Internet-Based Cultural Competence Training for White Undergraduate Students at Predominantly White University

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APPROVAL PAGE

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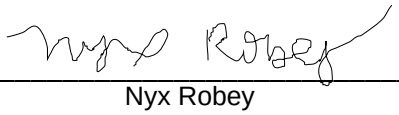

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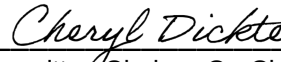

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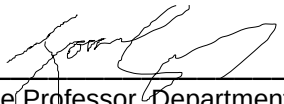

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ABSTRACT

Students from underrepresented racial groups experience higher rates of both explicit and subtler forms of racial prejudice and discrimination (Ellis, Powell, Demetriou, Huerta-Bapat, Carmen & Panter, 2019; Harwood et al., 2012; Ray, 2013; Stevens, Liu, & Chen, 2018; Vaccaro, 2010). Cultural competence training may benefit individuals in celebrating culturally-based differences as strengths, cognitively understanding their experience and cognitively empathizing with the experience of others, as well as building skills to better cross-cultural interactions (Glockshuber, 2005; Minami, 2008; Sue et al., 1982; Sue, 2001 Sue & Sue, 2013). This process can be beneficial particularly for White students (Chao, Wei, Good & Flores, 2011), who are prone to higher levels of color-blindness (Fu, 2015; Ryan, Hunt, Weible, Peterson, & Casas, 2007), misinformation around race (Saddlemire, 1996), and a lack of awareness surrounding White privilege (Ray 2013; Schoefplin, 2009). This study adapts a pre-existing one-day allyship training (Ong, Papa, Reveles, Smith, & Domenech Rodríguez, 2018) into a four-week training that walks participants through one-hour per week sessions in which they work towards developing cultural competence focused on race through an online Google forms platform. It utilizes student-acted role plays, reflection questions, and articles and videos to create an interactive experience for students. 49 White students complete the study, and were tested on measures before and after the training. Pre and post-test differences demonstrated significant increases in cultural competence and decreases in color-blindness. Relationships between color-blindness, White privilege, cultural competence, skill employment, training interest and implicit bias are discussed, along with implications and future directions.

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Introduction

Students from underrepresented racial backgrounds express higher alienation at Predominantly White Universities than campuses in which they are not the racial minority (Karkouti, 2016; Lett & Wright, 2003; Stewart, Jackson, & Jackson, 1990). Additionally, White students at Predominantly White Institutions (PWIs) often have less interaction with students from other races (Strayhorn, 2014). Consequently, White students may be lacking the skills and experiences necessary for navigating cross-racial interactions effectively. One method that may help promote their success and inclusion is through explicit diversity initiatives at the university level (Michalski, Cunningham, & Henry, 2017). Developing effective and evidence-based programming to this end has not been done. Improving cultural competence and implicit racial bias in White students at PWIs may help in contributing to safer, more inclusive campuses.

Cultural competence finds its roots in a foundational theory originating in the Counseling Psychology field (Sue, Arredondo, & McDavis, 1992). It is a tripartite theory focusing on bettering knowledge, awareness, and skills. It posits that there exists a combination of structural racial inequity in the United States, a growing population of racially diverse individuals, and the ethical responsibility to work with and be trained to work with individuals from all backgrounds. It proposes bettering the multicultural skills of counselors through increasing awareness of assumptions, building knowledge through understanding one's own perspective in relation to their clients, and actively and consistently bettering their practical skills with culturally diverse clients (Sue et al., 1992). First, increasing

awareness focuses on directing attention towards cross-cultural differences and with them one's attitudes and beliefs towards groups with cultural backgrounds disparate from one's own (Glockshuber, 2005; Minami, 2008; Sue & Sue, 2013). Secondly, cultural competence knowledge should bridge one's cognitive empathy across cultures (Sue & Sue, 2013) through cognition rather than affect. Lastly, skills incorporate communication that is culturally appropriate (Sue et al., 1982), and a push towards actively eliminating one's prejudice and bias (Sue, 2001). This theory became the basis of the American Counseling Association's multicultural competencies, and has been used as the groundwork theory for many subsequent effective interventions spanning healthcare (Montenery, Jones, Perry, Ross, & Zoucha, 2013; Shen, 2015; Young & Guo, 2016), education (Nickerson, 2017; Sue et al., 1992; Sue & Torino, 2005), and therapy (Nickerson, 2017; Sue et al., 1992; Sue & Torino, 2005).

Developing cultural competence strives towards multiculturalistic attitudes (Sue et al., 1992), and away from color-blind racial attitudes (Neville et al., 2006; Spanierman, Poteat, Wang, & Oh, 2008). Using the Critical Race Theory Framework, race operates on a multitude of levels ranging from individuals to macrosystems (David, 1989; Lawrence, 1987; Solorzano, 1997). However, color-blind attitudes undermine the fact that race plays an active and systemic role in society and an acknowledgement of racial discrimination (Neville, Spanierman, & Doan, 2006). White individuals are often more inclined to endorse colorblindness over multiculturalism than Blacks, for example (Fu, 2015; Ryan, Hunt, Weible, Peterson, & Casas, 2007). In a study conducted by Chao, Wei, Good and Flores

(2011), color blindness significantly predicted multiculturalistic knowledge, and White individuals in particular benefited from this type of training to increase awareness surrounding multiculturalism. Color blind attitudes may affect how well an individual can develop and implement skills found in cultural competence training like empathy (Burkard & Knox, 2004). These ideas may be better understood in relation to White privilege (Fu, 2015; Neville, Worthington, & Spainerman, 2001).

White privilege is the system that provides opportunities and benefits individuals who are White in the United States simply due to race (Donnelly, Cook, van Ausdale, & Foley, 2005). It is structurally advantageous for White individuals who are often unconscious of its effects (McIntosh, 1998). As a result, color-blindness may be a more advantageous method to adopt, because rather than seeing the benefits afforded based on skin color and race, one can apply a one-size fits all approach (Donnelly et al., 2005). Exploring White privilege is likely to bring up different reactions for different individuals (Langrehr & Blackmon, 2016; Miserocchi, 2017; Pinterist, Poteat & Spanierman, 2009; Todd, Spanierman, & Aber, 2010). Many may feel a sense of remorse for being privy to an exclusive system (Pinterits et al., 2009). This remorse may cause a sense of loss or anticipated cost in confronting this system and dismantling it, or it may further motivate them to work towards its dismantling (Langrehr & Blackmon, 2016; Pinterits et al., 2009). This may vary by demographics like gender and education (Pinterist et al., 2009), as well approach to religious attitudes (Todd, Suffrin, McConnell, & Odahl-Ruan, 2015). For some, mainly those who may have

more opportunities to sift through their emotions surrounding White privilege and a calling towards social justice, may be more likely to use newfound awareness as motivation to confront White privilege (Kernahan & Davis, 2007; Leach et al., 2006; Spanierman et al., 2008; Todd et al., 2015). Individuals higher in color-blindness may be more motivated to appear non-racist, but less motivated to actually develop an anti-racist identity (Gusuhe, Walker & Brewster, 2017). As a result, it is important to understand how these factors coalesce and in what capacity. This combination of the constructs color-blindness, White privilege and implicit bias are important aspects to analyze in developing and evaluating cultural competence training. The value of cultural competence has been recognized by programs in higher education. In the past few years, cultural competence interventions have been administered for graduate students in fields such as nursing (Repo, Vahlberg, Salminen, Papadopoulos, & Leino-Kilpi, 2017), medicine (Zanetti, Dinh, Hunter, Godkin, & Ferguson, 2014), clinical psychology (Benuto, Singer, Newlands, & Casas, 2019; Patterson et al., 2018), education (Larson, Bradshaw, Rosenburg, & Day-Vines, 2017) and counseling (Perry & Tate-Manning, 2006; Soto, Smith, Griner, Domenech Rodríguez, & Bernal, 2018). Even earlier, pushes for improving cultural competence have also been seen in psychology undergraduate students (Patterson et al., 2018) and high school students (Barrett, 2018). Training at the undergraduate level may be early enough to reduce negative attitudes around different cultures (Dogra, 2001). Some studies have found its implementation helpful in improving campus climate

in university settings (Ong, Papa, Reveles, Smith, & Domenech Rodríguez, 2018; Repo et al., 2017).

Organizations and corporations are also harnessing these training, but theirs may only span one day. Starbucks used this approach after a race-related incident in-store prompted them to close all stores for a training day on diversity and inclusion (Calfas, 2018). This one-day approach can be controversial. On the one hand, approaching an important topic like cultural competence is important. However, narrowing the scope of historical and structural inequalities that exist in race, and the development of racist attitudes to a single day is certainly a challenge, and may signal that one's bias can be resolved in a day. While a day signals an important start, it is not enough to solidify long-term change within an individual or a safe environment (Applebaum, 2019). The literature suggests that one-day approaches are mostly ineffective in promoting long-term changes (Gonzalez et al., 2014).

Components of cultural competence at the student level are often taught through structured coursework often focusing on broader topics like multiculturalism or diversity (Ong et al., 2018). While longer coursework may foster safer spaces for connection and discussion, marginalized students who do not feel safe with classmates may feel further marginalized. Additionally, courses may be difficult to replicate as they vary by the quality of instruction by the professor and group interaction. The courses also necessitate consistent scheduled time, credits, and tuition for students. If they are confined to a certain department or do not meet the requirements of required coursework towards a

major or completion of college, this limits the student's opportunities to participate in this coursework. The courses also ideally require expertise of professors who can navigate difficult conversations. As a result, the length of effective cultural competence trainings spans one week (Zestcott, Blair, & Stone, 2016), multiple weeks (Devine, Forscher, Austin, & Cox, 2012), and months through structured classwork (Hannah & Carpenter-Song, 2013; Ong et al., 2018). Interventions that are medium length or longer may be more effective in finding lasting results (Fitzgerald, Martin, Berner, Hurst, 2019). Consequently, there is still room to grow in the field for effective interventions that can be easily replicable and cost and time-efficient.

One solution to the challenges of cultural competence interventions as long-term coursework could be internet-based training. Internet-based approaches also carry many benefits. Online mental health treatments have shown emerging promising results for mental health interventions, particularly for adolescents (Clarke, Kuosmanen, & Barry, 2015). In university populations, internet-based interventions have been used to effectively reduce depression and stress (Harrer et al., 2018). Additionally, internet offers the benefits of anonymity, comfort and convenience, which tend to allow for more accurate assessments of an individual, as individuals feel free to disclose more (Huff & Edwards, 2001; Misosch, 2015; Rooney, 2016), particularly as it pertains to the potentially sensitive topic of race and culture (Huff & Edwards, 2001; Keum & Miller, 2018). Internet-based interventions show some promise for reducing social desirability in managing public social impressions and likeability (Joinson,

1999; Kays, Gathercoal, & Burow, 2012), although results are mixed when compared to paper and pencil measures (Gnambs & Kaspar, 2016). In some areas of research, internet-based tools and assessments may be more effective than in-person for this very reason (Brock, Barry, Lawrence, Jaci, Jodi, & Zarling, 2015). Lastly, online interventions can be less costly in terms of money, staff or faculty, space, and time (Musiat & Tarrier, 2014; Rooney, 2016).

Internet-based trainings may have some drawbacks. Effective programming may be difficult to translate from in-person to online settings (Whitehead, 2011). Without in-person accountability, individuals may be more likely to drop from the training (Rooney, 2016; Clarke et al., 2015). Even though internet-based interventions allow the comfort of taking it from a location of choice, this variable environment may reflect higher variability in the results (Rooney, 2016). As a result, internet-based approaches may not be the right solution for every intervention.

Thus, despite its limitations, the many benefits of internet-based approaches may lead it to be ideal for cultural competence training. One internet-based intervention has already been used in the medical healthcare setting for improving cultural competence for training doctors in working with Arab American Muslim patients (Smith & Silk, 2011), with another in the university campus setting (Goldstein Hode, Behm-Morawitz, & Hays, 2018). However, an internet-based cultural competence training has yet to be performed with undergraduate students. Developing an internet-based training may help with replicability as it eliminates the need and variability of programming instructors or facilitators, and

can be accessed from any college campus. One study used in a campus setting with faculty and staff (Goldstein Hode et al., 2018), described below, shows promise for an effective online-intervention for undergraduate students.

Safe Passage for U is an in-person intervention designed to be administered at a PWI with the goal of ensuring marginalized students have the safe space necessary to navigate campus by educating White students (Ong, et al., 2018). Without a diverse student body, White students are more prone to being misinformed (Saddlemire, 1996), less aware of their privilege (Ray 2013; Schoefplin, 2009), and at higher risk of committing damage to students of color through explicit prejudice or subtler forms like microaggressions and microaffirmations (Ellis, Powell, Demetriou, Huerta-Bapat, Carmen & Panter, 2019; Harwood, Huntt, Mendenhall, & Lewis, 2012; Ray, 2013). As a result, students from underrepresented racial backgrounds report high rates of racial discrimination at PWIs (Harwood et al., 2012; Vaccaro, 2010). Thus, having an intervention to improve cultural competence specifically White students in this setting is ideal. This intervention is a one-day, four-hour course with the intention of increasing skills, knowledge, and awareness through exploring definitions and privilege related to diversity and role-playing. Cultural competence is assessed before and after the training. Additionally, the authors made all of their materials, including a trainer's manual, publicly accessible through the Open Science Framework with encouraging words to adapt their programming for other campus settings. Although this training is an in-person training, adapting it to an online

platform can reach more students, possibly reduce social desirability (Joinson, 1999), and reduce time and cost while maintaining confidentiality.

The Current Study

In the current study, we adapted the Safe Passages for U training to maximize pre-existing and accessible resources for developing an effective PWI campus-based training for cultural competence and translate it for online use. To our knowledge, this type of cultural competence training is novel to its literature base in several ways. First is the timeline. While we continue to use four total hours in our study, we space the hours across four weeks. This span is both a reach for long-term change, but in a more efficient capacity than a semester long course. Each week of the training in the current study is dedicated to one aspect of the three-part model of cultural competence, with an extra week for skill building.

This study focuses on the general cultural competence training of White undergraduate students from varied backgrounds outside of race. Students are not assumed to have foundational knowledge surrounding certain helping fields for example, or even the motivation and drive to sign up for a full course on multiculturalism. A niche focus in the field is expanded to benefit a more general population of undergraduate students.

Another original approach in the current study is the format of the study: online and with additional measures beyond quantitative self-report. This is the first targeted training of its kind, to our knowledge, that will be conducted online. Our hope is that this online intervention can easily be reused and modified at the

campus level, and replicable across campuses. In addition to examining potential changes in cultural competence as a result of the intervention, we also extended previous research by using the Implicit Association Task (IAT) to measure possible changes in implicit racial bias. Furthermore, we included several open-response questions to understand this training from a qualitative approach. We hope that this will capture multiple measures of cultural competence and bias. Implicit bias is a preference for one group over another that is outside of one's conscious attentional focus (Greenwald & Krieger, 2006). Regardless of intent, implicit bias has been shown to predict a wide range of behaviors that are not consciously registered, such as nonverbal behaviors (Dovidio et al., 1997; Dovidio et al., 2002). Research is mixed on the IAT's predictive validity as it pertains to race. Some research has found the IAT to have predictive validity in individual behavior (Greenwald, Banaji, & Nosek, 2015; Greenwald & Krieger, 2006), while other research has found it to be a poor predictor (Oswald, Mitchell, Blanton, Jaccard, & Tetlock, 2013; Oswald, Mitchell, Blanton, Jaccard, & Tetlock, 2015). Although there is mixed support for the IAT's ability to predict later biased behavior, it is a valuable tool in understanding and evaluating prejudicial attitudes when used with strong discrimination outcomes (Carlsson & Agerström, 2016). In our study, we use the IAT as a measure of implicit racial bias to understand this measure alongside more explicit and self-report measures which predict behaviors that are within conscious control, such as verbal behavior. Significant IAT score changes were even seen in a training administered by Devine and authors (2012). As a result, a training that seeks to reduce implicit bias in

addition to targeting cultural competence may be ideal to reducing prejudicial behaviors.

Implicit bias may influence individuals with color-blind attitudes differently than those with multicultural attitudes (West & Schoenthaler, 2017). Developing cultural competence strives towards multiculturalistic attitudes (Sue et al., 1992), and away from color-blind racial attitudes (Neville et al., 2006; Spanierman et al., 2008). Using the Critical Race Theory Framework, race operates on a multitude of levels ranging from individuals to macrosystems (David, 1989; Lawrence, 1987; Solorzano, 1997). However, color-blind attitudes undermine the basis that race plays an active and systemic role in society and an acknowledgement of racial discrimination (Neville et al., 2006). White individuals are often more inclined to endorse colorblindness over individuals from underrepresented racial groups (Ryan et al., 2007). As a result, colorblindness may have a critical role in how we approach cultural competence training.

In the current study, we also narrow the focus slightly more than the Safe Passages for U training. While the original training focuses on several aspects of cultural competence including race, religion, gender, and sexual orientation, the current study focuses on race alone. We did this in order to ensure that our study is measuring increases in cultural competence in one facet that is often centrally lacking on a PWI campus. This also allows us to tease apart different attitudes that a student may enter the training with, to simply examine their attitudes towards race. As a result, we hope for more attuned results in our measures as they relate to race at a PWI. Lastly, the current training, while online, takes place

in a lab setting. Although a goal of this training is for students to be able to complete it in their own spaces, we sought to test it first in a situation with experimental control to increase internal validity by reducing environmental factors that may limit the effectiveness of the intervention.

Methods

Participants

The current study recruited for White first-year students, given this is the target audience with the highest room for improvement in cultural competence (Pope & Mueller, 2005; Sheu & Lent, 2007). Students were recruited through the campus research pool for participation in psychological research as well as through flyers for paid participation. Students who self-identified their race as White or Caucasian were included for criteria. Students had the option to sign up for the four sessions or two. As a result, random assignment did not occur, however the group used as a control group was strictly used to regulate current events or time factoring into the study. White undergraduate participants were recruited at a public, competitive, PWI in the mid-Atlantic through flyering and talking to classes about participation across campus. Students were then assigned an identification number. Due to changes in protocol for COVID-19, we were unable to recruit the number of participants anticipated in the control group. As a result, we completed the study, just looking at the experimental group. Originally, we had 70 students complete the four-week training. However, 12 of the participants were given the baseline for the control rather than the experimental, which included the first part of the awareness training. As a result,

these participants were excluded. Additionally, we had 8 participants drop from the study and did not receive their follow-up data. We had an additional 3 participants who were mixed race (i.e., Asian and White, Mexican and White, and Korean and German), and another 4 participants who self-identified as White with a secondary ethnicity (i.e., Turkish-American, Middle Eastern, Jewish, or Russian). As a result, these additional 7 participants were excluded. This left us with a total of 49 students.

Students were compensated with one research participation credit or $10 for every hour of participation for a total of 4 credits of $40 for experimental condition, or 2 research credits or $20 total. Students came into a laboratory setting for this study, and were seated at a computer station with privacy panels separated from other participants by at least one seat. They were asked to leave their belongings outside of the room to prevent distraction.

Pre- and Post-Test Measures

Students completed the following measures at baseline and three weeks after baseline.

Cultural Competence. The Awareness Knowledge and Skills - General (ASK-G) scale is used to assess cultural competence in the general population (Domenech Rodríguez, Reveles, Litson, Smith & Patterson, 2018). The scale measures cultural competence on a 1 (strongly disagree) to 5 (strongly agree) Likert scale. It has 36 items including 4 subscales related to an individual's own awareness (e.g. "My culture has an impact on the way I see the world."), their awareness of others (e.g. "I refrain from using certain words and phrases that I

know may be offensive"), and finally development and use of knowledge (e.g. "I am familiar with important customs of a cultural group other than my own") and skills (e.g. "I confront racist comments in public settings made by strangers").

Color Blindness. The Color Blindness Racial Attitudes Scale (CoBRAS; Neville, Lilly, Duran, Lee, & Browne, 2000) is validated with college student populations to measure color blind racial attitudes. This includes racial attitudes that the participant may be unaware of, attitudes that are explicitly racist, and their perception of racial discrimination within their institution. CoBRAS is a 5-point Likert scale that ranges from 1 (*not at all appropriate or clear*) to 5 (*very appropriate or clear*). An example item is "White people in the U.S. have certain advantages because of the color of their skin."

White Privilege. We used two measures of White privilege: one to assess perceptions and another to assess attitudes, cognition and affect. The White Privilege Scale (Swim & Miller, 1999) is a 5-item Likert scale. Responses can range from strongly disagree to strongly agree. Additionally, we use the White Privilege Attitudes Scale (WPAS; Pinterits, Pointeman, & Spainerman, 2009) to assess attitudes surrounding White privilege. It includes example items like "I plan to work to change our unfair social structure that promotes White privilege." and "I am angry knowing I have White privilege." It includes 4 subscales: anticipated costs of White privilege (e.g., " If I were to speak up against White privilege, I would fear losing my friends."), White privilege remorse (e.g., " I feel awful about White privilege."), confrontation of White privilege (e.g., " I intend to work toward dismantling White privilege."), and awareness of White privilege

(e.g., “ Our social structure system promotes White privilege.”). There are 28 items, rated on a 6-point Likert-type response scale, ranging from 1 (strongly disagree) to 6 (strongly agree).

Implicit Association Task. The Implicit Association Test (Greenwald, McGhee, & Schwartz, 1998) has been used to assess racial bias more frequently in the literature than any other measure of implicit bias (Greenwald et al., 1998; Devine, Plant, Amodio, Harmon-Jones, & Vance, 2002; Nosek, Hawkins, & Frazier, 2011; Nosek, Greenwald, & Banaji, 2005). The task involves pressing computer keys on opposite ends of a keyboard to pair a test positive and negative associations between Black Americans or White Americans (both with words and photos) (Nosek et al., 2011; Nosek et al., 2005). Examples of positive valenced words include “glorious”, “lovely”, “pleasure”; examples of negative valenced words include “painful”, “awful”, “terrible”. Participants are first asked to associate a word with Good or Bad through keyboard presses for training. Each process lasts 10 trials for each side randomized, for a total of 20 presses per round. After associating words, photos of a cropped face of a Black or White individual is added in. Again, participants do 10 trials for each side with the left side including Black American and good, and the right side including White American and bad. The next round has the sides reversed, and the final round includes White American and good, and Black American and bad. Throughout the task they’re provided a red X on the screen if they chose the incorrect association. The IAT is judged by differences in response times amongst participants doing the same task. The concept includes the notion that

participants will show slower response times when the participant has difficulty associating a photo to a valenced word, deviating from the individual's natural association.

While the field has had methodological concerns regarding the IAT (Oswald et al., 2013), even relatively small but statistically significant findings have shown relatively large societally effects in terms of racial bias (Greenwald et al., 2015). The test continues to be predictive of a wide range of biased behaviors (McConnell & Leibold, 2001; Greenwald, Smith, Sriram, Bar-Anan, & Nosek, 2009).

Skill, Situation and Reflection. In addition to the various scales we used, we also asked participants questions to better understand their use of the training. We asked if they encountered a situation where they could have used the skills. We asked if they employed any of the skills during the two weeks, they learned skills, and if so which of the six they employed. The skills they learned from the first week of skill training included 1. active listening to make space for others' experiences, 2. asking questions to check hypotheses, 3. asking questions to understand others' experiences and develop empathy. They were asked about these at the third and fourth sessions. The skills they learned from the second week of skill-building included: 4. calling out prejudice/discrimination, 5. acknowledging mistakes after someone calls you out, 6. owning your bias (calling yourself out). These skills were taken directly from the original intervention at Utah State (Ong et al., 2018). Skill employment was created into a summary

score with a minimum possibility of -2 (explicitly chose not to use their skills when they could have) to +6 (used all 6 skills).

Interest and Follow-Up. Finally, students were asked what their interest was in receiving additional related resources after the training on a scale of 1 to 10, as well as whether they explicitly wanted us to follow-up with them (yes/no).

Intervention

Participants in the experimental group came in for four sessions total spaced approximately a week apart, ranging from 4 to 10 days after their first session. The spacing gave them a chance to absorb the information from a previous session as well as practice time for the skills component. The following components of the intervention were adapted from Safe Passage for U (Ong et al., 2018).

Awareness and Knowledge. A focus on awareness and knowledge is the first step in the intervention and begins immediately after baseline measures. Participants were presented with expectations from the original study, and how to maximize their intervention online. The original study reviewed in person, as a group, definitions of key terms pertinent to building awareness (e.g.: definitions for ethnicity, culture, intersectionality). These same definitions were transferred to a Google forms survey. Checks for understanding were added throughout to ensure the material was read and absorbed. Students were given feedback on the right answers and could elect to check their scores on their checks for understanding at the end of the session.

The original intervention had an interactive discussion around race and identity as it pertains to privilege. Given this can be at the expense of marginalized students (Mills, 2019) and subject to social desirability, the online version contained a reading of the well-known "White Privilege: Unpacking the Invisible Knapsack" (McIntosh, 1998), a reading of “Herd Invisibility: The Psychology of Racial Privilege” (Phillips & Lowery, 2018), and a YouTube clip of *“*How Stereotypes Affect Us and What We Can Do - Claude Steele” (Steele, 2015). Additionally, checks for understandings of the material as well as reflections of the material and self-identity were added at the end of each component. Video clips from PBS documentaries on race have previously been an efficacious video to show in previous interventions (Phillips & Lowery, 2018; Soble, Spanierman, & Liao, 2011). This combination of media was chosen to help reinforce knowledge (Berk, 2009; Rackaway, 2012).

Skills. The skill-building aspect of the intervention again originally involved interactive role play which can be at the harm of marginalized individuals, but also variable across different facilitators and participants. Each group is subject to different results. In its place, similar role plays from Safe Passages for U were acted out and recorded by hired actors. To develop these videos, a research assistant scripted similar scenarios that reflected typical cross-racial interactions that go wrong on campus. Second, feedback was solicited from students from underrepresented backgrounds about these scenarios. Role plays generally reflected subtle but still harmful acts of prejudice, most often micro-aggressions. Examples include interactions based on apathy from peers that someone from

underrepresented racial groups can be expected to talk on behalf of their race in class (tokenism), assumptions around language abilities for international students from underrepresented racial groups, and stereotypes based on race. Student actors were hired to represent same-sex (two women or two men) cross-racial interactions (one individual from underrepresented racial minorities on campus including Asian, Black, or Hispanic and one White individual). Scenes were memorized and filmed in typical settings (classrooms, outside, hallways) around campus.

Each role play included an introduction to the role-play, a video of an interaction going poorly between students, reflection questions, and then the same interaction going better using the designated skill. The skills sections ended with reflection questions and a prompt to incorporate the skill in their life was also added. The following week, they had an opportunity to state whether or not they used the skill and reflect on why. Given the original intervention had two skills building sessions, each an hour long, students had one skill building intervention each week during weeks two and three.

Reflection and Wrap-Up. During the final week, students reflected through a series of questions to capture their continued interest in bettering cultural competence skills, how much they feel they have learned, and their experience as a whole in the process. They also completed post-test surveys of the same measures used at baseline.

Results

Due to the coronavirus-19 (COVID-19) outbreak in March 2020, we were unable to obtain sufficient numbers for our control group. As a result, we ended in-person research collection at the closure of campus in mid-March. Of the 49 participants, four participants did not complete either the pre- or post- IAT test. The majority of students were female (n = 42), either 18 or 19 years old (n = 16, n = 23; M = 18.96, SD = .93), in their first year. Full student demographics are shown in Table 1.

Primary Analyses

Kurtosis and skewness were analyzed for each of the variables. We performed paired sample t-tests when statistical assumptions were met to compare the mean score of each measure from before the training (pre-test) to after (post-test). We performed nonparametric Wilcoxon signed rank tests when statistical assumptions were not met as listed below. See figure 1 and 2 for graphical representations of the measures of cultural competence and White privilege.

Cultural Competence

The ASK-G scale is rated across four subscales as mentioned earlier encompassing an individual's own awareness, their awareness of others, development and use of knowledge, and development and use of skills. Overall, a paired sample t-test did show a significant increase in the cultural competence scores from before (M = 3.77, SD = .44) to post-test (M = 3.89, SD = .37), the four-week training. $t(48) = 2.93$, $p < .01$. Difference scores for the self-awareness subscale showed substantial skewness and kurtosis. A Wilcoxon signed rank

nonparametric test showed a significant increase ($p < .001$) in self-awareness as measured pre-test ($M = 3.52$, $SD = .92$) and post-test ($M = 3.90$, $SD = .84$). A paired sample t-test showed a significant increase in awareness of others from pre-test ($M = 4.47$, $SD = .34$) to post-test ($M = 4.59$, $SD = .32$), $t(48) = 2.92$, $p < .01$. A paired sample t-tests did not show a significant difference in cultural competence knowledge pre-test ($M = 3.99$, $SD = .49$) and post-test ($M = 4.08$, $SD = .46$) the training, $t(48) = 1.62$, $p > .10$. There was also not a significant difference in cultural competence skills pre-test ($M = 2.66$, $SD = .81$) and post-test ($M = 2.58$, $SD = .73$), $t(48) = 0.89$, $p > .10$.

Given the newness of the scale, we also computed the scale reliability for each of the subscales. We found all to be of acceptable reliability. The subscale of awareness of self had a Cronbach's alpha of .916, based on 7 items. The awareness of others subscale had a Cronbach's alpha of .734, with 10 items. The subscale of cultural competence knowledge had a Cronbach's alpha of .807, with 12 items. Lastly the proactive skills development subscale had a Cronbach's alpha of .715, with 7 items.

Color Blindness

A paired sample t-test showed a significant decrease in color blindness in the average CoBRAS score for participants from pre-test ($M = 2.04$, $SD = 0.58$) to post-test ($M = 1.88$, $SD = .57$), $t(48) = -3.50$, $p < .01$.

White Privilege

The average score for participants on the White Privilege Scale did significantly increase from pre-test ($M = 3.55$, $SD = .54$) to post-test ($M = 3.73$, SD

= .51), t(48) = 2.76, $p < .01$. Additionally, differences on individual subscales for the White Privilege Attitudes Scale were significant. Confrontation of White privilege significantly increased from pre-test (M = 4.01, SD = .83) to post-test (M = 4.35, SD = 1.03), t(48) = 4.74, $p < .001$. Attitudes surrounding the cost of White privilege significantly increased from pre-test (M = 2.91, SD = 1.00) to post-test (M = 3.15, SD = 1.21), t(48) = 2.07, $p < .05$. Attitudes surrounding the remorse of White privilege also significantly increased from pre-test (M = 3.76, SD = 1.33) to post-test (M = 4.16, SD = 1.34), t(48) = 3.64, $p < .001$. Finally, awareness surrounding White privilege significantly increased from pre-test (M = 4.41, SD =.89) to post-test (M = 5.07, SD = .92), t(48) = 7.80, $p > .001$.

Implicit Association Task

A paired sample t-test did not determine a significant difference in implicit association difference scores pre-test (M = .48, SD = .37) and post-test (M = 0.42, SD = .31), t(44) = - 0.04, $p > .10$.

Skill Employment Interest and Follow-Up

While only measured at the end of the survey, it was important for us to also report the summary statistics for participants' interest in similar resources, desire for us to explicit follow-up as well as skills employed. On average, participants reported employing 2-3 skills. Included are figures 3 and 4 showing the histograms of interest in follow-up resources (figure 3) and cumulative skill employment (figure 4) in regards to their relative participant frequency counts. In addition, Table 2 demonstrates how many participants employed each skill specifically.

Exploratory Analysis

In addition to understanding changes before and post-test, we also wanted to understand color blindness in relation to developing cultural competence, and in relation to White privilege. Given previous literature on color-blindness, we analyzed whether participant scores in color-blindness pre-test predicted difference scores for other measures including subscales of cultural competence and white privilege.

CoBRAS and White Privilege

Using multiple linear regression, CoBRAS scores at time one (pre-test) were used to predict the subscales of White privilege attitudes including awareness, confrontation, anticipated costs, and remorse. CoBRAS at time one significantly predicted awareness of White privilege at follow-up, while controlling for White privilege awareness scores at time one, $b = -.59$, $t(48) = -2.53$, $p < .05$. Color-blindness also explained a significant proportion of variance in awareness scores, $R^2 = .68$, $F(2, 46) = 47.92$, $p < .01$. CoBRAS at time one did not significantly predict remorse of White privilege at follow-up, while controlling for White privilege remorse scores at time one, $b = -.18$, $t(48) = -.85$, $p > .05$. It did, however, predict remorse at follow-up on its own in a single regression model, $b = -1.04$, $t(48) = -3.40$, $p < .01$. Color-blindness significantly predicted confrontation of White privilege even when controlling for scores of confronting White privilege at time one, $b = -4.21$, $SE = 1.32$, $t(48) = -3.81$, $p < .01$). Color-blindness also explained a significant proportion of variance in confrontation scores, $R^2 = .81$, $F(2, 46) = 97.76$, $p < .001$. Finally, color-blindness as measured

by CoBRAS scores did not significantly predict anticipated costs of White privilege ($p > .10$).

CoBRAS and Interest & Follow-Up

Finally, given previous interest in color-blindness and openness to navigating trainings around multiculturalism, we wanted to see if it predicted our measures of interest and follow-up. Scores in color-blindness prior to training did predict higher scores in interest in related resources as measured on a 1-10 scale, in a single regression model at the end of the training, $b = -2.36$, $t(48) = -4.83$, $p < .01$. Additionally, scores in color-blindness prior to the start of training predicted participant's election to receive follow-up information from the study, as measured by yes or no. A logistic regression model demonstrated that scores in color-blindness significantly predicted participants' election to receive follow-up information, $b = -1.25$, $SE = 0.60$, $p < .05$.

Cultural Competence and Skill Employment

Subscales of skill and knowledge within cultural competence were not found to change through a four-week training. We were curious if their relationship predicted whether or not individuals used the skills they learned during the training, given these subscale items may reflect outcomes that find higher likelihood in a longer time period than four weeks (e.g., "I have attended ceremonies/celebrations (e.g., holiday celebrations, weddings, funerals, birthdays) from cultures different than my own" for knowledge, and "I engage in advocacy work that advances the wellbeing of marginalized populations (e.g., homeless people, low income children)" as an example for skills). A multiple

linear regression demonstrated that the subscale of skill for cultural competence predicted the employment of learned skills with marginal significance, b = .79, SE = 0.31, t(48) = 2.52, p = .05, but there was not a significant prediction by knowledge of cultural competence on skill employment, p > .10. We also analyzed whether the top quartile or bottom quartile of participant scores for the average across cultural competence would predict whether or not they employed any of their skills learned. This was done by grouping those above the Q3 benchmark (score = 4.08), those between Q3 and Q1, and those below the Q1 benchmark (score = 3.47). A linear regression demonstrated that whether individuals started at below or above a level of average cultural competence than the majority of their peers did not significantly predict whether or not they employed their skills, b = .06, SE = .29, p > .10.

Cultural Competence and CoBRAS

Knowing that color-blindness plays such a large role in this study, we wanted to see if it moderated the relationship between skills sub scores for cultural competence and to what extent students used their skills. Multiple regression was used to assess the interaction between color-blindness scores as measured on CoBRAS and cultural competence skill scores, both from time 1 in predicting how many skills students employed. In this model, neither color-blindness nor its interaction with cultural competence skills significantly predicted employment of skills beyond the skills subscale of cultural competence, p's >.10.

Discussion

Previous research suggested need for cultural competence training for White undergraduates at a predominantly White university that incorporated previous evidence-based tactics, and adapted them for an online medium-length (four-week format). We adapted and implemented an intervention and mixed support for its ability to change cultural competence, awareness of White privilege, color-blindness, and racial bias. First, in these types of training that often try to reduce xenophobic or racist attitudes, sometimes interventions unintentionally increase the effects rather than decrease (Fitzgerald et al., 2019). It's important to note that our study did not find increases in xenophobic or racist attitudes or behaviors. Furthermore, it found that participants who successfully navigated all four weeks saw improvements in our measures of cultural competence, particularly as it pertains to awareness of self and others, and decreases in our measure of color-blindness. Additionally, participants ended the study with higher self-report recognition of White privilege, both in general and across various attitudes including: awareness, remorse, and confrontation. On the other hand, our study also found significant increases in the anticipated costs in confronting White privilege. While we did see a small decrease in difference scores between before and after training for implicit bias, this difference was not significant.

After assessing these general changes, it was important to better understand our data in predictive models as well. We found that color-blindness at time one predicted a wide range of outcomes including White privilege awareness and confrontation of White privilege, even when controlling for time

one scores. It did not predict White privilege remorse above and beyond time one, and it did not predict anticipated costs of White privilege at all. Color-blindness scores also predicted significant interest in receiving similar resources in the future, as well as yes/no follow-up answers. Finally, given scores in cultural competence for skills and knowledge were not significant, we were curious if they still had predictive power in whether or not individuals employed their skills throughout the training. We found that the skills subscale of cultural competence did predict skill employment; however, knowledge did not. Color-blindness also did not have a moderating effect between cultural competence skills and skill employment.

These findings demonstrate that the intervention was effective in this sample in improving cultural competence, awareness and attitudes surrounding White privilege, as well as in reducing color-blindness. Given that increases were shown in White privilege across all subscales including anticipated costs and remorse may be a result of an internal conflict with their new awareness particularly when viewing this alongside increases in confronting White privilege and decreases in color-blindness. This is in line with previous literature in participants reacting differently to White privilege following an intervention (Langrehr & Blackmon, 2016; Miserocchi, 2017; Pinterist et al., 2009; Todd et al., 2010), but promising in their potential perseverance to dismantle White privilege.

Additionally, this study allows us to better understand color-blindness in relation to White privilege. Color-blindness at time one better predicted White privilege scores in predicting how participants receive and react to White

privilege in awareness and confrontation than participants' scores on these subscales prior to the training. However, for remorse and anticipated costs of White privilege, it did not play a heavy role. This may be due to the small sample size of our study, or require a need for sussing out those emotional and affective reactions that individuals may have better.

Color-blindness also predicted interest and follow-up supporting previous literature that individuals lower in color-blindness may be more open to trainings around cultural competence or multiculturalism in attempting to resolve negative racial attitudes (Correll, Park, & Smith, 2008). Our study suggests that individuals higher in skills for cultural competence at time one (potentially measured by longer-term engagement) employ more of the skills learned in the trainings regardless of their scores in color-blindness. This finding suggests that with practice the engagement of cultural competence, even participants who approach racial equality from a color-blind perspective may be more likely to engage in skills that promote allyship between White students and students from other racial backgrounds.

Strengths

This study has many strengths that contribute to its stronghold in the cultural competence training literature. First, it is incredibly unique in its development and structure. While built off of a pre-existing intervention as the foundation (Ong et al., 2018), it was uniquely shaped in an iterative process by racially diverse undergraduate students. In its inception, students from underrepresented racial and immigrant backgrounds contributed to the feedback

of the scenario development, including the scripting, acting, and pilot testing within role play development specifically. Students contributed thoughtful feedback to ensure scenarios came to life in the halls and buildings they frequent, with students they interact with, in common scenes that other students could imagine unfolding. Pilot testing allowed for an agile process of adjusting the training as needed to best accommodate the ease, attention span, and the variety of training approaches within our training. This was particularly important given this study was adapted for online use to limit in-person interaction.

A second major strength of the study was the use of evidence-based practices and validated scales including CoBRAS, IAT, WPS, and WPAS. While the ASK-G scale for cultural competence is fairly new, this study will help further validate its use with non-specialized populations, given the high internal reliability for the subscales. Additionally, the study's structure is founded on the evidence-supported original allyship training at Utah State, and uses a multi-faceted approach including materials like video and articles, which have been previously shown to be effective in helping inform multicultural attitudes (Fitzgerald et al., 2019; Todd et al., 2010). Adapting this for online use with significant results speaks to the strength of the training.

A final major strength of the study is the participant retention, speaking to the engagement of the study. For the experimental training group, we had an 88.5% retention rate, meaning 62 of our 70 participants completed the four-week training, in person in a lab environment. This speaks to the training's strengths particularly despite complications and concerns with coronavirus in spring 2020.

Limitations

While not within our control, the study did overlap with the ongoing events of the coronavirus outbreak in the United States. This is an important limitation in how the virus was being addressed in our country with reports of xenophobia and blame on other countries (Aguilera, 2020; Wen, Aston, Liu, & Xing, 2020). This event likely affects the manner in which participants reacted to their training or reported on various items. A second aspect of this limitation, is that the majority of scales used are self-report, and may be more prone to the effects of the outbreak and/or social desirability. Despite this limitation, we also incorporated two measures that we hope are less prone to participant opinion, including skills employed and an implicit bias task. While implicit bias difference scores between pre and post training were not significant, many students did employ the various skills used. We also asked participants if they wanted to receive follow-up as a measure of their continued commitment.

Another limitation of the study is its generalizability. Students from this university come from strong academic and personal backgrounds, with the majority having graduated from high school in the top 10% of their school (Undergraduate Admission: William & Mary, 2020). The university also prides itself in exposing students to the world outside of William & Mary with over 60% of students electing to study abroad (Reeves Center: William & Mary, 2020). While the majority of our student sample were in their first year and unlikely to have this sort of exposure as a school experience, overall, this may have aided our study in students being more receptive to the type of cultural competence

training we offered. As a result, this study which may work well at this campus may not work equally well at other predominantly White universities.

Implications & Future Directions

This study is an excellent contribution to growing efforts towards in moving beyond efforts to increase racial diversity, but also focusing on the necessary components of inclusion and belonging (Espinosa, Turk, Taylor, & Chessman, 2019). White individuals may be more likely to measurably benefit from cultural competence training in terms of changing negative racial attitudes (Chao et al., 2011), particularly for individuals with color-blind attitudes (Ryan et al., 2007); training at the undergraduate level may be particularly critical (Dogra, 2001). Students from underrepresented racial groups experience more racial discrimination at predominantly white institutions (Harwood, 2012; Vaccaro, 2010). Without a diverse student body, White students at predominantly White universities may be more prone to misinformation (Saddlemire, 1996) and a lack of awareness surrounding their privilege (Ray 2013; Schoefplin, 2009). As a result, students from underrepresented racial groups experience more prejudice, tokenism, and discrimination based on race (Ellis et al., 2019; Harwood et al., 2012; Ray, 2013; Stevens, Liu, & Chen, 2018; Vaccaro, 2010). Students from underrepresented racial groups report feeling less positive about the college experience, particularly at predominantly White universities (Johnson et al., 2007; Johnson, 2012). By equipping White students in particular with a strong cultural competence training with recognizing a range of explicit to subtler forms of

prejudice, students and universities can take a step forward towards bettering inclusion efforts.

Being able to decrease color-blindness in a sample has strong implications for how students navigate moving forward. Individuals with colorblind mentality are less likely to resolve negative racial attitudes, however those strong in cultural competence are more likely (Correll et al., 2008). Color-blindness has been seen to have negative effects on students from underrepresented racial backgrounds in interactions with teachers, potentially extending to negative effects on cognitive development (Atwater, 2008). Racial stereotypes exist both consciously and subconsciously (Banaji & Greenwald, 1994). Thus, bringing awareness to students around aspects of their own identity, including White privilege, color-blind attitudes, and interactions or situations where they can personally improve or employ an anti-racist skillset is likely to confront the student with mixed feelings. Pinterits and colleagues (2009) argue that being upset may be a first step towards confronting privilege and working towards an anti-racist identity (see also Kernahan & Davis, 2007; Spanierman et al., 2008). However, they also argue that these feelings may lead someone to dive further into denial surrounding structuralized racism (Pinterits et al., 2009), having the opposite effect. This could be the case for individuals higher in color-blindness, so understanding motivation in navigating the training and next steps for students is key (Gusuhe et al., 2017). Helping students understand how color-blind attitudes denote a system of racism, even beyond themselves as individuals may help guide that motivation in a grounding of how racial ideology is both fluid with

political and cultural climates and important to both individuals and groups, but anchored to a pulling structural system of racism that upholds White advantage (Doane, 2017).

While attempted, we were not successfully able to capture a control group to compare our training condition to no condition at all. Part of this was due to developing participant protocol and control that also led us to lose several participants in the experimental group. Stringent review and on-going monitoring of data collection and set-up will be crucial in future studies for participant retention. Likewise, in addition to having an in-person control group, a third comparison group that will be useful in examining is the online training outside of the laboratory setting (at home, in the dorms, etc.). Ideally these groups would inform a training that functions equally well in multiple environments for more externally generalizable results. Having a large sample size will be crucial to understanding effects of implicit bias as well, particularly in how they interact with color-blindness. Individuals high in color-blindness may have higher implicit bias as well (Richeson & Nussbaum, 2004), which may be true even for individuals high in cultural competence (Correll et al., 2008). Having a larger sample size, will allow us to dive deeper into the effects that implicit bias may play in a training like ours.

Additionally, given shorter interventions may not be effective for cultural competence training (Gonzalez, Kim, & Marantz, 2014), we strove for a medium length training duration. It may be beneficial to measure longer lasting results a month after participants complete the study to examine the persistence of these

effects. We hope to support the growing group of literature that demonstrates support for medium length studies (Stone, Moskowitz, & Zestcott, 2015). The study also focused on cultural competence specifically surrounding race; however, we recognize cultural competence spans much further than merely skin color. While we wanted to localize this one aspect of cultural competence that might be specifically affected at a predominantly White university, other aspects of identity, culture, and intersectionality are strong research avenues to approach. Additionally, adding measures that seek to capture the various experiences that participants had prior to the training may be enlightening in the study's results.

Finally, a qualitative perspective could benefit this type of study, both in how participants navigate the training and in monitoring experiences in longer effects and skill implementation. Additionally, it could give a unique and needed perspective in the possible inner-conflict that students navigate as they come to terms with their awareness surrounding White privilege. It may also help us better capture why students chose to use their skills when they did, or chose not to, and give critical feedback on improving various aspects of the study.

Conclusions

This study brings a key and novel perspective to the literature through several aspects. First, it is the first cultural training that we know of to be empirically tested, which is both conducted completely online while being measured in a controlled research environment, Second, it focuses on the general cultural competence of undergraduate students; many previous

investigations have looked at students with specialized backgrounds in the helping fields at the graduate or post-graduate level (Benuto et al., 2019; Larson, Bradshaw, Rosenburg, & Day-Vines, 2017; Patterson et al., 2018; Perry & Tate-Manning, 2006; Repo et al., 2017; Soto, Smith, Griner, Domenech Rodríguez, & Bernal, 2018; Zanetti et al., 2014), and even in undergraduate students who are Psychology majors (Patterson et al., 2018). Third, this study uses a wide variety of self-report measures ranging from color-blindness to general cultural competence to White privilege in addition to measured outcomes like skills employed as well as implicit bias scores in order to understand the relational threads between these concepts. Given implementation of cultural competence training may help to improve campus climate in university settings (Ong et al., 2018; Repo et al., 2017), particularly at predominantly White universities, we are encouraged at the efficacy of our intervention to inform cultural competence training at the undergraduate level.

Tables

Table 1

Participant Demographics

Characteristics	n	%
Sex		
Female	42	85.7
Male	7	14.3
Race		
White	49	100.0
Age		
18	16	32.7
19	23	46.9
20	5	10.2
21	3	6.1
22	1	2.0
Missing	1	2.0
Year in School		
First	30	61.2
Second	11	22.4
Third	6	12.2
Fourth	2	4.1

Note. Data was self-identified.

Table 2

Skills Employed

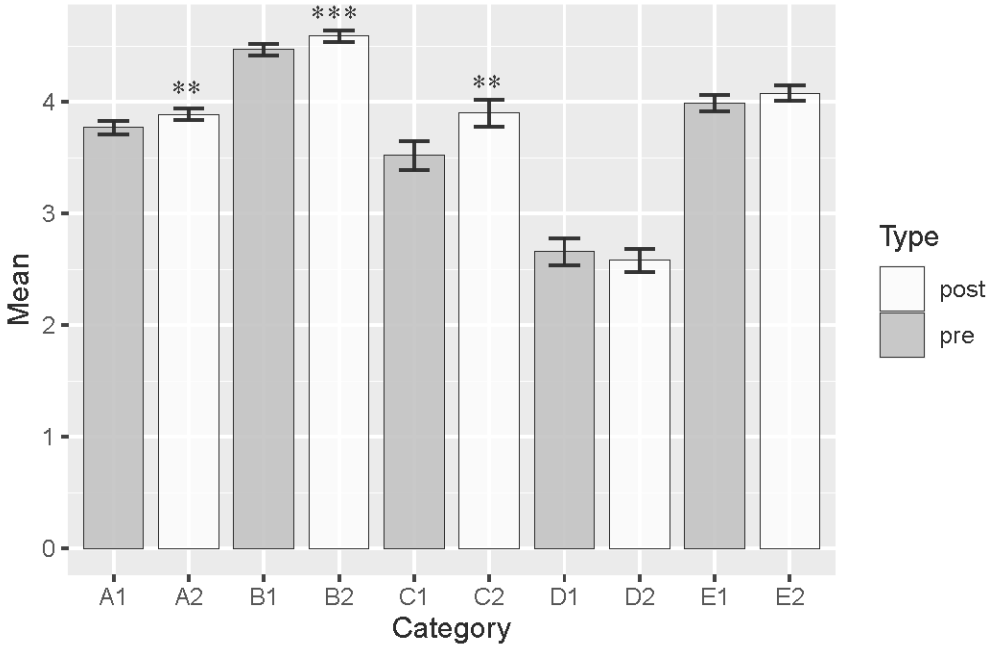
	Skill Employed					
	1.	**2.**	**3.**	**4.**	**5.**	**6.**
Yes	27	13	27	13	44	30
No	22	36	22	36	5	19
Percent	55.1%	26.5%	55.1	26.5%	89.8%	61.2%

Note. Skills include: 1. active listening to make space for others' experiences, 2. asking questions to check hypotheses, 3. asking questions to understand others' experiences and develop empathy. They were asked about these at the third and fourth sessions. The skills they learned from the second week of skill-building included: 4. calling out prejudice/discrimination, 5. acknowledging mistakes after someone calls you out, 6. owning your bias (calling yourself out). These skills were taken directly from the original intervention at Utah State (Ong et al., 2018).

Figures

Figure 1

Cultural Competence Pre- & Post-Test Comparisons

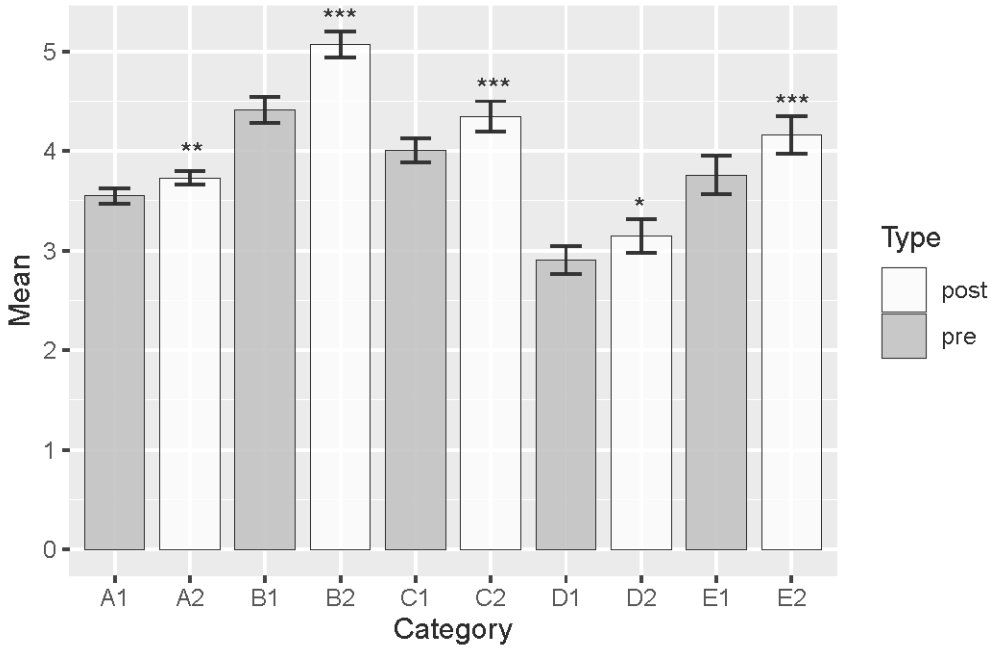


Note. A1 & A2 represent overall ASK-G scores. B2 & B2 represent Awareness of Others subscale of ASK-G. C1 & C2 represent Awareness of Self subscale of ASK-G. D1 & D2 represent Proactive Skills Development subscale of ASK-G. E1 & E2 represent Knowledge subscale of ASK-G.

*p < .05. **p < .01. ***p < .001

Figure 2

White Privilege Pre- & Post-Test Comparisons

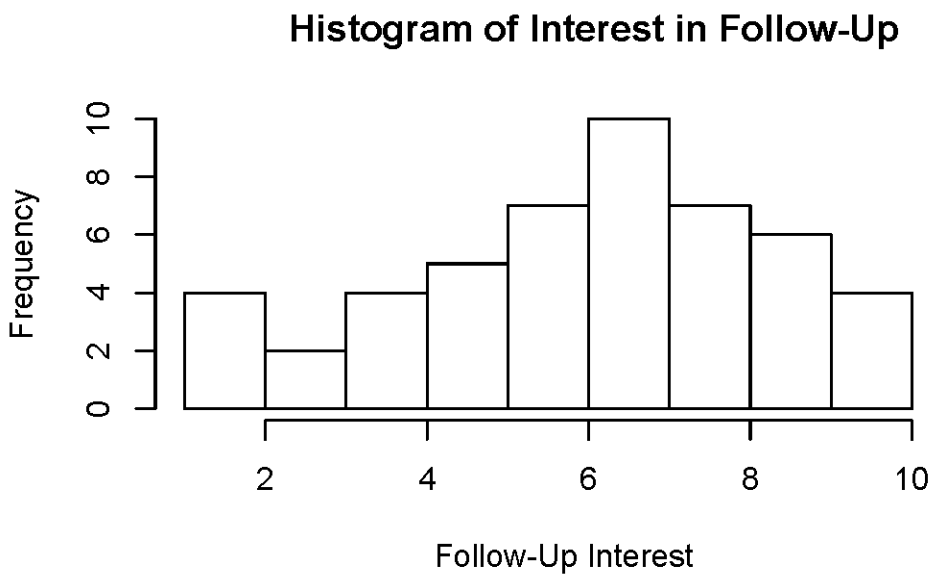


Note. A1 & A2 represent WPS overall scores. B1 & B2 represent Awareness of White Privilege subscale of WPAS. C1 & C2 represent Confrontation of White Privilege subscale of WPAS. D1 & D2 represent Anticipated Costs of White Privilege subscale of WPAS. E1 & E2 represent White Privilege Remorse subscale of WPAS.

*p < .05. **p < .01. ***p < .001

Figure 3

Interest in Follow-Up Resources



Note. Participants were asked how interested they would be in receiving follow up resources related to the training on a scale of 0-10 during the final week of training. Frequency represents participant count.

Figure 4

Number of Participants who Employed Cumulative Skills

Note. Participants who were not interested or scared to employ skills were rated as -1. Each number represents a cumulative employment of skills.

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