural empathy. The implicit bias training was a 3-h standardized training that described how implicit biases are formed, how they impact children in the school-to-prison pipeline and adults in society, the short- and long-term consequences of those biases, and strategies for responding to one's own implicit biases. Participants who completed implicit bias trainings were 243 justice professionals and 274 non-justice professionals. Results indicated training outcomes were significantly associated with participant gender, race, racial identity, and whether participants worked in justice or non-justice professions. In addition, participants indicated several strengths and assets of the program; how receptive participants were to implicit bias training components was significantly associated with gender, race, and whether the participants worked in justice settings. The current study provides a necessary but incomplete picture of the strengths and weaknesses of this implicit bias training, lending support for continued trainings with more in-depth and longitudinal study of them.

Keywords Race · Disparity · Disproportionate minority contact · Adolescent · Youth

Introduction

In the USA during 2018, black, Native North American, and Latinx children were significantly more likely to be detained or confined than white children (Hockenberry and Puzanchera 2018). Numerous studies show a preponderance of children of color at nearly all stages of juvenile justice processing (Spinney et al. 2018). Moreover, there is a large body of literature assessing why we see this phenomenon of disproportionate minority contact (Leiber and Fix 2019). Race and racial identity impact outcomes for people; race refers to a classification of a person based on shared physical features with a particular group (e.g., black, Asian American), whereas racial identity is defined

as, “feelings of [racial and/or] ethnic belonging and pride, a secure sense of group membership, and positive attitudes toward one's ethnic group” (Phinney and Alipuria 1996, p. 142). Still, the critical question remains: how can we reduce—and ultimately prevent—bias in the juvenile justice system? The current study begins to answer this question through a preliminary evaluation of a promising implicit bias training with justice professionals versus non-justice professionals. The study specifically examines how racial identity (defined as the set of individually defined beliefs about what it means to be a certain race; Sellers et al. 1998) impacts training outcomes beyond other meaningful factors like gender and race. Further, the current study examined how the training influenced ethnocultural empathy among participants, an unstudied but important outcome in implicit bias trainings.

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Race and Implicit Bias in the Juvenile Justice System

There is implicit racial bias in the juvenile justice system. Evidence of these biases is apparent in juvenile justice court statistics, which demonstrate overrepresentation of black, Native North American, and Latinx children in delinquency cases, formal processing of delinquency cases, and residential placements (Hockenberry and Puzanchera 2018). Additionally, black children are—on average—five times more likely to be securely detained or confined in a juvenile correctional facility compared with white children (The Sentencing Project 2017). Indeed, the Office of Juvenile Justice and Delinquency Prevention's 1-day census of confined juveniles notes sharp disparities among white, black and Latinx youth (Sickmund et al. 2018).

Over the course of juvenile justice stages, implicit bias accumulates. Police focus more time and attention on communities of color, judges may view people of color as more criminal and prone to violence, and correctional officers may respond more harshly to a child of color (Kang et al. 2011; Rachlinski et al. 2008). Altogether, the culmination of implicit racial bias in the juvenile justice system results in a preponderance of children of color within the system, a phenomenon termed disproportionate minority contact (DMC). Because DMC was so pronounced and longstanding at the federal level in 1988, Congress reauthorized the Juvenile Justice Delinquency Prevention Act [Juvenile Justice and Delinquency Prevention (JJDP) Act 1974]. The JJDP Act mandated intervention to reduce racial disparities; this legislation was again reauthorized in 2019. Despite both jurisdiction-level- and state-level recognition of DMC and responses to the Federal Disproportionate Minority Contact mandate of the JJDP Act, rates of DMC remained stagnant over the past 40 years (Leiber and Fix 2019). Accordingly, while intervention is recognized as necessary to reduce and prevent DMC, research on effective practices is limited with mixed results at best (Leiber and Fix 2019).

Implicit Bias Training and Disparities Reduction

Implicit bias trainings conducted in a variety of professional settings hold promise in reducing implicit bias, yet many related studies do not examine under what conditions a given training is most effective (Paluck and Green 2009). In particular, not enough attention is being paid to characteristics of the trainees—which may need to be separated from success of trainings to better understand for whom which content is most effective or should be modified. A brief university training designed to reduce implicit bias toward women in the academic fields of sciences, technology, mathematics, and engineering demonstrated mixed results. Participating women's implicit bias scores did not change significantly, in

part because their baseline rates of bias were not elevated. For participating men, the intervention significantly reduced some, but not all, measures of implicit gender bias in select academic fields (Jackson et al. 2014). Other trainings focused on women in STEM have demonstrated success in reducing implicit gender biases through unique brief interventions like those including short educational video clips (Moss-Racusin et al. 2018). Accordingly, research should consider social identifiers like gender in examining implicit bias training outcomes.

A brief diversity training was evidenced as reducing implicit racial biases and stereotypes in a sample of college students (Rudman et al. 2001). Findings also support a black trainer may be most effective in reducing intergroup implicit bias and associated attitudes. Undergraduate students in an introductory psychology course who completed another more intensive 12-week training developed by Devine et al. (2012) demonstrated a marked reduction in implicit biases. Findings also indicated motivation to reduce implicit bias did not significantly influence outcomes. Further examination of how implicit bias trainings are received by justice and non-justice professionals in the community are warranted.

Of greater relevance to the current study, cultural competence development and improvement through training—while not coterminous with implicit bias training—is associated with a reduction of DMC within juvenile justice settings (Leiber and Fix 2019; Spinney et al. 2018). A recent study of interviews with juvenile justice professionals and community providers who work with justice-involved children conducted by Dawson-Edwards et al. (2017) provides an impetus for implicit bias trainings with justice professionals. Namely, this study found most professionals within the system have preconceived notions about DMC—that it either is unimportant or less pronounced than data suggest—and also have implicit biases about racial and ethnic minority children who are enmeshed in the juvenile justice system. Such evidence ought to be viewed as promising and fertile ground for intervention, given the right strategies are implemented.

Ethnocultural Empathy and Implicit Bias

Empathy is defined as an expressive and matched emotional responsiveness to the feelings of others (Eisenberg and Strayer 1990). Empathy is malleable with intervention; moreover, altering an individual's levels of empathy can encourage prosocial behavior and justice orientation (Wang et al. 2003). Research conducted by Okonofua et al. (2016) demonstrates the pivotal role of targeting empathy in reducing implicitly biased responses among middle school educators. Not only did empathy toward students increase following their training, but suspension rates did, as well. There are no other known implicit bias trainings that have targeted ethnocultural empathy (Wang et al. 2003), regardless

of its strong relationship with implicit bias. In recognition of results from Okonofua et al.'s (2016) research, implicit bias training evaluations would be more informative with measurement of changes in empathy alongside more direct measures of implicit bias reduction.

Research Questions and Hypotheses

Research Question 1

Is participation in an implicit bias training associated with differential improvement in implicit bias knowledge, empathic feeling and expression, empathic perspective taking, acceptance of cultural differences, and empathic awareness between participants working in a justice profession and those working in a non-justice profession?

Research Question 1 Hypothesis It was hypothesized that all participants would experience comparable improvement in implicit bias knowledge, but that justice professionals would demonstrate lower levels of improvement in empathic feeling and expression, empathic perspective taking, acceptance of cultural differences, and empathic awareness due to the high levels of systemic bias within the justice system (Alexander 2020).

Research Question 2

Does participant gender, race, or racial/ethnic identity influence pre-to-post outcomes from an implicit bias training?

Research Question 2 Hypothesis It was hypothesized that employment in a non-justice profession would be associated with more robust implicit bias training outcomes. Additionally, it was hypothesized that participants identifying their gender as female, their race as black, and who have stronger racial identity would demonstrate greater improvement in pre-to-post outcomes following completion of implicit bias training.

Research Question 3

In addition to employment in a justice profession, does participant gender or race impact their response to implicit bias trainings (e.g., what they liked about the trainings, what surprised them in the training content)?

Research Question 3 Hypothesis It was hypothesized that women and black participants would report less surprise about training content given their own direct experiences with discrimination/implicit bias. It was also hypothesized that participants working in the justice profession would report less surprise at the content than non-justice partici-

pants, but that the two groups would present with similar levels of liking the implicit bias training content.

Method

Participants

Participants were individuals who completed a prescribed implicit bias training, typically within their place of employment. The average age of participants was 44 years. Most participants identified as white (92%) and identified themselves as female gender (74%); one participant identified their gender as non-binary. 243 (47%) of participants worked in justice settings (predominantly in pretrial court, police department, and specialty court). The most common types of employment settings among participants who identified their profession as being in a non-justice setting ($n = 274$) included healthcare, business, retail, and the educational system.

Procedures

Participants were asked to complete a survey immediately prior to the implicit bias training (pre-implicit bias training) and again immediately following the implicit bias training (post-implicit bias training). They were informed that their participation in the current study was entirely voluntary and that they could withdraw at any point without penalty. No incentives were provided to participants, as many were state employees. Knowledge and ethnocultural empathy were evaluated at pre- and post-implicit bias training. Demography and racial identity were only measured at pre-implicit bias training, and whether participants indicated they liked select aspects of the training or were surprised by selected aspects of training content were measured at post-implicit bias training. The assessment battery was kept brief to encourage participation and more valid responses.

Implicit Bias Training

The implicit bias training used in this study consists of a 3-h training designed to: (1) improve participant knowledge about implicit bias; (2) to increase awareness of individual attitudes, understanding, and decisions regarding implicit biases; and (3) to improve participant skills and best practices for addressing individual implicit biases. Participants were told prior to their completion of trainings that the desired outcome of trainings would be to increase awareness of implicit bias and encourage development and use of the skills presented in the training with the goal of minimizing the impact and influence of their implicit biases on their decisions. Training material development was informed by

Sukhera and Watling (2018); for example, the decision to include individualized and contextually relevant variables in each training came from the recognition that different factors influence a culture. Workplace culture and expectations vary considerably within and between justice settings versus non-justice settings. Thus, the implicit bias training incorporated both standardized data on racial bias from the school-to-prison pipeline and also data on racial bias relevant to each intervention site.

All trainings were led by a (currently) 56 year old black man who grew up in inner-city Chicago, served for 10 years in the U.S. Army, and currently works as a pastor, a Radcliff, KY City Councilman, and also is the National Chair of The Coalition For Juvenile Justice. The trainer is a Center for Juvenile Justice Reform fellow at Georgetown University, and Certified Diversity Trainer. Trainings included a combination of brief lectures, large group discussions, case study exercises, individual completion of the Implicit Association Test to exemplify the presence of implicit bias in participants, an experiential exercise—the Baby Doll Example and other activities. Brief lectures provided statistics about implicit biases and affiliated consequences of those biases (e.g., state and local DMC rates, suspension disparities). Lectures also included definitions and examples of concepts (e.g., microaggressions, stereotypes) relevant to the goals of the implicit bias training. Large group discussions were facilitated by the primary trainer, covering topics like pathways from trauma to delinquency and lifespan development of implicit bias. Video clips were integrated into the training curriculum to inspire critical thinking and in-depth content discussion. Case studies of real-world events were also presented to participants to help retention of knowledge gained from the training (McKeachie and Svinicki 2013).

The Baby Doll Example is an example of an experiential exercise used in all trainings from the current study, and reflects particularly unique content compared with other implicit bias trainings. The Baby Doll Example refers to an anecdote used by the trainer in which he describes going to a large chain store and seeing all of the baby dolls (many brands and types) whose race was black on clearance sitting in a large bin next to other clearance items that were neatly displayed on a shelf. No white dolls were on clearance. This story is used to demonstrate the implicitly biased responses of customers (who do not purchase the dolls), the store (who put them on clearance), and the employees (who put them in a bin on clearance). Further extending the teachable moment, the trainer then says he purchased all of the dolls on clearance to counter the other biases as best he could—demonstrating that these products are not unwanted. The training experience culminates in the trainer gifting one or two of these baby dolls to participants at the end of each training.

Measures

Demographic Questions

Basic demography was collected from participants. Participants were asked to write in their age, gender, racial/ethnic identity, highest education completed (grade/degree), and profession.

Multigroup Ethnic Identity Measure-Revised

The Multigroup Ethnic Identity Measure-Revised (Phinney 1992; Phinney and Ong 2007) was used to assess for participant racial and ethnic identity. There are six items on this measure that use a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). The scale includes two factors (i.e., exploration, commitment) and a total score. Previous research indicates measurement equivalence across racial groups (Avery et al. 2007). Internal reliability on the Multigroup Ethnic Identity Measure was acceptable for the exploration subscale ($\alpha=0.86$), commitment subscale ($\alpha=0.82$), and the total score ($\alpha=0.85$) in the present sample. Only the full-scale score was used in the current study.

Implicit Bias Knowledge Questionnaire

A scale of 18 true–false questions pertaining to knowledge about implicit bias relevant to the current training was developed to evaluate knowledge gained following training participation. Items assessed two types of knowledge. First, it measured knowledge regarding straight facts about implicit bias [e.g., *A prejudice is an opinion, prejudgment or attitude about a group or its individual members. It can be positive or negative. (T); Discrimination in the juvenile justice system mostly negatively affects white youth (F)*]. Second, the scale assessed beliefs about one's own implicit biases and understanding of bias (e.g., *We can manage microaggressions by becoming aware of them, and slowly learning to catch our biases before they become actions; I feel knowledgeable about implicit bias*). A total knowledge score was calculated and used. Internal reliability on this scale was acceptable ($\alpha=0.74$).

Program Content Questionnaire

Questions about what training content was most appreciated and what was the most surprising were developed based on responses to initial open-ended questions presented to participants in an earlier version of the survey (*citation blinded for peer review*). Five options were included following the “like” prompt, “Which of the following reflect things you liked about the program (please select all that apply)”: the videos, the presenter, the statistics presented, the baby doll

example, and the discussions. We also included an option for participants to write in other content they liked. Five options were also included following the “surprise” prompt, “Which of the following surprised you during the program (please select all that apply)”: the statistics, that everyone has biases, that I have biases, the role of the media in development of bias, and how early in life our bias develops. Similar to the question about which aspects of the training participants liked, participants were provided the opportunity for participants to describe other facts or aspects of the training they found surprising. Responses to these items were coded dichotomously as present or absent for each of the five ‘like’ options and each of the five ‘surprise’ options. Responses written about other liked or surprised content is not detailed in the current study but will be incorporated into future writings on this training.

Scale of Ethnocultural Empathy

The Scale of Ethnocultural Empathy was developed by Wang et al. (2003) in recognition that more tolerance and empathy is warranted for societal norms to shift in response to the increasing diversification of the USA (Colby and Ortman 2015). This measure includes 31 Likert scale items (1 = *strongly disagree that it describes me* to 6 = *strongly agree that it describes me*) evaluating four aspects of ethnocultural empathy. The first scale, empathic feeling and expression, refers to thoughts, feelings, or actions pertaining to concern about communication of discriminatory or prejudiced attitudes or beliefs (sample question: *I feel supportive of people of other racial and ethnic groups, if I think they are being taken advantage of*). The second scale is empathic perspective taking—this scale measures efforts made to take the perspective of experiences and emotions of people from different racial and ethnic backgrounds (sample item: *I can relate to the frustration that some people feel about having fewer opportunities due to their racial or ethnic backgrounds*). The third scale, acceptance of cultural differences, measures how much an individual recognizes and accepts customs of people from different racial and ethnic backgrounds (sample item: *I get impatient when communicating with people from other racial or ethnic backgrounds, regardless of how well they speak English*). Empathic awareness is the last scale—it measures awareness or knowledge about the potentially difficult experiences of people from different racial or ethnic backgrounds (sample item: *I can see how other racial or ethnic groups are systematically oppressed in our society*). Research supports use of this measure for tracking changes in development of ethnocultural empathy over time (Albiero and Matricardi 2013).

At post-training measurement, the Scale of Ethnocultural Empathy was modified to include only 24 items; select items assessed for attitudes or experiences that were not

anticipated to be affected or altered in such a brief period of time.¹ Further, compared with items that might change immediately following a training (e.g., knowledge gained), there was not enough time between pre- and post-measurement to adequately evaluate changes in these items. In addition, wording of most items was modified to better measure program effects on evaluated study items/constructs. Language such as “during the training” and “following this training” was added to select items to better evaluate post-training responses. For example, the item worded, “I don’t know much information about important social and political events of racial and ethnic groups other than my own” was reworded to read, “I learned information about important social and political events of racial and ethnic groups other than my own during the training”. Additionally, language indicating changes in future intentions was added to select items to allow for measurement of change, such as “I intend to”, “I hope to”, “In the future”, and “I will” to gauge changes in participant intentions for their future behavior. As an example, the item worded, “When I know my friends are treated unfairly because of their racial or ethnic backgrounds, I speak up for them” was reworded to read, “When I know my friends are treated unfairly because of their racial or ethnic backgrounds, I hope to speak up for them in the future”. Another such example is, “When I hear people make racist jokes, I tell them I am offended even though they are not referring to my racial or ethnic group” being reworded to read, “In the future, when I hear people make racist jokes, I intend to tell them I am offended even though they are not referring to my racial or ethnic group”.

Data Analysis

Data were examined for normality. Demographic characteristics and correlations between study variables are presented in Table 1. A series of one-way repeated measures ANOVAs were run to examine effects of implicit bias training participation on implicit bias knowledge, empathic feeling and expression, empathic perspective taking, acceptance

¹ Removed items from pre- to post-training on the Scale of Ethnocultural Empathy measure: I feel annoyed when people do not speak standard English; I get impatient when communicating with people from other racial or ethnic backgrounds, regardless of how well they speak English; I feel irritated when people of different racial or ethnic backgrounds speak their language around me; When I know my friends are treated unfairly because of their racial or ethnic backgrounds, I speak up for them; When I see people who come from a different racial or ethnic background succeed in the public arena, I share their pride; When other people struggle with racial or ethnic oppression, I share their frustration; It is difficult for me to relate to stories in which people talk about racial or ethnic discrimination they experience in their day to day lives; I feel uncomfortable when I am around a significant number of people who are racially/ethnically different than me.

Table 1 Descriptive statistics and correlations between study variables (N=264+)

Measure	Justice Profs [†]	Other Profs [†]	Correlations						
	M (SD)	M (SD)	1	2	3	4	5	6	7
1. Age	39.21 (12.39)	47.30 (14.41)	–	–.011	–.007	–.040	.060	–.129	.052
2. Racial/ethnic identity	18.95 (5.80)	19.47 (5.16)	.083	–	.098	.177**	.139*	–.113	.248***
3. Implicit bias	1.26 (2.94)	2.06 (2.89)	–.207**	.039	–	.240***	.089	–.040	.411***
4. Feeling and expression	4.52 (7.77)	6.93 (6.86)	–.086	.038	.260***	–	.362***	.198**	.433***
5. Perspective taking	2.59 (4.78)	1.58 (4.52)	.042	–.159*	.107	.332***	–	.497***	.201**
6. Accept cultural differences	0.56 (2.64)	–0.95 (2.51)	.053	–.010	–.008	.329***	.289***	–	.041
7. Empathic awareness	1.28 (3.65)	2.65 (3.31)	–.063	.041	.381***	.432***	.144*	.043	–
Categorical descriptives									
Black/African American race									8.4
White/European American race									91.6
Gender									
Female									70.1
Education									
High school diploma									16.8
Associate's degree									4.0
Bachelor's degree									55.4
Master's degree									20.3
Professional degree									3.5

Accept acceptance of. Values above the dashed lines are specific to justice professionals, whereas below the dashed lines are for non-justice professionals who completed the training

*** $p < .001$; ** $p < .01$; * $p < .05$

[†]Reflects the mean and standard deviation for the change score for measures 3 (Implicit Bias)-7 (empathic awareness)

of cultural differences, and empathic awareness based on participant justice versus non-justice professional status. In addition to workplace setting, age, gender, race, and racial identity were included as predictors of pre-to-post-implicit bias training outcomes. Finally, three-way Chi-Square Test statistics were used to examine whether working within a justice setting and participant gender impacted what participants liked about the training and what content they found surprising (see Table 3). This type of analysis calculates odds ratios and can be used in place of a log-linear analysis (Lowry 2001).

Results

Pre-to-Post Changes Following Implicit Bias Trainings

Five one-way repeated measures ANOVAs were conducted to test for pre-post changes following participation in the implicit bias training on study outcomes (see Table 2). Effects of working in a justice setting, gender, race, and racial identity influenced study outcomes were also tested with age as a control variable. There was a significant effect

of the implicit bias training on improvement in knowledge about implicit bias from pre to post (Wilk's $\lambda = 0.97$). Participants who worked in a justice profession (Wilk's $\lambda = 0.97$) and participant race (Wilk's $\lambda = 0.99$) significantly increased pre-to-post changes in implicit bias knowledge, making observed training effects more pronounced.

Three of the four subscales of the Scale of Ethnocultural Empathy changed significantly from pre- to post-program participation: feeling and expression, perspective taking, and acceptance of cultural differences. Empathic feeling and expression significantly increased from pre- to post-training (Wilk's $\lambda = 0.94$). There was also a significant difference in increased empathic feeling and expression by justice versus non-justice profession over time (Wilk's $\lambda = 0.96$; see Fig. 1). Empathic perspective taking also increased significantly following participation in the implicit bias training (Wilk's $\lambda = 0.97$). There was also a significant interaction effect of justice versus non-justice profession over time on perspective taking, with non-justice professionals presenting with a more robust improvement in perspective taking over time (see Fig. 2). Acceptance of cultural differences decreased significantly following participation in the implicit bias training (Wilk's $\lambda = 0.98$); there was no

Table 2 Results from repeated measures ANOVAs testing pre-post changes within implicit bias training participants

	Justice Prof Pre-training <i>M</i> (SD)	Justice Prof Post-training <i>M</i> (SD)	Other Prof Pre-training <i>M</i> (SD)	Other Prof Post-training <i>M</i> (SD)	<i>F</i>	<i>p</i>	η^2_p
Implicit bias knowledge	13.3(2.0)	14.7(2.3)	13.2 (2.1)	15.5(1.7)			
Training					15.7	<.001	0.03
Age					4.4	.037	0.01
Gender					4.8	.030	0.01
Race/ethnicity					3.0	.082	–
Justice profession					6.7	.010	0.02
Racial identity					0.9	.343	–
Age × training					0.4	.847	–
Gender × training					2.7	.103	–
Race/ethnicity × training					4.6	.033	0.01
Justice profession × training					15.9	<.001	0.03
Feeling & expression	63.6 (11.9)	67.9 (12.1)	65.1 (8.9)	72.0 (7.8)			
Training					30.0	<.001	0.06
Age					0.0	.870	–
Gender					10.4	.001	0.02
Race/ethnicity					0.5	.462	–
Justice profession					6.0	.015	0.01
Racial identity					3.9	.049	0.01
Age × training					2.6	.109	–
Gender × training					0.5	.474	–
Race/ethnicity × training					0.0	.904	–
Justice profession × training					16.6	<.001	0.04
Perspective Taking	22.7 (5.5)	25.3 (4.1)	22.6 (5.8)	26.1 (4.2)			
Training					16.2	<.001	0.04
Age					8.8	<.001	0.02
Gender					0.9	.339	–
Race/ethnicity					41.7	<.001	0.09
Justice profession					0.1	.932	–
Racial identity					8.6	.004	0.02
Age × training					2.0	.163	–
Gender × training					0.7	.794	–
Race/ethnicity × training					29.4	<.001	–
Justice profession × training					5.2	.023	–
Accept cultural differences	14.1 (7.4)	13.5 (6.5)	14.2 (7.8)	13.3 (6.8)			
Training					7.1	.008	0.04
Age					1.2	.297	–
Gender					0.0	.908	–
Race/ethnicity					4.6	.033	–
Justice profession					0.2	.698	–
Racial identity					0.4	.556	–
Age × training					0.8	.365	–
Gender × training					6.5	.011	0.01
Race/ethnicity × training					0.1	.762	–
Justice profession × training					0.9	.352	–
Empathic awareness	18.6 (3.8)	20.0 (3.7)	18.9 (3.4)	21.5 (2.7)			
Training					3.0	.087	–
Age					0.4	.518	–
Gender					16.0	<.001	0.04

Table 2 (continued)

	Justice Prof Pre-training <i>M</i> (SD)	Justice Prof Post-training <i>M</i> (SD)	Other Prof Pre-training <i>M</i> (SD)	Other Prof Post-training <i>M</i> (SD)	<i>F</i>	<i>p</i>	η^2_p
Race/ethnicity					9.7	.002	0.02
Justice profession					9.9	.002	0.01
Racial identity					3.3	.070	–
Age × training					0.1	.725	–
Gender × training					3.1	.081	–
Race/ethnicity × training					5.6	.018	0.01
Justice profession × training					15.6	<.001	0.03

Accept acceptance of, *Justice Prof* justice professionals, *Other Prof* professionals in fields outside of the justice system. The first *F* statistic is the main effect of participating in the training

****p* < .001; ***p* < .01

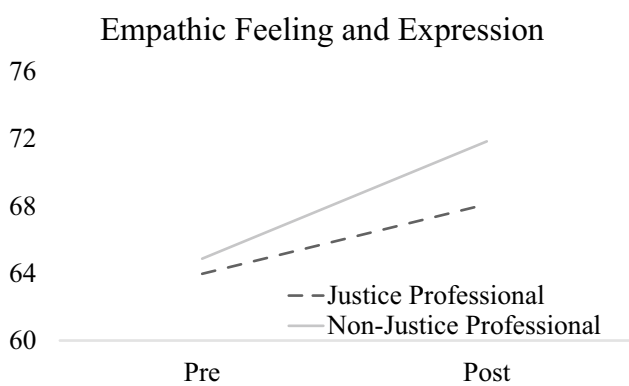


Fig. 1 Changes in estimated means of empathic feeling and expression over time by profession

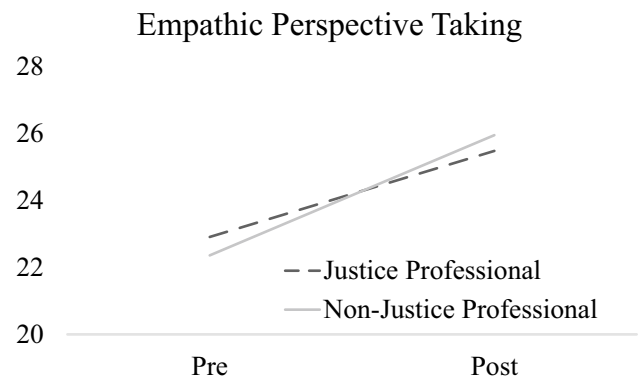


Fig. 2 Changes in estimated means of empathic perspective taking over time by profession

significant interaction effect of profession over time on changes in acceptance of cultural differences.

Participant Responses to Training Content

To test whether participant employment within a justice profession, gender, or race impacted their response to what they liked about the trainings what surprised them in the training content, we conducted a series of three-way χ^2 . Participant gender within justice work settings will be discussed, but not race within justice work settings, because there were too few participants who identified as black to test for such effects. More detail is presented in Table 3.

Participant responses to the implicit bias training presenter were notably favorable, but there still was some significant variation in who indicated they liked the presenter. There was a significant main effect of employment setting, with participants who were in non-justice settings responding more favorably to the presenter (OR = 0.23; CI [0.12, 0.45]). Gender interacted with employment setting such that

women in justice settings (94.1%) were the most likely to say they liked the presenter, whereas women in non-justice settings were the least likely to say they liked the presenter (78.1%); (OR = 0.22; CI [0.11, 0.45]).

A similar pattern between justice employment setting and gender emerged for participants indicating they liked learning the statistics (OR = 0.44; CI [0.30, 0.64]) and discussions (OR = 0.49; CI [0.34, 0.70]) during implicit bias trainings. More specifically, men in justice professional settings were more likely to report liking those two components of the trainings, whereas women were more likely to report liking these training components in non-justice professional settings. Main effects of gender across employment settings also indicated significantly more favorable responses to training content among non-justice professionals for liking the Baby Doll Example (OR = 0.40; CI [0.33, 0.70]), with women consistently reporting liking this training component more than men.

Gender only significantly influenced participants' responses to one question about what training content was surprising: the statistics presented. More specifically, there

Table 3 Chi-square test statistics for implicit bias training responses by justice experience and gender

	Justice professional				Other professional				Gender			
	Female % (n = 148)		Male % (n = 65)		Black % (n = 17)		White % (n = 181)		Black % (n = 20)	White % (n = 237)	χ^2	p
Liked videos used	82.1	70.8	94.1	77.5	88.3	77.8	95.0	85.8	4.51	.034		
Liked presenter	78.1	89.2	88.2	80.8	94.1	98.1	100.0	94.4	21.65	<.001		
Liked learning statistics	49.0	52.3	70.6	48.9	73.7	53.7	85.0	68.7	18.76	<.001		
Liked doll example	51.0	44.6	58.8	47.3	72.2	46.3	75.0	67.0	14.54	<.001		
Liked group discussions	47.0	49.2	58.8	46.7	68.3	53.7	75.0	65.2	14.90	<.001		
Surprised by statistics	35.1	44.6	41.2	38.5	64.2	51.9	55.0	62.1	26.00	<.001		
Surp everyone is biased	22.7	26.2	29.4	23.8	20.5	13.0	15.0	19.7	1.63	.202		
Surprise I have biases	14.7	23.1	17.6	17.1	17.1	13.0	20.0	15.5	0.08	.773		
Surprised at media role	19.3	26.2	58.8	19.3	25.9	29.6	25.0	27.0	1.76	.185		
Surp age bias develops	53.3	52.3	70.6	53.6	49.3	50.0	35.0	51.1	0.61	.435		

Surp surprised. There were too few participants identified as black in many cells, so χ^2 Test statistics are not reported for race

was a significant main effect of employment setting such that participants who worked in justice settings expressed less surprise about presented statistics than did participants in non-justice settings (OR = 0.38; CI [0.26, 0.56]). Moreover, this effect was statistically significant among women (OR = 0.30; [0.19, 0.47]) but not men (OR = 0.75; [0.36, 1.54]).

Discussion

Let's revisit the critical question, what is the first step toward prevention of racial bias within the juvenile justice system? Research to date consistently suggests the need for (Bennett 2016) and promise of implicit bias trainings (Kang et al. 2011; Leiber and Fix 2019; Perez et al. 2017). Still, the literature on such trainings—particularly for those conducted with justice officials—is limited in studied outcomes and in evaluating how participant characteristics impact training outcomes. The current study provides a formative evaluation of an implicit bias evaluation developed for use with justice professionals, namely with a focus on improvement in implicit bias through increased ethnocultural empathy. Further, findings for justice professionals were examined in comparison with non-justice professionals. All participants had some room for improvement on measures of implicit bias knowledge and ethnocultural empathy, yet non-justice professionals and women benefitted slightly more from trainings than their counterparts. In addition, participants identifying their gender as female and race as black felt more positively about the training altogether, regardless of professional affiliation.

Profession Type and Implicit Bias Training Outcomes

The responses of justice professionals to the training were less robust than non-justice professionals, such that gains in tested outcomes were either weaker or were not statistically significant among justice professionals. Such an effect was observed on the measure of implicit bias knowledge, and the feeling and expression and empathic awareness subscales. There are several reasons we may see slightly more robust benefits for non-justice professionals to the implicit bias training relative to justice professionals. Because of the nature of their job, justice professionals define their jobs as unbiased; yet, they may have more difficulty remaining unbiased depending on the context and their demography (Rachlinski et al. 2008). Just professionals' work often involves making split second decisions about others in which they must judge others (e.g., law enforcement officer identifying a suspect's threat level, judge or probation officer evaluating the validity of someone's statements). It also may be that

the tailored content in justice versus non-justice trainings interfered with acquisition of knowledge and improvements in empathy due to the content feeling more personal and distracting due to emotional reactions for justice professionals (e.g., Wistrich et al. 2014). Specifically, disproportionate minority contact is a justice problem and it would be understandable for anyone working in related fields to become defensive in response to presented data in the implicit bias training. Follow-up qualitative research could elucidate some of these observed patterns in responding that were counter to our hypotheses. It is also important to recognize how implicit bias is likely a part of the workplace culture across settings, but particularly within justice settings, given the longstanding presence of institutional racism in this system (Alexander 2020). Research is needed to evaluate how participant workplace positions—including whether they worked in positions of power and helped shape or uphold practices based on implicit bias or racism—impact training outcomes.

There was no difference between study profession groups in changes on the perspective taking subscale or cultural acceptance subscale. A single training is not a panacea for perspective taking or cultural acceptance. The lack of change in cultural acceptance following the training is likely due to the inability for more exact and sensitive measurement of this phenomenon, as timepoints were so close in time that three of the five items were unable to change (e.g., “*I get impatient when communicating with people from other racial or ethnic backgrounds, regardless of how well they speak English*”). It is also possible that the observed stagnation in cultural acceptance scores may suggest the training needs tweaking, or it may be that acceptance of cultural differences are not significantly correlated with reduction of biased responding. Thus, research is needed to evaluate the strength and impact acceptance of cultural differences on justice professionals’ behaviors with children in the juvenile justice system. If indicated, then future implicit bias trainings should emphasize content related to improving awareness and acceptance of cultural differences. Adjustments to the implicit bias training are particularly feasible given the current design of the implicit bias intervention, particularly because it was developed to be culturally tailored and individually-informed.

Participant Characteristics and Implicit Bias Training Outcomes

Male respondents demonstrated a significantly stronger improvement in empathic feeling and expression and empathic awareness following completion of the implicit bias training compared with female respondents. This finding is consistent with other research demonstrating an impact of gender on empathy (Albiero and Matricardi 2013;

Wang et al. 2003). Due to their higher preexisting levels of empathy, women participating in this—or any other implicit bias training—likely come into the training with less room for improvement compared with men. Of note, while women consistently present with higher levels of empathy and cultural acceptance, research conducted by Albiero and Matricardi (2013) indicates that the Scale of Ethnocultural Empathy is measuring the same construct among both women and men. Altogether, findings from the present study that support a noteworthy increase in several facets of ethnocultural empathy, regardless of gender, but such effects are more pronounced for men.

White participants had a significantly larger improvement in their implicit bias knowledge than did black participants. It is worth noting that this effect was observed in a predominantly white sample—people who identify their race as white often present with the largest implicit biases (Nosek et al. 2002) and therefore have the largest room for improvement in knowledge and affiliated measures of implicit bias including empathy. Indeed, white race was associated with significantly greater gains in perspective taking and empathic awareness. Accordingly, the present training holds promise as an intervention for increasing empathy—and reducing implicit bias—among white justice and non-justice professionals.

Racial identity is unexamined in the implicit bias training literature. Yet, the current study supports the inclusion of racial identity in this and subsequent research on implicit bias trainings because two subscales were significantly impacted by racial identity. In fact, racial identity significantly influenced gains over time in two subscales from the Scales of Ethnocultural Empathy: feeling and expression and perspective taking. It is reasonable to assume that when people have higher racial identity levels—regardless of their racial background—they are in a better position to self-evaluate and self-regulate their own internal experiences (e.g., thoughts, emotional responses) (Helms 1990, 1997). One reason it might be important to examine racial identity in such research is to ultimately tailor content for participants based on their stage of racial identity development (Helms 1997). Results support this notion, but future research is needed to better understand how racial identity impacts training outcomes between racial groups and across other intersectional social identities (Crenshaw 1989, 1993).

Overall Participant Reaction to the Implicit Bias Training

There were aspects of the training that were particularly appealing to both justice and non-justice professionals, to women and men, and to participants who identified as black and as white. Non-justice professionals consistently rated all aspects of the implicit bias training more favorably than did

justice professionals. Justice professionals may present with higher skepticism than non-justice professionals, given possible proclivity to disagree with evidence-based recommendations like the use of structured decision making (Shook and Sarri 2007). This finding further indicates a need for qualitative research to better understand how to improve the training content for justice professionals.

Across both justice and non-justice professions, women consistently reported liking videos used to exemplify concepts and initiate group discussions significantly more than men. In addition, women were significantly more likely to report that the Baby Doll Example was an especially enjoyable aspect of the training. Men, on the other hand, were significantly more likely than women to say that they liked the presenter (a black man). It is worth noting that most participants in the training indicated that they liked the trainer—just men more so than women.

Black participants also reported liking all aspects of the implicit bias training more than white participants. In particular, black participants were more likely to say they liked the videos used, the presenter, learning the statistics, the Baby Doll Example, and the group discussions. Such an effect was consistently present for both justice and non-justice professionals. It is possible that such an effect was observed because white participants were more resistant to the content and anxious about related discussions (Sue et al. 2009, 2010) or black participants were more concerned about discrimination within society (Devine et al. 2012). Alternatively, participants may be responding to the trainer's racial background, but this is unlikely given that research suggests diversity training participants tend to respond most negatively to white male trainers (Holladay and Quiñones 2008), and the current trainer was not a white male.

Implicit Bias Training Implications

Findings from the present study have important implications for the implicit bias training used in the present study. First, the trainer who developed and implemented this implicit bias training recently began an iterative developmental process for follow-up curricula to build upon the first training. These trainings go deeper into the history of race and institutionalized racism in the USA, explore whiteness, and address how to be an anti-racist. Once these trainings are fully complete and standardized, future research work will test their effects.

The current study demonstrated a significant impact of this implicit bias training on most aspects of ethnocultural empathy. However, particularly for justice professionals, acceptance of cultural differences did not improve following the training. The training is being modified to better address cultural differences and acceptance thereof. For example, the training will encourage participants to complete brief

relaxation or mindfulness exercises prior to participating in the implicit bias training to (1) promote non-judgmental awareness that can combat implicit biases (Hanley et al. 2015) and (2) reduce intergroup implicit racial bias (Tincher et al. 2016).

Finally, moving forward, it will be important for the training to incorporate multiple social identities and the intersectionality theory into future trainings (Crenshaw 1989, 1993). Given that implicit race biases are a major underlying force of contributors to the perpetuation of discrimination (e.g., Devine 1989, Fiske 1998), training content will still focus predominantly on these identifiers. However, intersectionality theory explicitly recognizes the pivotal influence of each social identifier (e.g., race, gender, sexual orientation, socioeconomic status, disability) on outcomes. Given the weight of what is at stake when someone becomes involved in the justice system, focusing on improving individual awareness of implicit biases among decision makers working in the justice system is especially important.

Limitations and Future Directions

The present study examined a promising implicit bias training in a large sample of individuals. Ethnocultural empathy was examined from pre- to post-implicit bias training and racial identity was examined as an indicator of response to the training. Participant characteristics also allowed analysis by profession (i.e., justice or not) and by gender. Still, there are several limitations of the present study worth discussing. There were too few participants who identified as certain types of justice professionals (e.g., judges, attorneys, probation officers) to look at whether and how implicit bias training responses varied by type of justice professional. In response, future research should focus on recruiting a larger sample of certain professionals. The same limitation and future direction apply to research on the non-justice professionals who participated in the implicit bias trainings.

The majority of participants identified their gender as female (74%) and their race as either white (92%) or black (8%). Moreover, the study sample identified as black was too small to test for between race differences in training outcomes. Therefore, it is encouraged that future research focus recruitment efforts on increasing gender and racial/ethnic diversity representation in who is participating in these trainings. Additionally, the present study was conducted with participants predominantly from one state. Future research using implicit bias trainings are encouraged to recruit participants from a broader geographical area. The current study examined how participant characteristics impacted their response to an implicit bias training, yet a lingering question following this work is if other participant characteristics matter. For example, within a workplace, whether an individual is in a position of power (e.g., how pivotal

their role is in setting policies and protecting/determining the workplace culture) respond differently to the training. Future research is encouraged to examine how work culture and policies may incentivize and normalize implicit bias.

The current study did not use behavioral measures. For instance, data from a Go/No-Go task or the Implicit Association Test (IAT) were not available for the current study. As another example, participants were not asked questions about whether they intend to use what they learned during the implicit bias training in decision making moving forward. In follow-up research, inclusion of these and similar measures would more clearly evaluate how implicit associations are impacted by the training and how participants foresee using knowledge gained in their future work. Accordingly, the implicit bias trainer plans to remove the IAT from the training and to instead measure automatic responses tapped into by the IAT for future studies and to incorporate other behavioral measures of change when funding for such research is secured.

Finally, the present study used a cross-sectional design with a limited number of data points for each participant. A longitudinal study design is warranted to (1) test for long-term outcomes of participation in such trainings, and (2) to measure other more distal outcomes from this training like use of learned skills for reducing implicit bias. Longitudinal research would also allow for testing of mechanisms through which reductions in implicit bias occur. Findings from the present study point to ethnocultural empathy as a potentially meaningful mediator of implicit bias reduction. Future research may examine more distal outcomes due to changes in racial disparities in the behavior of justice professionals, like responses to relevant vignettes and arrest rates. Altogether, such a program of research would certainly benefit from collection of parallel—if not expanded—data to build on the current study. For example, planned future research on this implicit bias training will examine whether participants plan to (and actually do in follow-up data) interrupt their own and others' implicit bias, intentionally engage in more interracial and intercultural activities, and seek continued education on implicit bias and related concepts.

Conclusion

Implicit bias is one malleable factor that contributes to disproportionate minority contact in the juvenile justice system. There is a pressing need for intervention with justice professionals to prevent these biases from harming the wellbeing of people and communities of color. One way in which implicit bias may be mitigated is through targeting of ethnocultural empathy (Wang et al. 2003). The current study evaluated an implicit bias, which focused primarily on

individual awareness. In addition, the training included the pathologizing of blackness, adverse childhood experiences linked to racism (including but not limited to environmental racism), and the school-to-prison/containment pipeline. The current implicit bias training effectively increased most desired outcomes, including ethnocultural empathy. Moreover, while select effects were more robust for justice professionals or non-justice professionals, respectively, participants benefitted overall. Further, men, white participants, and those with a more developed racial identity benefitted most strongly from the implicit bias training. While results indicate this intervention holds promise for justice and non-justice professionals, people who identify their gender as female or male, and people who identify their race as black or white, more work is needed to refine an implicit bias training curriculum that can be widely disseminated in an effort to ultimately prevent widespread racial disparities in the US juvenile justice system.

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Compliance with Ethical Standards

Conflict of interest Rebecca L. Fix declares that she has no conflict of interest regarding the present study or manuscript.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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

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