The Fair Play Project: An Intervention to Reduce Racial Bias in the Academy

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ABSTRACT

Fair Play is the cornerstone of workshops that were developed by researchers at the University of Wisconsin–Madison to teach STEMM faculty about the concept of implicit (or unconscious) bias and to teach them strategies to reduce bias within their behaviors and the environment. *Fair Play* is a computer-based simulation that allows the player to "walk in the shoes" of the primary character, Jamal, a STEMM graduate student on a university campus who encounters verbal and environmental microaggressions that represent racial implicit bias. Workshops were implemented for STEMM faculty and staff at colleges, universities, and conferences across the country from 2016 to 2019. A research study was conducted to follow up with participants to understand what they learned from these trainings and how they applied their skills and knowledge in their professional and personal settings. Study results suggest they increased their awareness of bias and their ability to define concepts (bias literacy); they were able to take Jamal's perspective; their attitudes and behaviors changed; and they were able to apply bias-reducing strategies in their professional settings. These positive findings, as well as the experiences of the facilitators, suggested the need to develop a similar training for graduate students and postdoctoral scientists that added in additional topics to encourage persistence and for learning about the history of race as a concept in the United States. Funding from both projects supported development of open and accessible training materials and the video game for facilitators to implement in workshops at their home institutions and organizations.

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Introduction

Recent efforts to broaden the participation of underrepresented and minoritized groups in STEMM (science, technology, engineering, mathematics, medicine) fields have led to a variety of interventions that are intended to work at the individual, departmental, institutional, and national levels throughout the United States. These efforts include everything from increasing interest in STEMM for students during their K–12 education (e.g., Fouad & Santana, 2017; Sengupta-Irving & Vossoughi, 2019), to providing research and other engaging opportunities for undergraduate students (e.g., Freeman et al., 2014; Hunter et al., 2007; Seymour et al., 2004), to offering large-scale grants and funding to institutions and national networks to collectively address workforce disparities (e.g., programs such as INCLUDES, LSAMP, and ADVANCE through NSF, and UNITE through NIH). These important efforts are an attempt to address the "pipeline" issues for gender and ethnic/racial minorities that impact their full retention and participation in STEMM fields in the academy (Espinosa, 2011; Gayles & Ampaw, 2014; National Academies of Sciences, Engineering and Medicine [NASEM], 2023). Yet, as NASEM stated:

> Despite these efforts, recent reports indicate that, although the representation of minoritized persons in science, technology, engineering, and mathematics higher education is increasing, the collective attainment of science and engineering degrees for Black people, Indigenous people, and Latine people does not reflect their corresponding growth in the U.S. population (NASEM, 2023, p. 84).

Theorists have attempted to explain the documented gender and racial/ethnic disparities across educational attainment and employment in STEMM fields (e.g., Aguirre, 2000; Clark Blickenstaff, 2005; Gonzales et al., 2021; McGee & Martin, 2011; Seymour & Hewitt, 1997). Some scholars implicate barriers at the structural and institutional levels that serve as gatekeepers to full and equal participation by racial/ethnic and other minoritized faculty (Burt et al., 2020; National Academies of Sciences, 2023; Seymour et al., 2019; Walters et al., 2019). Others suggest that individual-level interactions influence how people experience the climate and culture within academia, which provides either a welcoming environment, or one in which faculty seek to exit from (Brazziel & Brazziel, 2001; Burt et al., 2019; Seymour & Hewitt, 1997; Winkle-Wagner & McCoy, 2018). Our work is situated in the latter camp, while recognizing that both macro- and microaggressions play a role in persistence and attrition.

As we describe here, our intervention focused on explicating the microaggressions that "generally occur below the awareness of well-intentioned people" (Sue, 2010, p. 9; see also Bernd Wittenbrink, 2007; Devine, 1989) and that occur through comments, behaviors and the environment due to *unconscious* or *implicit bias*. We created a computer-based simulation that

allows someone to take another person's perspective and experience real-world implicit bias incidents as they explore a college campus. The objective of this intervention was to make people aware of their own implicit and unconscious actions as a means to mitigate and decrease biased interactions with those who are commonly harmed by them (Sue, 2010; Sue et al., 2007).

Background

Implicit bias, which was initially identified as *automatic and uncontrolled reactions* to stimuli based on stereotypes (Devine, 1989), often happens without conscious awareness yet leads to the unintended consequence of negative interactions. This concept served as the foundation for the development of the *Fair Play* video game and ultimately, the centerpiece of the workshop described here. The proposal that led to funding to support this work from the National Institutes of Health noted:

> No research to date synthesizes evidence-based strategies to reduce *habitual stereotype-based bias* into an experiential *interactive case-based computer game* format that is specifically designed to facilitate a change *in attitudes and behaviors of faculty* with the overall goal of transforming the cultural norms of academic STEMM (Carnes, 2010, p. 5).

In the initial stages of the game's development, storyboarding of ideas and rapid iterative design were the cornerstones of the collaborative work between subject matter experts and game designers. During these frequent meetings and over several years, characters and dialogues were discussed, and multiple story lines were developed. Ultimately, the game included a main character, Jamal, and several non-primary characters who served as the perpetrators of a number of bias incidents (see Kaatz et al., 2017 for a description of the game development). The game provided players with the opportunity for perspective taking, or "walking in someone else's shoes" (Davis et al., 1996; Galinsky & Moskowitz, 2000; Mashuri et al., 2017; Todd et al., 2011), which it was found to do successfully (Gutierrez et al., 2014). It also provided the players with the opportunity to learn the names of the types of implicit bias reflected in the game, their definitions, and the literature base that informs them. In short, the game was intended to increase the player's *bias literacy* (Carnes et al., 2012, 2015; Isaac et al., 2012; Sevo & Chubin, 2008) through the identification of biases in conversation and in the environment of a higher education campus.

Once the game was finalized, the project team, which included Carnes and Pribbenow, recognized that although it was strong on its own, the game's effectiveness could be enhanced when embedded within a training or workshop. The decision to draft a grant proposal to develop a training stemmed from the evaluation and research findings collected about *Fair Play*, as well as from the literature about effective anti-bias trainings (Carnes et al., 2012, 2015; Devine et al., 2012; Gutierrez et al., 2014). Using the literature and research that identified evidence-based practices, the project team proposed and received a grant to develop and disseminate a workshop for faculty in the STEMM and biomedical and behavioral science (BBS) fields. The proposal, *Breaking the Bias Cycle for Future Scientists: A Workshop to Learn, Experience, and Change,*

was modeled on an evidence-based workshop (Carnes et al., 2015). The framework for the workshop included three sections:

Module 1: Education about implicit bias
Module 2: Experiential learning component (play *Fair Play*)
Module 3: Strategies to address bias

The approximately 3-hour workshop was intended to meet the following objectives: 1) make participants aware of the names and definitions of common biases faced by individuals (i.e., bias literacy), 2) understand the effects of these biases on the individuals who experience them, 3) increase participants' motivation to address their own biases, and 4) learn and apply strategies to address bias in themselves. In addition, the project included developing a Facilitator Training version of the workshop for participants to learn how to conduct workshops at their perspective institutions. *Fair Play* and its complementary workshop curriculum and training materials were disseminated through a project website.

Once the workshops were developed, they were offered to ~1000 participants at 14 universities and 10 national STEMM-related conferences across the country between 2015 and 2020. Participants included faculty and instructors, administrators, academic staff, researchers, postdoctoral scientists, and graduate students, and were representative of all genders and racial/ethnic groups. Post-workshop evaluations indicated consistently favorable responses to questions about participant satisfaction and learning. Table 1 provides aggregate data from 203 participants who attended workshops at 10 institutions between 2017 and 2019 who indicated their level of agreement to statements using the scale from 1 = Strongly Disagree to 5 = Strongly Agree.

***Table 1*. Average responses to items in post-workshop evaluation, overall and disaggregated by people who identify as White and not White, and by gender using male/female binary categories.**

	Overall Mean (N=203)[1]	**Identify as White (n=116)**	**Do Not Identify as White[2] (n=87)**	**Male (n=67)**	**Female (n=132)**
The game accurately portrayed racial bias in an academic setting.	4.1	4.0	4.3	3.9	4.1
The workshop increased my understanding of the effects of bias.	4.3	4.3	4.3	4.3	4.3
I learned a lot from the overall workshop.	4.2	4.2	4.2	4.1	4.2

[1] Includes faculty, academic staff, administrators, postdoctoral scientists, and graduate students.
[2] Identify as American Indian/Alaskan Native; Asian/Asian American; Black/African American; Hispanic/Latinx; Native Hawaiian/Pacific Islander; other racial/ethnic identities.

The workshop is an effective way to teach people about bias.	4.5	4.4	4.5	4.4	4.5
I would recommend this workshop to a colleague.	4.5	4.4	4.6	4.4	4.5

Besides positive reactions to the workshop itself, the participants also articulated steps they would take to address bias in their professional environment. In short, the post-workshop evaluations invited them to predict what they might do in the future based on the workshop. A follow-up research study was designed to determine if and how the participants used the information gained from the *Fair Play* workshop as intended in the original aims of the proposal.

Research Study

Three questions guided a follow-up study of workshop participants:

1. What did the workshop participants learn from the workshop?
2. What behaviors did they adapt or change due to participating in the workshop?
3. How did they apply the skills and knowledge in their professional and personal lives and settings?

To address these questions, a survey was sent to all individuals who participated in a full *Fair Play* workshop between 2017 and 2019 at eight higher education institutions approximately 1–2 years after their participation.

Prior to conducting the study, an Internal Review Board (IRB) for Human Subjects Research protocol was submitted and approved (2019-0081; reviewed as Exempt). Once IRB permission was granted, participants were recruited from the *Fair Play* participant database to complete an online survey without any incentive. Before seeing the instrument, participants read an information page outlining the study and then were asked to provide their consent to participate by clicking on the survey to begin. Of the population of 258 possible research participants, 86 completed the survey for a response rate of 33%. For the purposes of this study, individuals who participated in a *Fair Play* workshop at a conference or symposium were excluded due to the strict time constraints that significantly reduced the allotted time for a workshop (1.5–2 hours vs. 3–3.5 hours for a full workshop).

The Survey

Survey items were developed by the project team, which included evaluators (current and former) and faculty and staff researchers at UW–Madison. The overarching intent of questioning was clear—to understand the experiences of participants in the *Fair Play* workshop, what they learned and remembered from the workshop, and how they applied their learning, if at all (i.e., to address the three original research questions). There were also a few items about the respondents' participation in facilitator training opportunities and if they disseminated the workshop in other venues, which were used for workshop evaluation purposes and are not reported here. The survey included closed-ended, multiple choice and Likert-type questions, as well as open-ended questions. The survey met the criteria for content and face validity; no other psychometrics were performed on this instrument.

Participants ranged in age from 18 to 65, with most participants indicating an age somewhere between the ages of 25 and 64 (90%). The sample was racially and ethnically diverse: 28% identified as African American/Black, 56% as White, 4% as Hispanic/Latinx, 6% indicated Biracial/Multiracial/Multicultural, 2% as Asian/Asian American, 2% as American Indian/Alaskan and 2% who identified themselves as "Other." Sixty-four percent of the participants identified as female, 30% identified as male, and 6% did not indicate gender. Nearly half of the participants (45%) were academic staff (e.g., researcher, program director), 37% were faculty/instructors, 8% were graduate students, 3% were administrators (e.g., president, provost, dean), and the remaining 7% identified as "other" or preferred to not respond.

Data Analysis

Data analysis for the quantitative items occurred at the descriptive level, such as calculating frequencies, percentages and means. The qualitative analysis of the open-ended items used an inductive process by sorting responses to the item into thematic categories (Tracy, 2013), which were then shared alongside the quantitative data with a sample of verbatim quotes that reflected the overarching theme.

Findings

Increase in Bias Literacy

When asked if they could recognize any of the portrayed biases in their daily life when observing interactions between others, over half of the participants noted they could identify "tokenism," "stereotype threat," and the specific racial microaggression known as "microinsult." The respondents reported they were least able to identify "failure to differentiate," "impression management," and "attributional rationalization" (Table 2).

***Table 2*. Responses to the item, "In my daily life, while observing interactions between others, I can recognize…" (n=60).**

Bias Type	Yes	No	Total
Tokensim	57% 34	43% 26	60
Stereotype threat	53% 32	47% 28	60
Racial microaggression – microinvalidation	53% 30	47% 27	57
Racial microaggression – microinsult	50% 30	50% 30	60
Racial microaggression – microassault	48% 29	52% 32	61
Status leveling	48% 23	52% 25	48
Color-blind racial attitude	44% 26	56% 33	59

Competency proving	42% 23	58% 33	56
Shifting standards of judgement	38% 20	62% 33	53
Failure to differentiate	36% 20	64% 36	56
Impression management	37% 16	63% 27	43
Attributional rationalization	24% 11	76% 34	45

In the open-ended questions, respondents noted that learning the names of the biases proved to be helpful as they sought to address bias in their spheres of influence. Direct quotes reflecting respondents' increased bias literacy include:

- The workshop helped me learn the terminology, which I have been able to pass on to my current students and my former students who are in graduate and health professional programs and beyond.
- It has given me better language to describe the biases that I see happen.
- It also expanded my vocabulary and provided concrete examples within higher education that I used to improve the quality of the diversity and inclusion course I teach for my department.
- It's great to know words for some of the things I've noticed (and not noticed). Awareness and being able to name what is going on is effective.
- While I don't have all of the terms memorized, I am definitely more cognizant of how people perceive what I say and do. I am trying harder to recognize my own bias and acknowledge that I am still learning how to navigate this process.

Changes in Attitudes and Behaviors

The respondents were asked to indicate their level of comfort being an ally for a student like Jamal after attending the *Fair Play* workshop. Over half indicated "extremely comfortable" and one third indicated "slightly comfortable" (Table 3).

***Table 3*. Responses to the item, "After attending the *Fair Play* workshop, describe your level of comfort being an ally for a student similar to Jamal Davis." (n=71).**

Extremely comfortable	55% 39
Slightly comfortable	37% 26
Neither comfortable nor uncomfortable	7% 5
Slightly uncomfortable	0% 0
Extremely uncomfortable	1% 1

Total	**100% 71**

When asked if participation in the *Fair Play* workshop made it more comfortable to talk with others about implicit bias, the respondents indicated they felt most comfortable talking with colleagues (71%), followed by graduate students (55%) and family members (52%). They felt least comfortable talking with administrators and community members (Table 4).

***Table 4*. Responses to the item, "Has participation in the *Fair Play* workshop made it more comfortable to talk with the following groups about implicit bias?" (n=86).**

	Yes	**No**	**Total**
Colleagues	71% 60	29% 24	84
Graduate students	55% 47	45% 39	86
Family members	53% 45	47% 40	85
Administrators	48% 40	52% 44	84
Community members	46% 39	54% 45	84

Applying Bias-reducing Strategies

The third module of the workshop describes and discusses evidence-based strategies to decrease bias with the participants. To assess if the strategies are being used, the respondents were asked to indicate how often they engaged in bias-reducing strategies since attending the *Fair Play* workshop. Most participants indicated that they did them "very often" or "often," as seen in Table 5. The most common strategies were identifying and labeling bias in their environments, including in the media and on social media.

***Table 5*. Responses to the item, "Please check the box to indicate how often you have engaged in the following" (n=70).**

	Very Often	**Often**	**Occasionally**	**Rarely**	**Never**	**Total**
Identified bias in the environment around me.	42% 29	41% 28	16% 11	1% 1	-	69
Labeled something that I read or saw in the media or on social media as a form of bias.	40% 28	29% 20	26% 18	4% 3	1% 1	70
Tried to understand why particular issues hold significance for others.	38% 26	42% 29	17% 12	1% 1	1% 1	69

Imagined how my actions will affect things that are important to others.	37% 26	46% 32	16% 11	1% 1	-	70
Asked questions to better understand an individual's experience rather than assuming it is similar to my own.	26% 18	49% 34	22% 15	1% 1	1% 1	69
Sought out ways to reduce bias at my institution.	26% 18	39% 27	25% 17	10% 7	-	69
Sought out opportunities to interact with others who are of a different race and/or ethnicity than I am.	26% 18	29% 20	43% 30	-	1% 1	69

Take Another's Perspective

The participants also described how the workshop changed the way that they view and interact with students. In particular, they see how students have different experiences that impact them and may contribute to negative feelings in an environment. The ability to take the perspective of others, which is a key component of the game, is reflected in these participants' responses:

- I am more aware that students' experiences of the same situation can vary wildly depending on their backgrounds.
- I am personally more aware of microaggression and situational problems—for example, putting a student in a situation that could be uncomfortable.
- Gained a better understanding of the experiences of other graduate students, whether at [my university] or elsewhere.
- Personally, learned more about experiences of minority graduate students.
- It makes me think more about bias and how others experience their environment.
- I have a daughter that is about to graduate from high school and has made decisions on where to attend college based on racial experiences she had in the workplace and at a high school level. This has made me take a strong, hard look at how I interact with my own students and colleagues and how our students might be perceiving those interactions as well.

The respondents noted many ways that the workshop affected them in both their personal and professional lives. The most common responses indicated that the workshop made the participants more aware of biases, with "increasing awareness" being the one of the primary goals of the workshop. The following examples are indicative of how participants describe their increased awareness:

- It has been one more thing to help make me more aware of different biases that I hold as well as being able to recognize when others are acting on their own biases.
- I am more aware of the racism and biases and microaggressions that exist in our community and in the workplace.
- As a Black female faculty member, the biggest impact has been in making me more aware of my own assumptions about the background and experiences of others. Everyone is unique with their own story.
- I definitely catch myself falling into cognitive traps that majorities can fall into. This is interesting because I fall into a minority myself (LGBQ) and I would have thought that I would be able to recognize similar examples from my own life (tokenism, discounting) and prevent them creeping in when I interact with other minorities.
- It gave me a new lens to view social interactions.
- I have heightened awareness of the prevalence and impact of implicit (and explicit) bias.
- Increased awareness of how to interact with students of color.
- It has made me more aware of the potential for exacerbating feelings of stereotype threat and imposter syndrome.
- It made me think about consistent daily factors that impact students.

Consistent with the data presented in Table 5, 55% of the respondents "strongly agreed" or "agreed" that they had implemented bias-reducing strategies in their professional work (Table 6). They were less likely to agree with statements about how things changed in their departments/units.

***Table 6*. Responses to the item, "Please indicate the extent to which you agree or disagree with the following statements" (n=77).**

	Strongly agree	**Agree**	**Neither agree nor disagree**	**Disagree**	**Strongly disagree**	**Total**
Because of the *Fair Play* workshop, I have implemented bias reducing strategies in my professional work.	13% 10	45% 35	32% 25	5% 4	4% 3	77
Following the *Fair Play* workshop, my college/department/unit has taken an interest in the issues identified in the workshop.	10% 8	31% 24	38% 29	14% 11	6% 5	77
Since the *Fair Play* workshop, my college/department/unit is a more welcoming space	3% 2	18% 14	59% 45	14% 11	5% 4	76

for minority graduate students.						

Besides developing a greater awareness of bias, learning the names of some forms of bias, and the ability to take the perspective of others, the participants identified concrete ways in which their behaviors changed after participating in the workshop. These behaviors vary and are idiosyncratic to their individual spheres of influence and ways in which they can influence change. For some, this involved their own personal growth about the topic of implicit bias, while others applied their learning to situations in their departments or at their universities.

- I am more comfortable calling out implicit bias and advocating for minority groups.
- I left my institution for an HBCU. This is not something that can be seen as a common solution, but I left my institution with some changes implemented at the department level.
- It has brought to light some elements of my own stereotyping, which I now recognize and deal with.
- I understand to a greater degree the ways in which bias impacts my work. I am also beginning to add in processes that limit the effect of my biases.
- It has changed how I advise students who are looking to move on to graduate programs and has made me more likely to speak up in department meetings about implicit bias.
- It has also helped me reach out to other marginalized groups on campus to make our learning environment more inclusive, like LGBTQ students and students with disabilities. As a result of participating in this workshop, I have developed a greater interest in advocating for equity across campus.

One participant highlighted a bias situation that resonated with them:

> There is a hallway on my campus with portraits of former deans, all of whom are White. Every time I walk down that hallway, I see Jamal with a red exclamation point over his head thinking, “Maybe I don’t belong here,” and I remind myself to work to make my campus a more inclusive place for everyone.

Validated and Reinforced Knowledge

A few of the workshop and survey participants described the outcome of validating and reinforcing what they had experienced and/or were already knowledgeable about.

- The workshop had a very positive effect on me because it validated some issues that I had brought to the attention of colleagues and administrators prior to attending.
- It was a good reinforcement of the importance of issues.
- It helped me to reexamine my own implicit biases, which has both a personal and professional impact.

Finally, some used the survey as an opportunity to describe what they saw as both positives, as well as shortcomings, of the training. Positive reactions included:

- I work in the field of diversity. The workshop has been a good tool for allowing groups to have an interactive experience.

- It's one of many tools that serves as a catalyst for meaningful conversation.
- It was a very compelling and informative presentation that I recommend frequently to others. It helps personalize issues of racism.

One respondent noted the "selection bias" inherent in voluntary trainings:

> It reinforced for me that the sorts of individuals who select into taking a workshop like this are already interested in these issues and working on improving the experiences of minority graduate students—and that workshops are not anywhere near enough to address bias.

A few participants noted they did not learn anything new, which was attributed to their current roles and base of knowledge:

- I am already in the field of promoting racial and cultural diversity and addressing racial discrimination, so most of my perspective and insight was already developed before I attended the workshop. In other words, it was not new information for me.
- As a diversity coordinator, I am aware of many of these issues and their impact.

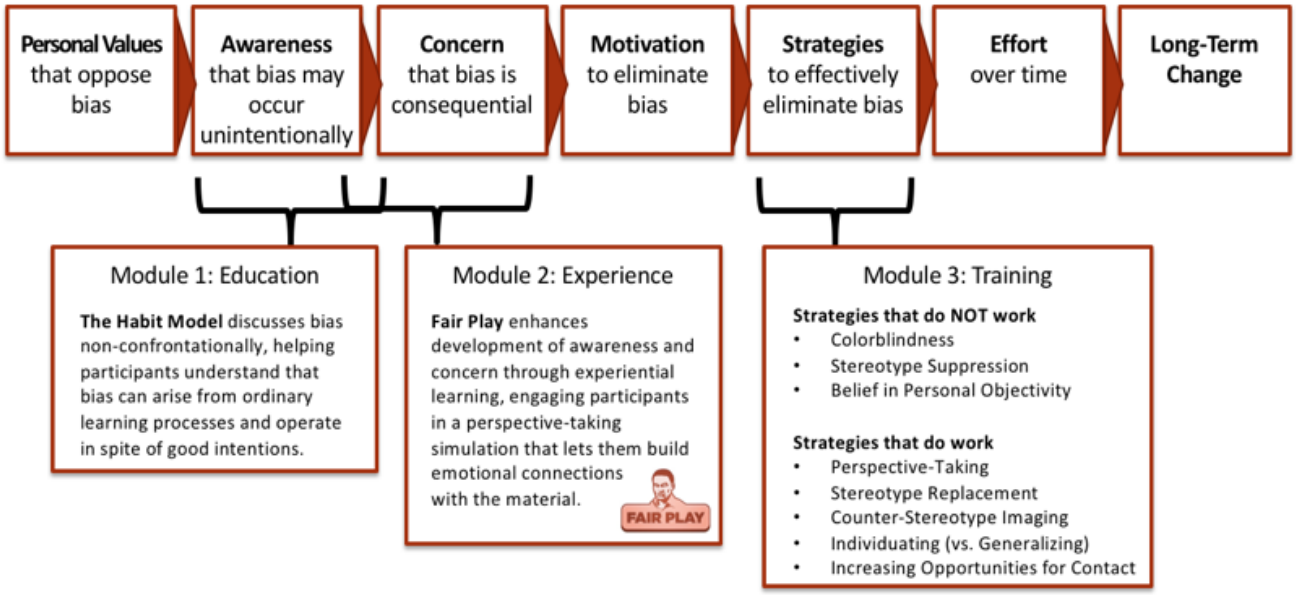
Discussion and Future Directions

Much was learned during the extensive implementation of the workshops for STEMM faculty between 2015 and 2020. From post-workshop evaluations, facilitator observations, and results from the follow-up study, the project team identified the following outcomes:

- Participants who did not identify as White indicated that they experienced similar incidents of bias that are portrayed in *Fair Play* and found the workshop to be valuable.
- The awareness of bias and the ability to name the incidents (i.e., bias literacy) resonated with workshop participants (Carnes et al., 2012, 2015; Sevo & Chubin, 2008).
- Many participants indicated increased empathy for Jamal and were able to take his perspective, which has shown to be a factor in decreasing bias (Davis et al., 1996; Galinsky et al., 2005; Galinsky & Moskowitz, 2000; Mashuri et al., 2017; Todd et al., 2011).
- Participants were able to describe the many ways in which they applied their learning in both professional and personal settings.

Besides these positive outcomes, recent articles suggest that the workshop meets the criteria and standards of effective anti-bias trainings that consider the process from individual awareness to long-term and sustained changes in behavior (see Figure 1).

***Figure 1*. Conceptual model of the *Fair Play* workshop.**



Specifically, this intervention clarified what implicit bias is and included extensive research discussions to provide a foundational understanding. Second, the game is an immersive and engaging opportunity for participants to see, hear and experience the events and accompanying feelings of someone who is experiencing bias consistently (for those who have not). Finally, the strategies section of the training gives people concrete, evidence-based ideas to address bias in themselves and in their environments (Cheng et al., 2019; Kim & Roberson, 2022; FitzGerald et al., 2019; Schmader et al., 2022; Sheridan et al., 2021; Fine et al., 2018).

That said, we know that participating in one workshop cannot undue an individual's background and unconscious reactions to environmental stimuli (Devine & Ash, 2022; Moller et al., 2024). Further, understanding the history of race as a concept and its history in the United States is foundational to understanding where implicit bias comes from. To address this, a second proposal was submitted and funded to enhance the workshop with more opportunities for learning and to address the needs of a different audience. This new proposal—*Fair Play: Bias Literacy and Resiliency Training to Empower the Future Biomedical Workforce*—included additional elements and educational activities that both extended, and were distinct from, the initial workshops. In particular, the project team shifted the focus to current graduate students and postdoctoral scientists, who will be faculty and in the workforce in the near future. Not only would the newly proposed educational programming provide trainings about the effects of implicit bias, but the content would also focus on empowering participants through bias-reducing and resiliency-building strategies to help them navigate and persist in their respective STEMM/BBS fields (Table 7).

***Table 7*. Learning objectives for *Fair Play* workshops.**

Workshop Learning Objectives	STEMM Faculty	Graduate Students and Postdoctoral Scientists
Etiology of Race: Analyze historical underpinnings of race. • Recognize that "race" was socially constructed. • Assess the role racism has played within the theories and practices of STEMM domains.		X
Implicit Racial Bias: Recognize bias and the effects of bias on your and others' experiences. • Define bias concepts and how stereotypes contribute to it. • Examine research studies about bias in the academy. • Articulate how bias affects you and others.	X	X
Bias Literacy through *Fair Play* • Identify types of bias as reflected in real-world and evidence-based examples.	X	X
Individual Empowerment: Cultivate practices to empower yourself and others to achieve personal and professional goals. • Assess your readiness to empower yourself and others to overcome bias, racial inequity, and other challenges within graduate education. • Reflect on the practices you currently use to overcome challenges related to bias and racial inequity. • Identify new practices you can use to overcome challenges related to bias and racial inequity in your role.		X
Address Bias in Selves: Learn about evidence-based practices to address bias. • Identify practices you can use to overcome bias and inequity in yourself. • Assess actions you can take related to your immediate environment while recognizing the complexities of broader systemic issues.	X	
Serve as an Ally: Cultivate practices to create a more inclusive environment around you by intervening. • Assess actions you can take when encountering bias incidents. • Identify practices you can use to intervene as an ally.	X	X

Despite extensive changes and additional content to the workshops, the project team was challenged by lack of attendance for both the in-person workshops (average attendance was half of who registered), as well as the online and virtual extended learning opportunities. Even with the low number of participants for the in-person trainings between 2023 and 2024, discussions

were deep and valuable, and participants gave positive feedback on the evaluations and expressed appreciation for the facilitators and content of the workshop.

In 2025, and in accordance with the proposed plan and meeting of goals, the project team shifted their focus to Aim 3 of the grant proposal—to provide facilitator training to expert facilitators who have foundational knowledge, extensive skills, and a strong commitment to disseminating this intervention at their institutions and organizations. Work had already begun to develop the *Facilitator Training* curriculum and revamp the website to include instructions and the materials to successfully conduct a workshop. Pilot workshops were implemented with local and national expert facilitators who served as reviewers of the materials and who tested them in different institutions.

The final year of the grant led to a shift in expectations about what could and could not be accomplished in the project due to changes at the federal and institutional levels. On the positive side, the full curriculum was edited and is openly accessible for anybody who would like to implement either of the workshops. Three websites host the materials: <fairplaygame.org> <gradstudents.fairplaygame.org> and <workshops.fairplaygame.org>. These materials include the "Facilitator Guide," with step-by-step instructions to host and facilitate a workshop, including logistical instructions, PowerPoint presentations, participant activities, references, and other resources. The *Fair Play* game and the *Facilitator Game* are also available on these sites.

Currently, there is much backlash and hesitation from others about implementing this training due to its topic and focus, despite its importance. That said, ignoring or not addressing implicit bias does not decrease its impact. Rather, there are many people in STEMM, and a host of other fields, who encounter interpersonal and environmental microaggressions daily. Their experiences of negative incidents lead to a climate that they feel is unwelcoming and one in which they feel that they do not belong. Our hope is that others will continue to use the training materials and tools that are freely available and accessible to improve the environments in which they work, especially the academy.

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