A Culturally Responsive Training Program for Behavior Analysts

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The present study describes the implementation of an intervention that sought to increase cultural responsiveness of graduate students in behavior analysis. A literature review of graduate psychology programs and behavior analytic and social justice research as well as incorporation of the multicultural and social reconstructionist theoretical framework supported the intervention curriculum and content. To increase the cultural responsiveness of participants, a combination of didactic instruction, group discussions, and reflective writing exercises was implemented in a small group format. Pre- and post-assessments included two self-report rating scales and one written case study response. During the intervention, three reflective writing responses were collected. This mixed-methods analysis allowed for the ability to assess participant growth. Participants were six graduate students in an applied behavior analysis course sequence. Participants showed growth in rating scale scores and qualitative assessment on the pre- and post-assessment measurements. Reflective writing responses showed consideration of positionality and conceptions of culture, as well as how the desire to expand their professional conception of culture was impacted by participating in the intervention. Implications for practice and future research are described.

Key words: cultural responsiveness, behavior analysis, graduate training

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Preface

First and foremost, I would like to thank my dissertation committee for all their time and attention over the past several years—and in particular my advisor, Dr. Rachel E. Robertson. Rachel, your unwavering support for whatever I needed, your kindness, and your relaxed demeanor were necessary to get me through this program. Dr. Doug E. Kostewicz, thank you for recruiting me into this program, always making yourself available to answer questions, and supporting me. The both of you are a credit to our field and have taught me so much; I will be forever grateful. Dr. Katrina Bartow Jacobs, I was so thankful you were willing to be on my committee. Your focus on reforming teacher education is an inspiration and a guide for those of us lucky enough to learn from you. Lastly, Dr. Jessica Spradley, I am so appreciative that you shared with me your time and expertise. You have been an invaluable resource. I hope this work is a credit to your guidance.

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1.0 Introduction

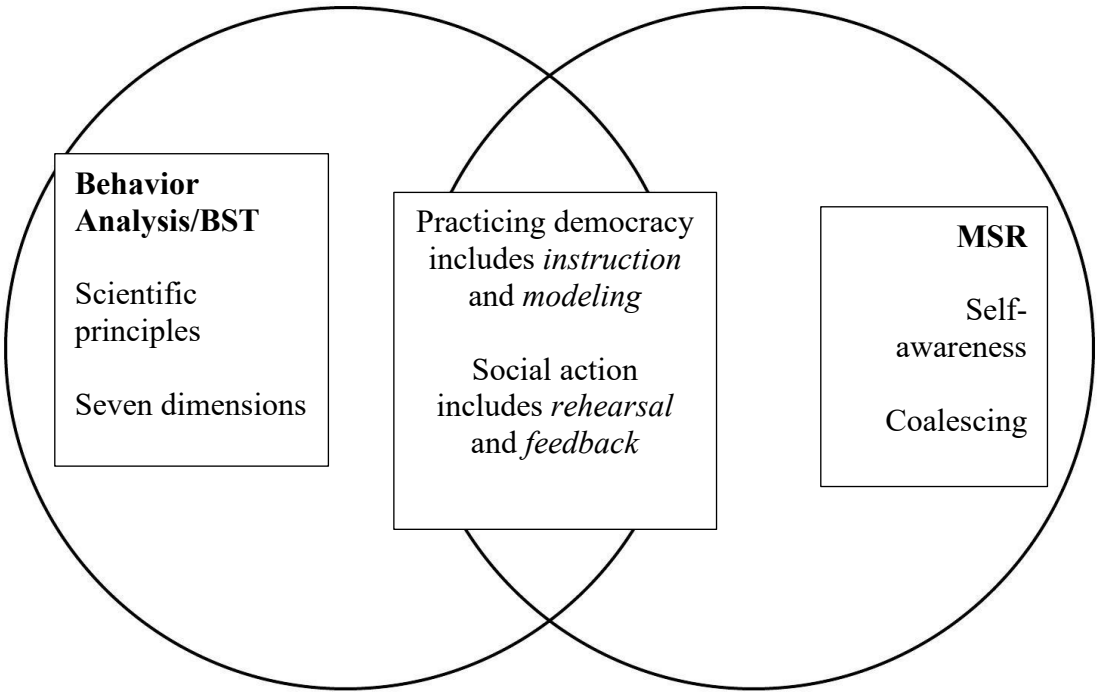
1.1 A Culturally Responsive Training Program for Behavior Analysts

Recent events have led many to reconsider and reassess aspects of life and culture in the United States that they have never considered previously. Professional behavior analysts are part of this reckoning (Trautman, 2021). Concurrent to this emerging awareness of systemic inequities is that current population demographics of the United States are increasingly diverse (U.S. Census Bureau, 2020). Since most behavior analysis practitioners primarily identify as white and female (Miller et al., 2019), there is an inherent and potentially problematic cultural mismatch between many service providers and their clientele. Recent surveys of current Board Certified Behavior Analysts (BCBAs) found that most BCBAs work with individuals from differing backgrounds and feel competent in doing so (see Beaulieu et al., 2018; Fong et al., 2015). Interestingly, most of these same respondents also report they have between zero and five hours of training in how to provide culturally responsive service (Beaulieu et al., 2018; Fong et al., 2015). Another recent survey found that more than 30% of caregivers believed their behavior analysis provider did not show respect for their culture (Taylor et al., 2018). Due to minimal reporting on demographics of behavior analysis professionals or clients, inconsistent training on cultural responsiveness, and lack of research on outcomes of diverse clientele, the ability of behavior analysts to provide effective service to historically marginalized groups is uncertain (Miller et al., 2019).

Foundational works in behavior analysis provided insight into how culture develops (e.g., Skinner, 1953, 1984) and how the science of behavior can facilitate socially significant social justice aims (Baer et al., 1968; Wolf, 1978). However, the ensuing years saw a narrowing focus,

which has led us to our current disconnect between training, practitioners, and clients (Miller et al., 2019). Gaps in behavior analytic literature on culturally responsive training and services will need to be addressed through integration of theories from other disciplines. While deconstructing and rebuilding training in behavior analysis may be a new concept, this is work that has been going on in other fields for many years (see Bezrukova et al., 2016; Jernigan et al., 2016; Oikarainen et al., 2019).

Multicultural and social reconstructionist (MSR) theory (Sleeter & Grant, 1999) aims to disrupt and rebuild education as a social system. Behavior analysis education and practice is historically centered in hegemonic, westernized approaches (Brodhead, 2019). This overreliance on white, Eurocentric values lacks a strong understanding of individual client culture and thus decreases social validity of treatment for clients (Rodriguez & Williams, 2021). As social validity is an essential component of behavior analysis (Wolf, 1978), this disconnect is problematic. MSR theory directly addresses "oppression and social structural inequality based on race, social class, gender, and disability . . . [by preparing] future citizens to reconstruct society so it better serves the interests of all groups of people" (Sleeter & Grant, 1999, p. 189). Incorporating such an approach can guide the advancement of behavior analysis into becoming a more inclusive and effective science. MSR practices can be implemented using a common training procedure in behavior analysis called behavioral skills training (BST), which consists of four steps: instruction, modeling, rehearsal, and feedback (Miltenberger, 2008). BST has been used effectively to train human service staff and caregivers how to implement multiple behavioral techniques (Erath et al., 2020; Kirkpatrick et al., 2019). See Figure 1.



Note. BST represents behavioral skills training, and MSR represents multicultural and social reconstructionist theory.

Figure 1 Graphic Representation of BST and MSR

Education and educational training that is MSR also has four recommended practices, along with additional components considered basic practice in culturally responsive teaching. The first step in using the MSR framework is practicing democracy. Practicing democracy entails teaching students about democracy, incorporating its practices into educational settings in order to foster critical thinking, and empowering learners (Sleeter & Grant, 1999). In behavioral analysis, practicing democracy can be done using the first two steps of BST, instruction and modeling. BST starts with direct instruction about a topic, followed by the trainer or teacher modeling the skill. MSR is asking educators to teach students about democracy and engage in critical thought about its practices. Critical thinking aligns with one of the most basic tenets of behavioral science, philosophic doubt, which requires us to question what is regarded as fact. Skinner (1979) said,

"Regard no practice as immutable. Change and be ready to change again" (p. 346). Behavior analysis is built, as all sciences are, on an ongoing cycle of experimentation and replication. We must teach about behavior analysis and encourage ongoing critique of it simultaneously.

The second practice of MSR is analyzing circumstances of one's life through self-reflection of your own culture and identities, and determining how these fit into our broader community (Sleeter & Grant, 1999). Providing opportunities for self-reflection is essential to develop culturally responsive professional skills in any field (Jernigan et al., 2016; Najdowski et al., 2021; Oikarainen et al., 2019). BST does not have a component of self-reflection included in application or research at this time. While not universally practiced, understanding your own culture helps you recognize how different settings may evoke culturally different behavioral responses from clients (Tagg, 2021). Behavior analysis needs more progress in recognizing and reporting positionality (Miller et al., 2019; Najdowski et al., 2021).

The third practice of MSR works to develop social action skills by linking the first two components (Sleeter & Grant, 1999). Incorporating MSR theory requires us to bring critical thought into action and understanding of day-to-day inequities facing students. BST steps three and four, rehearsal and feedback, fit into this component of MSR. Integrating BST principles requires learners to use their new skills and receive feedback on those skills. Integrating MSR theory asks students to take their newfound understanding of themselves and democracy and work to change the world. In MSR theory, there is an understanding that schools and educational systems exist with larger societal systems. These systems have consistently and disproportionately used exclusionary disciplinary practices on historically minoritized students (Skiba et al., 2014). Because a primary dimension of behavior analysis is to be an applied science committed to improving the lives of individuals (Baer et al., 1968), behaviorists are in a position to disrupt this

trend as well. If behavior analysts are taught culturally responsive approaches, they increase the likelihood of benefiting their clients. For example, behavior analysts are often asked to intervene with a client whose behavior is interfering with classroom participation. If the behavior analyst intentionally considers the culture and lived experiences of that individual and how it might be impacting their behavior, an intervention is likely to be more successful (Tagg, 2021). Inclusion of culturally responsive assessment and interventions can have a direct impact on whether students are placed in more restrictive settings or excluded from school, which is one way to implement the MSR component of being socially actionable.

The fourth practice of MSR consists of uniting various historically marginalized groups to work together to eliminate oppression and seek social justice for everyone (Sleeter & Grant, 1999). Coalescing of all nondominant groups is a recognition that people often identify as members of more than one group and that merging can increase the impact of their social justice activities (Sleeter & Grant, 1999). Unfortunately, behavior analysis has not focused on social justice concerns until more recently (Weiss, 2021), and there is no direct BST connection to this step. The very premise of behavior analysis is to work to improve the lives of individuals in socially significant ways. If behavior analysts ignore the myriad environmental and contextual factors that contribute to a client's learning history, they are not able to develop socially valid interventions. To maintain adherence to scientific principles of the field and contribute to societal well-being, social justice must be a focus in behavior analysis (Skinner, 1987; Weiss, 2021).

MSR theory also consists of additional components considered part of culturally responsive teaching. The components are to celebrate diversity in classrooms using multicultural instruction and materials, encourage students to work for social justice, work to develop cooperation among students, and teach students at their own level (Sleeter & Grant, 1999). These practices are

congruent with behavior analytic science, although they are not always implemented (Weiss, 2021). Behavior analysts work with clients at an individual level, and programming is based on what is likely to be successful for that individual. In addition, behavior analysts work toward teaching proactive social skills, such as cooperation, among students. As stated earlier, incorporating diverse instructional materials as well as encouraging social justice activities is not well documented in behavior analysis research (Tagg, 2021; Weiss, 2021).

The terms *multiculturalism*, *diversity*, *cultural competence*, *cultural humility*, and *cultural responsiveness* are often used interchangeably in the scholarly literature in reference to training. Multiculturalism is typically defined as interactions between various cultural groups in the United States, such as Latinx, African American, Asian American, Indigenous, and white (Arredondo et al., 1996). Diversity training includes race, ethnicity, sexual identity, gender identity, language, social class, age, religion, and social class (Daniel et al., 2004). Cultural competence refers to specific practices of practitioner awareness, knowledge, and skills (Johnson & Williams, 2015; Sue et al., 1992). Cultural humility as an approach has recently gained more prominence since it starts with an acknowledgment that ongoing learning needs to occur (Hook & Watkins, 2015). Throughout this dissertation, I will use the term *culturally responsive*. Cultural responsiveness is defined as "engaging all learners by incorporating cultural interests and preferences into the curriculum; creating a safe, inclusive, and respectful learning environment; implementing teaching practices derived from principles that cross disciplines and cultures; and promoting justice and equity in society" (Miller et al., 2019, p. 19). Culturally responsiveness, as used here, encompasses what is also referred to as cultural competence, multiculturalism, and cultural humility.

The past few years have shown an uptick of published research that explicitly examines the role that behavior analysts have to play in both how they serve clients in culturally responsive

and respectful ways and how they are trained (e.g., Baires & Koch, 2020; Matsuda et al., 2020; Najdowski et al., 2021; Wang et al., 2019). Ironic to this seemingly newfound discussion is that Skinner discussed culture and cultural contingencies from a behavioral perspective well over 50 years ago (Brodhead, 2019). In addition, many behavior analysts have been working to push the field toward a broader approach to serving clients in culturally responsive ways. Since the 1990s, scholars such as Sigrid Glenn and Mark Mattaini have put forth both theoretical and experimental work (e.g., Glenn, 1988; Mattaini, 1996). These researchers have been joined more recently by Nasiah Cirincione-Ulezi, Elizabeth Fong, Adel Najdowski, and others (see Cirincione-Ulezi, 2020; Fong et al., 2017; Najdowski et al., 2021).

While these are positive changes, there remains minimal research for how to train future behavior analysts in using culturally responsive approaches. Professionals in behavior analysis have recommended more rigorous methodology to develop and assess culturally responsive and respectful training (Fong et al., 2016; Fong & Tanaka, 2013; Miller et al., 2019). Guidelines were published nearly 10 years ago to encourage the development of culturally responsive behavior analysts, but they have not yet been universally incorporated (Fong & Tanaka, 2013). This lack of incorporation is unsurprising, as behavior analytic research literature often fails to report even demographics of study participants or positionality of researchers (Beaulieu et al., 2018; Denison et al., 2019; Li et al., 2017).

The primary goal of this research project is to increase future BCBAs' understanding of how to imbue culturally responsive pedagogies into their daily behavior analytic practices. This project will pull from existing work in psychology training programs and MSR theory. Behavior analysis is a subfield of psychology, and while there is very little information available about what constitutes culturally responsive training for behavior analysts (Conners et al., 2019), there is

ample research in psychology (Benuto et al., 2018; Bezrukova et al., 2016). Graduate psychology programs have a developed research base that shows, through outcome analysis, that specific training activities may increase awareness of implicit bias, improve individual understanding of systemic inequities, and improve individual skills in working with diverse clients (Benuto et al., 2018; Bezrukova et al., 2016, Sleeter & Grant, 1999). Specific research questions of this research project include the following:

1. What is the effect of a culturally responsive behavior analysis training program on
    a. Participants' cultural awareness?
    b. Participants' reflections on culturally responsive behavior analysis practice?
2. Do participants find the program to be socially valid?

2.0 Literature Review

2.1 Training in Cultural Responsiveness for Psychologists: A Review of Outcome Literature

To develop a curriculum to train behavior analysts in cultural responsiveness, it is necessary to use a research base within the broader field of psychology. There is a dearth of literature on cultural responsiveness, diversity, and antiracist approaches specifically geared toward behavior analytic training (Matsuda et al., 2020; Najdowski et al., 2021). Therefore, we need to broaden the narrow view of most behavior analytic training and incorporate research-based practices from scholars well versed in multiculturalism and cultural responsiveness (Miller et al., 2019).

Fortunately, almost 40 years ago, psychologists began advocating for culturally competent training (Sue et al., 1982). In response, in 2002, the American Psychological Association (APA) instituted a policy for their members titled *Guidelines on Multicultural Education, Training, Research, Practice, and Organizational Change for Psychologists*. Six guidelines were developed to direct psychologists to engage in addressing identified weaknesses in cultural diversity in psychological services. Many of these guidelines were based on the 11 characteristics of culturally skilled counseling psychologists developed by Sue et al. (1982). APA (2002) guideline #3 states, "As educators, psychologists are encouraged to employ the constructs of multiculturalism and diversity in psychological education" (p. 31); this is the basis for this literature review. These recommendations challenge psychology educators to provide a safe space to engage in multicultural training for students, to have a strong understanding of content, and to demonstrate

an ability to navigate the emotions of graduate students. These guidelines were updated in 2017 and are now titled *Multicultural Guidelines: An Ecological Approach to Context, Identity, and Intersectionality*. This 2017 update expands the meaning of *multicultural* to include all types of diversity, and not solely race/ethnicity as in 2002.

Despite an imperative put forth by both the 2002 and 2017 guidelines, there is still no full understanding of what constitutes multicultural or culturally responsive training, of how best to measure learning, or what successful outcomes look like. Some recommendations from research are broad and systemic, while others are more concrete and individualized. Some broad suggestions include a need to identify skills that constitute cultural competency (Sue et al., 1982; Tao et al., 2015). Another suggestion is for graduate programs to provide direct instruction and diverse experiences in training programs to develop cultural competency (Sue et al., 1982). Bernal et al. (2009) called on researchers to identify specific steps used to culturally adapt interventions and materials and to have a clear accounting of participant demographics. Similarly, investigation of practitioners' cultural competency using longitudinal studies has also been recommended (Tao et al., 2015). Individualized skill recommendations vary across research studies as well. Suggestions from Stuart (2004) include collecting clients' culturally relevant data and contextualizing any assessment tools used. Arredondo et al. (1996) provide specific guidance to practitioners to recognize potential impacts on their clients based on existing social hierarchies, to work to be actively antiracist, and to seek out further training to achieve these skills. Lastly, a set of multicultural competency recommendations from Daniel et al. (2004) includes directives to recognize that safety and support of clients is paramount; client identities are not static; and all aspects of client identities must be considered when developing therapeutic programs.

For almost 20 years, psychology has worked to implement culturally competent training, based on universal guidelines and APA-required multicultural competence trainings (Benuto et al., 2018). The purpose of this literature review is to analyze existing literature on outcomes of cultural competence training from psychology. Increased attention to and publications on cultural responsiveness in psychology graduate programs in recent years provide an opportunity to build a supportive framework for a culturally responsive training program in behavior analysis.

Research questions for this literature review are as follows:

1. What interventions are used to train psychology graduate students in cultural competence?
2. What measurement tools are used to assess the effectiveness of trainings in cultural competence for psychology graduate students?
3. What are outcomes of trainings in cultural competence on psychology graduate students?

2.2 Methods

To complete a systematic literature review, first, a search of the PsycInfo and PsycArticles databases as well as Google Scholar was conducted. Keywords for the literature search included various and relevant combinations of the following: (cultural competence training) OR (cultural humility training) OR (multiculturalism training) OR (social justice training) AND (psychology) AND (outcomes). An initial database search took place in February 2021. Second, ancestral searches of article reference sections and a review of two recent literature reviews and one meta-analysis identified additional potential articles. Third, hand searches of *Training and Education in Professional Psychology* and *Journal of Multicultural Counseling and Development* were also

conducted. One subsequent database search took place in April 2021 to identify any published articles missing from the initial search. No additional articles meeting the inclusion criteria were found with this final search.

2.2.1 Inclusion Criteria

1. Articles were published in a peer-reviewed journal. Studies not published in peer-reviewed journals, such as dissertations, were not included.
2. Articles included empirical assessment of outcomes of social justice, cultural humility, multiculturalism, cultural responsiveness, or cultural competence training.
3. Articles focused on outcomes of training in graduate psychology programs.
4. Articles included quantitative and/or qualitative analysis of training outcomes.
5. Studies were conducted after 2002, when the APA updated its guidelines and required multicultural training and mandated culturally competent service delivery.

2.2.2 Exclusion Criteria

1. Articles that only made recommendations as to what constitutes social justice or multicultural competence training were not included.
2. Articles that only reported on or reviewed specific components of an existing social justice or multicultural training program were not included.
3. Articles that only reported on trainees' perceptions of instructors or the impact of trainings on instructors were not included.

4. Articles that focused on undergraduates or fields other than psychology were not included.
5. Studies conducted outside of the United States were not included in this analysis due to the unique needs of practitioners in different countries.

The computerized database search returned 630 articles. Each abstract was reviewed to determine which articles should be read in full to ascertain if inclusion criteria were met. A total of 27 articles from 14 different journals that potentially met inclusion criteria were read. From this list of 27 articles, 6 articles from 4 different journals met inclusion criteria (Arczynski, 2017; Morgan Consoli & Marin, 2016; Moy et al., 2014; Nagy et al., 2020; Tormala et al., 2018; Vega et al., 2018). Ancestral searches did not yield any new articles for inclusion. Two literature reviews and one meta-analysis (Benuto et al., 2018; Bezrukova et al., 2016; Malott, 2010) yielded 22 additional potential options. From these 22 articles, 4 articles from 2 journals met inclusion criteria (Castillo et al., 2007; Rowell & Benshoff, 2008; Roysircar et al., 2005; Seto et al., 2006). A hand search was conducted on two journals: *Training and Education in Professional Psychology* and *Journal of Multicultural Counseling and Development*. *Training and Education in Professional Psychology* provided 1 additional article (Knutson et al., 2020). The *Journal of Multicultural Counseling and Development* provided 1 additional article for inclusion (Coleman et al., 2006). These searches led to a final tally of 12 articles. See Table 1 for an overview of characteristics of all included studies.

Table 1 Literature Review Overview of Included Studies

Domain	Category	N
Publication date	2002–2008	5
	2009–2015	1
	2015–2021	6
Methodology	Quantitative	5
	Qualitative	4
	Mixed methods	3
Study design	Randomized controlled trial	1
	Quasi-experimental	2
	Pre-post	5
	Post-only	4
Number of participants	Less than 10	3
	11–30	4
	31–50	2
	More than 50	3
Participant demographics	Race and gender only	3
	Race, gender, age, experience	7
	None	2
Training methods	Lectures/didactic	8
(can fall in more than 1)	Experiential/role-play	6
	Written responses/journals	5
	Focus groups/discussions	8
	Other (guest speakers, presentations)	4
Outcome assessments	Rating scales	4
	Written/verbal responses	4
	Both	4

2.2.3 Coding Procedures

The 12 included articles were examined for participant demographics, setting of training, type of training provided (as the independent variable), methods of measurement of outcome of training (as the dependent variable), results of training on participant skills and development, recommendations for future trainings based on findings, and other potentially relevant information, such as curriculum used, or specific teaching methodologies included.

2.3 Results

2.3.1 Study Characteristics

A total of 12 studies examining the outcomes of culturally responsive or multicultural graduate training interventions were identified. Study publication dates range from 2005 to 2021, with half (n = 6, 50%) being published since 2015. Study methodology used was divided among quantitative (n = 5, 42%; Arczynski, 2017; Castillo et al., 2007; Coleman et al., 2006; Rowell & Benshoff, 2008; Seto et al., 2006), qualitative (n = 4, 33%; Knutson et al., 2020; Morgan Consoli & Marin, 2016; Moy et al., 2014; Tormala et al., 2018), and mixed methods (n = 3, 25%; Nagy et al., 2020; Roysircar et al., 2005; Vega et al., 2018). The most common study design was pre-post analysis (n = 5, 42%), followed by post-only assessment (n = 4, 33%), quasi-experimental design (n = 2, 17%) and randomized controlled trial (RCT) (n = 1, 8%).

Only one study (Coleman et al., 2006) was able to meet the standards for experimental design using randomized assignment of participants. The first author and second author each met

with the control group and intervention group, respectively. A third person, blind to group assignments, administered all assessments. High levels of experimental control allowed for more concrete conclusions to be drawn from the results. Both quasi-experimental studies (Castillo et al., 2007; Seto et al., 2006) were not able to randomly assign participants to groups. Instead, both studies used participants who were already enrolled in specific classes in their graduate programs. A lack of random assignment minimized the reported internal validity of a study by adding the possibility of confounding variables affecting results. Five studies used a pre-post design (Arczynski, 2017; Nagy et al., 2020; Rowell & Benshoff, 2008; Tormala et al., 2018**;** Vega et al., 2018), where all participants completed preintervention assessments, participated in the intervention simultaneously, and completed post-intervention assessments.

2.3.2 Participant Characteristics

Studies reported a wide range in the number of participants. Three studies (25%) had less than 10 participants, four studies (33%) had between 11 and 30 participants, two studies (17%) had between 31 and 50 participants, and three studies (25%) had more than 50 participants. Most included studies (n = 10, 83%) reported gender and race for participants at a minimum, while two studies (Arczynski, 2017; Tormala et al., 2018) did not report any demographic information. In total, 492 participants were included in the 12 studies. Of the 455 participants for whom data were collected, the vast majority were white (n = 340, 75%) and female (n = 356, 78%). Male participants constituted 21% of the sample (n = 95), with 1% (n = 4) not recording a response. Remaining participant racial/ethnic responses were multiracial (n = 52, 11%), Black (n = 12, 3%), Latinx (n = 12, 3%), Asian (n = 10, 2%), biracial (n = 8, 2%), and no response (n = 5, 1%). Five studies reported information on age, noting either range of ages (Moy et al., 2014; Roysircar et al.,

2005) or mean age of participants (Knutson et al., 2020), or both (Coleman et al., 2006, Rowell & Benshoff, 2008). These studies represent 319 participants (out of 492 total) with a combined age range of 22–62 years.

It should be noted that less than half of the studies included any demographic information about the research team. Moy et al. (2014) reported that half of their research team (3 out of 6) were white and female, one member was an Asian American male, one was a white male, and one was African American (no gender specified). Knutson et al. (2020) identified the primary researcher as a white, gay, and cisgender male and the secondary researcher as a white, heterosexual, cisgender female; no information was provided about other members of the research team. Roysircar et al. (2005) reported data coders as 11 females and three males, ranging in age from 23 to 44 years; they were also described as diverse across race, ethnicity, nationality, and first language. Nagy et al. (2020) included information about trainers' experience, but not any demographic information. The remaining studies did not report any information about the research teams. Table 2 provides an overview of study characteristics.

Table 2 Literature Review Study and Participant Demographics

Study	Methodology	Study Design	Number of Participants	Participant Demographics	Reported Trainer Demographics
Arczynski, 2017	Quant	Pre-post	7		
Castillo et al., 2007	Quant	Quasi	84	R, G	
Coleman et al., 2006	Quant	RCT	27	R, G, A	
Knutson et al., 2020	Qual	Post	5	R, G, A, SI	R, G, SI
Morgan Consoli & Marin, 2016	Qual	Post	16	G	
Moy et al., 2014	Qual	Post	37	R, G, A	R, G
Nagy et al., 2020	Mixed	Pre-post	7	R, G, AL	
Rowell & Benshoff, 2008	Quant	Pre-post	183	R, G, A	
Roysircar et al., 2005	Mixed	Post	67	R, G, A	G, A
Seto et al., 2006	Quant	Quasi	14	R, G, A	
Tormala et al., 2018	Qual	Pre-post	30		
Vega et al., 2018	Mixed	Pre-post	15	R, G, A	
Total			492		

Note. Information missing from manuscripts is shown with a blank cell.
A = age, AL = academic level, G = gender identity, mixed = mixed-methods analysis, qual = qualitative analysis, quant = quantitative analysis, quasi = quasi-experimental design, R = race/ethnicity, RCT = randomized controlled trial, SI = sexual identity

2.3.3 Interventions in Cultural Competence

2.3.3.1 Pedagogical Methods

The first research question was, "What interventions are used to train psychology graduate students in cultural competence?" Most studies used multiple methods to increase cultural competence of students, as content was often taught as part of a traditional graduate course. The two most frequently used intervention methods were didactic training/lectures and focus/discussion groups (n = 8, 67%). Minimal specific details were provided as to what the didactic training or discussion groups entailed. Vega et al. (2018) described each meeting of the didactic sessions as covering different conceptual overviews, cultural groups, disproportionality, and assessment of culturally and linguistically diverse students. Morgan Consoli and Marin (2016) described focus groups as opportunities to engage more deeply with specific topics, such as knowledge of diversity. The third and fourth most frequently used methods were experiential activities (n = 6, 50%) and journaling/reflective writing (n = 5, 42%), respectively. Experiential activities were defined by Nagy et al. (2020) as including activities such as responding to case vignettes, as well as participating in case conceptualization and cultural immersion exercises. Written reflections varied across studies but mostly consisted of one-page responses to prompted questions, as described Roysircar et al. (2005). Five studies (33%) included additional measures not included in most other articles, such as having guest speakers and attending cultural festivals (Castillo et al., 2007; Seto et al., 2006), watching films or documentaries (Vega et al., 2018), engaging in student debates and presentations (Morgan Consoli & Marin, 2016), and developing curricula (Arczynski, 2017).

A few studies described specific teaching methodologies used to shape the intervention. Coleman et al. (2006) used portfolios to increase multicultural competence, compared to a control group using traditional ecological case formulation. The portfolio was used as a pedagogical tool (not for assessment) to track participants' self-reflection about their work. Nagy et al. (2020) piloted their Training and Education to Advance Multicultural (TEAM) mental healthcare delivery model as a package of training sessions combining theoretical frameworks of intersectionality, cultural assessment, process-oriented models, and group-specific content.

2.3.3.2 Intervention Length

Extensive variety was reported in the amount of time participants spent in the intervention. Seven studies (58%) occurred during a semesterlong (15 or 16 weeks) course. Two studies had variations on that approach, with one being a six-week training within a semesterlong course (Seto et al., 2006) and another a traditional course condensed to five weeks, totaling 45 hours (Vega et al., 2018). One study (Moy et al., 2014) consisted of hourlong focus groups held over one to three years. Another study (Nagy et al., 2020) involved 13 hourlong sessions with participants. Yet another study consisted of 10 meetings (Roysircar et al., 2005). See Table 3 for an overview.

Table 3 Literature Review Research Question 1: Interventions Used Across Studies

Study	Length of Training	Lectures/ Didactic	Focus Groups/ Discussions	Journal/ Written	Experiences	Other
Arczynski, 2017	Semester	X	X	X		X
Castillo et al., 2007	Semester	X			X	X
Coleman et al., 2006	Semester	X		X		
Knutson et al., 2020	Semester	X	X	X		
Morgan Consoli & Marin, 2016	Semester	X	X	X	X	X
Moy et al., 2014	1 hour		X			
Nagy et al., 2020	13 hours	X	X	X	X	
Rowell & Benshoff, 2008	Semester	X	X			
Roysircar et al., 2005	10 hours		X	X		
Seto et al., 2006	6 weeks	X	X		X	X
Tormala et al., 2018	Semester	X		X		
Vega et al., 2018	5 weeks (45 hours)	X	X		X	X

2.3.4 Measurement in Cultural Competence

The second research question was, “What measurement tools are used to assess the effectiveness of trainings in cultural competence for psychology graduate students?” There were an extensive variety of measurements used to investigate outcomes of training sessions. Overall measures were split among using only rating scales (n = 5, 42%), using only written/verbal responses (n = 4, 33%), and using both rating scales and written/verbal responses (n = 3, 25%). See Table 4 for an overview.

Table 4 Literature Review Research Question 2: Measurement Tools Used Across Studies

Study	Quantitative Analysis	Qualitative Analysis
Arczynski, 2017	MAKSS, QDI, CDPP, PMIS, AOS, SJS	
Castillo et al., 2007	MCI, IAT	
Coleman et al., 2006	CSRS	
Knutson et al., 2020		Open coding, axial coding, selective coding
Morgan Consoli & Marin, 2016		Consensual process, thematic coding
Moy et al., 2014		Consensual process, thematic coding
Nagy et al., 2020	CB-MCS	No information provided on coding
Rowell & Benshoff, 2008	MEIM, GCHIS	
Roysircar et al., 2005	MCI, MCDS, WRIAS	Consensual process, thematic and content coding
Seto et al., 2006	MCI, MCDS, IRI, IAS	
Tormala et al., 2018		Consensual process, thematic coding
Vega et al., 2018	MEIM, SEE	Thematic and content coding

AOS = Activism Orientation Scale, CB-MCS = California Brief Multicultural Competence Scale, CDPP = Confronting Discrimination Personally and Professionally, CSRS = Counselor Self-Reflection Scale, GCHIS = Group Counseling Helpful Index Scale, IAT = Implicit Association Test, IRI = Interpersonal Reactivity Index, IAS = Intolerance for Ambiguity Scale, MAKSS = Multicultural Awareness, Knowledge, and Skills Survey, MCDS = Multicultural Social Desirability Scale, MCI = Multicultural Counseling Inventory, MEIM = Multigroup Ethnic Identity Measure, PMIS = Personal Moral Imperative Scale, QDI = Quick Discrimination Scale, SEE = Scale of Ethnocultural Empathy, SJS = Social Justice Scale, WRIAS = White Racial Identity Attitude Scale

Eight included studies incorporated quantitative analysis of outcome measures. Three rating scales were used for quantitative analysis in multiple studies, including several mixed-methods studies. The most common rating scale was the Multicultural Counseling Inventory (MCI; Castillo et al., 2006; Roysircar et al., 2005; Seto et al., 2006). The MCI is a 40-item self-report inventory with four subscales measuring multicultural awareness, knowledge, skills, and relationships (Sodowsky et al., 1994). Construct, content, and criterion validity assessment as well as reliability using Cronbach's alpha has been reported (Sodowsky, 1996; Sodowsky et al., 1998). The Multigroup Ethnic Identity Measure (MEIM) was used by two studies (Rowell and Benshoff, 2008; Vega et al., 2018). The MEIM assesses an individual's awareness of their own ethnic identity across two subscales of exploration of identity and commitment to one's identity (Phinney, 1992). Both subscales have shown strong reliability using Cronbach's alpha (Phinney & Ong, 2007). The Multicultural Social Desirability Scale (MCDS) was also used by two studies (Roysircar et al., 2005; Seto et al., 2006). The MCDS seeks to determine if participant responses are motivated by desire to appear unbiased in their self-reports (Sodowsky et al., 1998). Higher scores indicate positive perceptions of minoritized populations. Previous use of the MCDS has reported acceptable levels of reliability using Cronbach's alpha (Roysircar et al., 2005; Sodowsky et al., 1998). Other assessments were each used by only one study. See Table 5 for more information on those less frequently used rating scales.

Table 5 Literature Review Research Question 2: List of Measurement Scales Used Across Studies

Rating Scale	Constructs Measured
Activism Orientation Scale (AOS)	Likelihood to engage in activist behaviors
California Brief Multicultural Competence Scale (CB-MCS)	Cultural knowledge, awareness, and sensitivity, and nonethnic subscales
Confronting Discrimination Personally and Professionally (CDPP)	Assumption of responsibility to confront discrimination within one's profession
Counselor Self-Reflection Scale (CSRS)	Self-reflection
Group Counseling Helpful Index Scale (GCHIS)	Group members' perceptions of events occurring in group sessions
Implicit Association Test (IAT)	Implicit associations between groups
Interpersonal Reactivity Index (IRI)	Empathetic concern, personal distress, perspective-taking, and fantasy
Intolerance for Ambiguity Scale (IAS)	Tolerance for ambiguity in understanding of others
Multicultural Awareness, Knowledge, and Skills Survey (MAKSS)	Multicultural awareness, knowledge, and skills in working with other cultures
Multicultural Counseling Inventory (MCI)	Multicultural awareness, knowledge, and skills, and cross-cultural relationships
Multicultural Social Desirability Scale (MCDS)	Bias in responses to appear more socially acceptable
Multigroup Ethnic Identity Measure (MEIM)	Exploration of and commitment to one's identity (affirmation)
Personal Moral Imperative Scale (PMIS)	Social justice beliefs
Quick Discrimination Scale (QDI)	Sensitivity, awareness, and receptivity to cultural diversity and gender equity

Table 5 (continued)	
Scale of Ethnocultural Empathy (SEE)	Empathy toward people of racial/ethnic backgrounds different from one's own
Social Justice Scale (SJS)	Social justice attitudes, perceived behavioral control, subjective norms, and behavioral intentions
White Racial Identity Attitude Scale (WRIAS)	White racial identity development

Seven studies used qualitative analysis of outcome measures of cultural competence studies. Four studies explicitly described consensual processes to determine common themes of qualitative data (Morgan Consoli & Marin, 2016; Moy et al., 2014; Roysircar et al., 2005; Tormala et al., 2018). Both Roysircar et al. (2005) and Vega et al. (2018) reported using content analysis as part of their data analysis process. Knutson et al. (2020) used grounded theory methodology to guide their analysis. Grounded theory uses open coding, followed by axial coding and then selective coding (Knutson et al., 2020). Several articles provided specific details to describe their analysis process. For example, Moy et al. (2014) described their research as inductive and themed through coders working in pairs. This research team coded independently first and then met to discuss discrepancies between team members. The coding manual was updated after the first round, and this process was repeated for a second round of coding, when final themes were determined (Moy et al., 2014). In another example, Tormala et al. (2018) used thematic analysis starting with six initial themes based on existing research literature. After the research team met, two of the codes were revised through consensus. Tormala et al. (2018) applied a three-step analysis. First, they applied six themes to the 60 written assignments, then worked through consensus to achieve 100% interrater agreement, and finally counted the number of statements in each theme to compare between groups (Tormala et al., 2018). Roysircar et al. (2005) reported taking an iterative approach to coding, moving between comparisons and derived categories until main ideas were agreed upon. Content analysis was then conducted on process notes from study participants (Roysircar et al., 2005). Content analysis was also used by Vega et al. (2018) whereby coder one developed case notes and highlighted representative statements, which were combined into commonly used themes across all documents with all subsequent coders. Lastly, Nagy et al.

(2020) analyzed written responses from two questions but did not provide information on how that was conducted.

2.3.5 Outcomes of Cultural Competence Training

The third research question was, "What are outcomes of trainings in cultural competence on psychology graduate students?" Outcome data includes reported quantitative, qualitative, and social validity results. See Table 6 for an overview.

Table 6 Literature Review Research Question 3: Reported Outcomes Across Studies

Study	Quantitative Results		Qualitative Results
	Positive	Mixed/Null	Themes
Arczynski, 2017	X		
Castillo et al., 2007	X		
Coleman et al., 2006		X	
Knutson et al., 2020			Increased multicultural awareness, importance of training, importance of bringing into practice
Morgan Consoli & Marin, 2016			Increased multicultural awareness, importance of training
Moy et al., 2014			Increased multicultural awareness, importance of training, importance of bringing into practice
Nagy et al., 2020	X		importance of training
Rowell & Benshoff, 2008		X	
Roysircar et al., 2005	X		Increased multicultural awareness, importance of bringing into practice
Seto et al., 2006		X	
Tormala et al., 2018			Increased multicultural awareness
Vega et al., 2018	X		Increased multicultural awareness, importance of training, importance of bringing into practice

2.3.5.1 Quantitative Results

Eight studies used quantitative analysis and reported inconsistent results, even when using the same scales. Seventeen different rating scales were used across all 12 included studies. While each rating scale has specific constructs it measures, constructs can be loosely grouped into two areas: (a) self-awareness and (b) knowledge/understanding of other cultures. The first grouping assesses self-awareness starting with the MCI, utilized by three studies. For both Castillo et al. (2007) and Roysircar et al. (2005), the MCI subscale of awareness was statistically significant upon intervention completion. However, in the study by Seto et al. (2006), composite MCI scales were statistically significant from pre- to postintervention, with knowledge and skills subscales showing improvement and the awareness subscale showing no significant improvement. Castillo et al. (2007) reported that the knowledge and skills subscales improved but did not reach levels of statistical significance.

Two studies utilized the MEIM (Rowell & Benshoff, 2008; Vega et al., 2018), which assesses awareness of connection to your own culture. Both reported statistically significant results. Results of both the MCI and MEIM rating scales reflect potential growth in participant self-awareness of their culture and positionality. Coleman et al. (2006) found significant differences between groups postintervention on the Counselor Self-Reflection Scale, which specifically focuses on self-reflection. Finally, the MCDS was used by Seto et al. (2006) and Roysircar et al. (2005). Results were inconsistent, as Seto et al. (2006) found no significant difference, but Roysircar et al. (2005) found statistically significant differences between pre- and postintervention groups. The MCDS rating scale seeks to determine if participants' responses change based on what they perceive as socially desirable responses. The nonsignificant results

from Seto et al. (2006) show that participants' responses are more self-aware and less likely to be affected by their desire to be socially correct.

A second grouping for the rating scales reflects participants' knowledge and understanding of other cultures. Vega et al. (2018) reported a significant correlation with the Scale of Ethnocultural Empathy, specifically the subscale of perspective-taking, which shows a change in participant understanding in terms of how other cultures experience the world. Arczynski (2017) used six different scales (see Table 4) and reported statistically significant pre-post results on the Multicultural Awareness, Knowledge, and Skills Survey (MAKSS), which represents increased awareness, knowledge, and skills in working with other cultures. Castillo et al. (2008) used the Implicit Association Test and found that the intervention group had significantly higher post-test scores overall—a 9% improvement rate, which reflects a change in implicit associations. Nagy et al. (2020) reported an increase from pre- to postintervention on the California Brief Multicultural Competence Scale, which is a self-assessment asking about understanding of working with specific minoritized groups. Rowell and Benshoff (2008) reported an overall significance on the Group Counseling Helpful Index Scale for group sessions but not within each group. Seto et al. (2006) reported no significant differences between groups for either the Interpersonal Reactivity Index (assesses empathy for others) or the Intolerance for Ambiguity Scale (assesses tolerance for ambiguity in understanding of others). Overall, quantitative results were inconsistent across many of the rating scales, even for those scales with acceptable content validity and strong Cronbach's alpha scores.

2.3.5.2 Qualitative Results

Seven studies used qualitative analysis and reported similar results that can be condensed into three themes of awareness, education, and application. These themes align with the overall

thrust of the 2002 APA guidelines, although they are slightly different than the quantitative constructs assessed through rating scales. The most common theme that emerged from qualitative analysis was increased multicultural awareness, reported in six studies (Knutson et al., 2020; Morgan Consoli & Marin, 2016; Moy et al., 2014; Tormala et al., 2018; Roysircar et al., 2005; Vega et al., 2018). Although multicultural awareness had slightly different definitions, the overarching premise is that participants reported more cognizance of their own culture and the cultures of historically marginalized groups. One participant, as reported by Vega et al. (2018) stated that "it was important for me to be exposed to the viewpoints of so many others who did not grow up the same way I did. Reading the first-person accounts of people who had experienced discrimination was also impactful" (p. 457). This example is representative of many responses showing increased multicultural awareness of participants.

The second theme reported was education or training experiences of psychologists, reported in five studies (Knutson et al., 2020; Morgan Consoli & Marin, 2016; Moy et al., 2014; Nagy et al., 2020; Vega et al., 2018). Participants' experiences with different types of training provided an opportunity for explicit feedback on what methods and activities were most impactful and allowed participants to consider themselves as agents of social change. There was universal agreement that increasing cultural training was essential for graduate students in psychology. Some articles reported specific feedback, such as increasing length of training sessions (Nagy et al., 2020), necessitating a safe learning environment for students (Vega et al., 2018), considering which faculty member conducts trainings (Morgan Consoli & Marin, 2016), and encouraging ongoing discussions during training (Knutson et al., 2020). Knutson et al. (2020) also reported participant thoughts on social justice as an overarching prerequisite of practitioners. Participant responses include the following: "Psychologists need to know how to facilitate conversations with

clients that are appropriate and relevant to their experiences" and "[Psychologists require] some sort of training that would allow [them] to feel more competent and confident in communicating with the population they are serving" (Knutson et al., 2020, p. 150). These examples provide some insight as to how graduate psychology students see the importance of multicultural training.

The third theme reported was consideration of applying intervention materials, reported in four studies (Knutson et al., 2020; Moy et al., 2014; Roysircar et al., 2005; Vega et al., 2018). As these participants were all graduate students, the "how" of what they are learning is important as they enter the field as practitioners. Participants in each of these studies reported a desire to take what they learned into their professional practice after they graduated, and specifically to serve as an advocate for their clients. One participant saw their role as follows:

> You're not saying, "This isn't right, this isn't socially just!" because they're like, "What the heck are you talking about?" . . . but you're saying, "Wow! Did you guys see that this subset of students is never meeting their benchmark, and they've been tracked since second grade?" . . . You know, and just asking questions and using, not only their data skills, but all their interpersonal skills, that's a huge role for the school psychologist. (Moy et al., 2014, p. 333)

One common subtheme of applying these principles into practice was potential barriers to implementation of multicultural frameworks. For example, in Knutson et al. (2020), one participant noted, "One of the difficult challenges of being a social justice advocate is being able to identify where your efforts would yield the greatest results" (p. 150). Overall, these responses showed a strong desire of participants to enact their training as advocates for their clients, as well as an understanding that environmental factors may make their work more challenging.

2.3.5.3 Social Validity Results

Only two studies (Moy et al., 2014; Nagy et al., 2020) reported specific results on the social validity of the interventions. Moy et al. (2014) used open-ended questions for qualitative analysis and reported that participants rated diverse field experience as the most beneficial part of their training. These participants also deemed alignment of training with the mission of their university as highly important (Moy et al., 2014). Nagy et al. (2020) used a seven-point Likert scale survey both mid- and postintervention. Participants' ratings for the acceptability and feasibility of their intervention were high, with all scores above 5 on a seven-point scale.

2.4 Discussion

The purpose of this review was to develop a framework for understanding existing research regarding implementation of cultural competence training in graduate psychology programs. Three questions were addressed:

- What interventions are used to train psychology graduate students in cultural competence?
- What measurement tools are used to assess the effectiveness of trainings in cultural competence for psychology graduate students?
- What are outcomes of trainings in cultural competence on psychology graduate students?

These results showed that (a) there has been an uptick in culturally responsive outcome training studies on graduate students within the past 10 years; (b) rarely are studies RCTs or even quasi-experimental studies, with most being pre-post group comparisons; (c) studies are employing a wide range of assessment tools utilizing quantitative and qualitative measures; (d)

sample sizes tend to be less than 30; (e) demographic information on participants and trainers is often inconsistently reported; and (f) most studies provide general information about intervention components, but lack specifics as to what and how concepts were taught. These results are akin to recent literature reviews with a similar focus. For example, Benuto et al. (2018) stated that future research needed increased rigor in terms of methodological approach and called for curriculum choices to be based on science. Bezrukova et al. (2016) was not able to identify specific successful curricula and recommended that training be tied to the overall mission of the university. Reviewed research consistently noted that increased assessment on culturally responsive training outcomes was needed, as well as encouraged continued focus on finding effective methods and curricula to instruct future psychologists.

The most commonly used intervention components were didactic instruction and discussion groups, which is unsurprising considering that all of the participants were graduate students. What is surprising is the lack of detail about what those activities looked like in many studies. A few studies used existing interventions and adapted them to incorporate cultural responsiveness. Ostensibly, a researcher could further investigate one of these approaches to gain insight as to a specific intervention. For example, Seto et al. (2006) utilized the Triad Training Model, and Coleman et al. (2006) assessed the use of portfolios compared to case formulation. Both approaches have an extant research base to provide additional information. Only Arczynski (2017) and Nagy et al. (2020) provided specifics on what activities were conducted and what topics were implemented with participants. It is very possible that journal publication restrictions prohibited researchers from including extensive information about their intervention.

Even without descriptions that allow for replication, most researchers provided an overview of topics covered during their studies that align with previous recommendations from

existing psychology research. In 1992, Sue et al. proposed a conceptual framework, a matrix, for the development and assessment of cross-cultural skills. This 3 x 3 matrix reflects three levels of characteristics (self-awareness, understanding of other cultures, and development of client-specific interventions) and three levels of dimensions (beliefs/attitudes, knowledge, and skills) (Sue et al., 1992). These nine overlapping competencies guided many intervention procedures and outcome assessments that were found in this literature review. The most common topics covered included self-identity, other cultures, specific adaptions to clinical practice, racism, and other forms of discrimination, all of which fit into Sue et al.'s (1992) conceptual framework.

Researchers measured the growth of participants in a myriad of ways. The MCI (Sodowsky et al., 1994) was used most often, which mirrors results from Benuto et al., (2018). However, the MEIM (Phinney, 1992) and MCDS (Sodowsky, 1996 were the next most common rating scales employed. This review found 17 different scales used across eight studies employing quantitative assessments. Given the somewhat inconsistent results and the wide variety of rating scales used, it is clear that further research needs to be done to establish strong assessment tools. Lacking clear definitions about what constitutes culturally responsive practices is a significant challenge (Tao et al., 2015). It is hard to effectively measure those constructs that are difficult to define. The APA's (2017) updated guidance provides more concrete research and practice targets, which may help address those construct measurement concerns.

Researchers who incorporated qualitative analysis into their measurement primarily used consensual processes and thematic coding to draw conclusions about their participants. Two studies (Knutson et al., 2020; Roysircar et al., 2005) provided in-depth information about materials used to elicit qualitative responses and methodology used to analyze those data. Describing qualitative processes is time- and space-consuming, which may be, as it was with intervention

descriptions, a reason for the limited information often provided. At a minimum, all included studies described what methodology was used to interrogate qualitative data. It then becomes incumbent upon readers to seek out information as to what each level of coding brings to final analysis (see Saldaña, 2016).

One area of assessment that was not addressed in any of these studies is the impact of practitioner skills on clients, which would be difficult to measure without longitudinal data. However, longitudinal measurement would be essential in understanding any long-term benefits of culturally responsive graduate trainings for clients. As reported by Tao et al. (2015), assessments of client perceptions showed that clinicians who demonstrate strong multicultural skills have more successful interactions with clients. Connecting specific training interventions and assessment tools directly to client outcomes would provide a more comprehensive understanding of what skills are needed to provide strong culturally responsive services.

A more comprehensive understanding would also be beneficial, given the overall inconsistency of quantitative results. Eight studies utilized statistical analyses, but only five had significant results. It is important to note that these assessment tools are self-report tools, which carry their own limitations. Furthermore, outcome data often focused on whether participants increased their knowledge and awareness around issues of multiculturalism. No objective measurement directly addressing increased skill development of participants was collected. These results are similar to those found by Benuto et al. (2018). Overall, results from quantitative analyses were encouraging, but more rigor and objectivity are needed to ensure that concrete conclusions can be drawn from the data.

As stated earlier, outcomes from qualitative assessments centered around three themes of awareness, education, and application. These themes not only align with APA guidelines but also

with conceptual framing from Sue et al. (1992). Based on quantitative results, many intervention approaches were successful in increasing cultural awareness of self and others. Cultural self-awareness is often listed as a necessary first step in developing a culturally responsive practice (APA, 2017; Stuart, 2004). The importance of training or education was another theme that emerged from the reviewed literature. All participants were graduate students, so their commitment to continued exposure to culturally responsive training is unsurprising. Finally, applying culturally responsive skills to daily practice as a psychologist was a consistent theme from the review. Psychologists seek to provide effective and successful treatment to clients, so being able to take their training and translate it into concrete practices is paramount.

2.4.1 Limitations

Several limitations affect the conclusions drawn from this literature review. The search was conducted using only three databases, so it is possible that inclusion-worthy articles were missed. Furthermore, selected search terms may not have been effective in finding all relevant literature. This literature review did not include dissertations, which leads to potential publication bias and thus could overestimate the effects of the interventions. Any lack of information about interventions provided may affect the generalizability of results. Finally, restricting years included to those after the APA guidelines were published in 2002 removes some of the historical context to understand more recent studies.

2.4.2 Implications for Future Research

To solidify the research base, an increase in RCTs would be a welcome addition. Most included studies were conducted in existing graduate courses, so randomization is not always possible, which limits the generalizability of data. In addition, developing consistent assessment methods to compare results across studies would allow for higher quality replications of interventions, especially in light of difficulties in conducting RCT studies. Relatedly, if researchers were transparent with intervention materials, replication studies could be more comprehensive and provide further justification (or not) for using specific materials or pedagogic practices. Furthermore, providing demographic information on both participants and researchers to ascertain if certain approaches are more effective with some participants or trainers would be helpful. Lastly, an increased focus on social validity results would be worthwhile information for subsequent research projects and help to bridge research-to-practice gaps.

2.4.3 Implications for Practice

Graduate psychology faculty who are not currently addressing cultural competence could benefit from explicit guidance on how to implement applicable training. Another consideration for practice is seeking to weave cultural competence throughout all graduate courses and not just one course or one supplemental experience. Faculty need to consider their own positionality as educators in cultural competence and consider how that affects any training they provide. Lastly, while a shared terminology is important for training, it is important not to get so caught up in terminology that it derails progress toward training culturally competent psychologists.

2.4.4 Conclusion

While most people accessing direct care from psychologists are white, those seeking psychological services more closely mirror the diversity the U.S. population overall. Developing effective skills in working with diverse clients requires more than exposure to and contact with people who are different; direct training is necessary (Hook & Watkins, 2015). Direct training is also essential for adherence to the APA's multicultural guidelines. Research consistently shows that a strong understanding of client culture can minimize overreliance on white, Euro-centric values and increase the social validity of treatment for each client, which improves long-term outcomes (Rodriguez & Williams, 2021). Reviewed research shows promising and positive results in methods of training psychologists. While more research is needed to understand best pedagogic practices and tools to ensure effective treatment for clients, this review provides a foundation on which to begin. Lessons learned from this review, such as combining didactic training, self-reflection, and group discussions, support the premise for this intervention aimed at increasing the cultural responsiveness of future BCBAs. A culturally responsive training program for behavior analysts was developed based on this literature review to answer these research questions:

1. What is the effect of a culturally responsive behavior analysis program on
    a. Participants' cultural awareness?
    b. Participants' reflections on culturally responsive behavior analysis practice?
2. Do participants find the program to be socially valid?

3.0 Methods

3.1 Positionality Statement

In developing this intervention, it is important to situate my position as a behavior analyst and educator. Although clarifying positionality is not typical in behavior analytic research or most quantitative research, it is a relatively common practice in multicultural and qualitative research (Milner, 2007; Saldaña, 2016). We must also recognize that a fundamental part of culturally responsive training is engaging with cultures different than one's own (Desai, 2000). I have been practicing behavior analysis for over 20 years and have been a BCBA since 2004. I have worked in a self-contained school, provided direct home-based services, and worked for a state department and in public school districts. I am currently a doctoral student in a program combining special education and urban education training. These experiences have honed my interest in combining behavior analysis with cultural responsiveness. I am a white, cisgender, female, married mother of two children who was raised Christian and primarily in suburban areas. It is important to acknowledge these identities as they affect my professional and personal experiences. As Milner (2007) states, "When researchers are not mindful of the enormous role of their own and others' racialized positionality and cultural ways of knowing, the results can be dangerous to communities and individuals of color" (p. 388).

3.2 Setting and Participants

Approval from the institutional internal review board (IRB) allowed for recruitment of current graduate students enrolled in the graduate applied behavior analysis program at a university in the mid-Atlantic region. Six individuals consented to participate. Participants were asked to respond to demographic questions using an open-ended format. No selections were given. Table 7 reflects responses from six participants.

Table 7 Participant Self-Reported Demographic Information

Participant Number	Age	Race	Gender Identity	Ethnicity
1	23	Biracial	Female	Non-Hispanic
2	28	white	Nonbinary	White
3	23	Black/African American	Female	Not Hispanic/ Latino
4	24	white	Female	Italian/Irish
5	23	white	Female	Non-Hispanic
6	24	white	Female	Hispanic and Syrian

Note. Biracial signifies white and Black.

3.3 Research Design

This study employed a pre-post design for a single group (Adams & Lawrence, 2019). Cultural responsiveness assessment and case study/scenario activities were presented pre- and postintervention to all participants. The intervention consisted of weekly sessions held over four

weeks. Sessions were held online via Zoom due to various COVID-19 protocols and concerns. A single-group pre-post design was used due to the sample size, the inability to randomly assign participants to groups, and the ability to infer causality due to pre- and postintervention assessment (Adams & Lawrence, 2019). There are several limitations to this research design. The lack of a control group limits conclusions that may be drawn about the efficacy of the intervention and does not account for potential threats to internal and external validity (Adams & Lawrence, 2019). Maturation, instrumentation, and statistical regression to mean are not areas of concern with this study due to the short time frame, use of the same assessment materials, and small sample size. However, testing and history are both factors to consider, as familiarity with the assessment materials may have affected scores and participants could have been acquiring skills in other settings during this intervention that could affect their responses.

3.4 Materials

Incorporating recommendations from the MSR framework (Sleeter & Grant, 1999) and principles from BST (Miltenberger, 2008), a curriculum was developed using a multidisciplinary approach. Two textbooks, *Multiculturalism and Diversity in Applied Behavior Analysis* by Brian M. Conners and Shawn T. Capell (2021) and *Building and Sustaining Meaningful and Effective Relationships as a Supervisor and Mentor* by Linda A. LeBlanc, Tyra P. Sellers, and Shaila Ala'i (2020) were used to ground information in behavior analysis. In addition, recommendations from Najdowski et al. (2021) on developing antiracist and multicultural graduate programs were incorporated. As stated earlier, the MSR approach has four recommended practices (Sleeter & Grant, 1999), which provided overarching guidelines. Intervention sessions directly implemented

components one and two (practicing democracy through didactic instruction and group discussions, analyzing circumstances of one's own life through reflective writing exercises). Steps three and four included developing social action skills and coalescing, which were interwoven through each session discussing how behavior analysts can work to use behavioral science to address a broad array of challenges. See Appendix A for the curriculum.

3.5 Measures

The primary outcome measure was participant growth in cultural responsiveness, which was measured in multiple ways using quantitative and qualitative assessment. Qualitative analysis is not frequently included in behavior analytic research, but it can be an effective method to interpret socially significant skills such as cultural responsiveness (Čolić et al., 2021). Two rating scales, described below, were completed by all participants prior to and upon completion of the four-week intervention. These rating scales provided quantitative results. One case study/scenario was also completed prior to and upon completion of the intervention and provided qualitative results.

3.5.1 Cultural Responsiveness Assessment

Participants completed the Multicultural Sensitivity Scale (MSS), developed by Jibaja et al. (1994). The MSS is a 21-statement Likert scale in which participants rate their agreement or disagreement with statements on a scale ranging from 1 (strongly disagree) to 6 (strongly agree). Internal consistency was assessed using Cronbach's alpha and reported at .90. Test-retest

reliability is also high, with a correlation of .92 (Jibaja et al., 1994, 2000). The MSS has been shown to be a valid and reliable assessment tool (Fong et al., 2016). Participants also completed the MAKSS-Revised (MAKSS-R), updated by Kim et al. (2003). The MAKSS-R has 33 questions divided among three subscales. Participants respond using a Likert scale ranging from 1 (strongly disagree/very limited) to 4 (strongly agree/very good). Reliability coefficients are .71 for the awareness subscale, .85 for the knowledge subscale, and .87 for the skills subscale; the overall reliability quotient is .82 (Kim et al., 2003). Construct validity shows a .58 correlation coefficient on two matching scales of a similar instrument, the Multicultural Counseling Knowledge and Awareness Scale (Kim et al., 2003; Ponterotto et al., 1990). Both the MSS and MAKSS-R were given pre- and postintervention to all participants. See Appendix B for both cultural responsiveness assessment rating scales.

3.5.2 Case Study/Scenario Assessment

Each participant was presented with a hypothetical case that required them to develop an action plan. The case study/scenario was the same for the pre- and postassessment. The case study, or vignette, was adapted with minimal changes from Olsen and Kelly (2020). Case studies (or vignettes) are mainly used in research to assess biases or judgments of participants in response to a specific situation (Silva et al., 2019). There are no reliability or validity data available for this particular case study. However, it does meet several of the key components needed to develop those measures. Namely, it is realistic, suitable in length, appropriate for the respondents, and written in the third person, and has a clear question at the end (Silva et al., 2019). This activity was assessed for both adherence to behavior analytic principles and cultural responsiveness of each participant's response. See Appendix B for case study question.

3.6 Procedures

Prior to the intervention, participants completed all rating scales and the case study/scenario described above. Upon completion of the intervention, participants completed the same assessments, as well as a social validity questionnaire. All sessions were audio recorded to ensure accuracy of topics covered and fidelity to agendas set for each session.

Prior to starting each session, participants were sent a reminder email, which included a Zoom link and a PowerPoint presentation to be used during that session. An agenda was followed for each session, with a focus on at least one behavior analytic topic aligned with corresponding culturally responsive research. Each session began with an opportunity to review previous sessions and a quote applicable to the current topic. Main topics were introduced during a brief didactic training with multicultural framing and examples provided, the instruction and modeling components of BST. Group activities and discussions were embedded throughout, occurring at different times during each session. The first session asked participants to set any personal goals, which aligns with the social action step of MSR. Each topical discussion also included any corresponding Behavior Analyst Certification Board (BACB) Task List and Ethics Code items covered in the material provided. One summary slide and final quote were used to wrap up each session. Finally, references, additional reading recommendations, and supplemental university support resources were provided in each PowerPoint. Each session lasted approximately one hour.

Procedural integrity was ensured by following a preset agenda for each session. As each session was audio recorded, a checklist using the agenda was completed using that recording to ensure intervention fidelity. A secondary observer completed fidelity checklists for 50% of the sessions. Additional interobserver agreement was conducted in multiple ways that will be described later. A secondary coder was also used for both pre– and post–case study analysis and reflective writing pieces.

3.7 Intervention Components

3.7.1 Didactic Instruction

Didactic components, consisting of direct instruction of culturally responsive and behavior analytic content, were the largest component of the intervention. Each session had a set agenda based on a specific behavior analytic theme. The four lessons were as follows: introduction and professional guidelines, the ADDRESSING model (Hays, 2016; Tagg, 2021), behavior and cultural responsiveness, and culturally responsive supervision. Accompanying PowerPoint slides are available upon request.

3.7.2 Reflective Writing Activities

Participants completed reflective writing activities on topics related to material presented in that session a total of three times. Each writing activity had multiple prompts included to encourage in-depth consideration of each topic. Session 1 writing focused on self-reflection and

positionality, with questions adapted from Milner (2007). Session 3 writing focused on participant response to a video depicting a classroom setting; questions were adapted from Enders et al. (2022, in press). Session 4 writing focused on questions related to supervision adapted from LeBlanc et al. (2020). All three writing exercises were completed following the session and provided an opportunity for participants to self-reflect. Using self-reflection to increase cultural self-awareness is highly recommended by behavior analytic research and other fields (see Benuto et al., 2018; Fong & Tanaka, 2013; Jernigan et al., 2016; Oikarainen et al., 2019). See Appendix C for reflective writing prompts.

3.7.3 Social Validity

Social validity was assessed upon completion of the intervention using Likert scale and open-ended questions. Participants were asked questions about the intervention's effectiveness, acceptability, and usefulness. Open-ended questions asked for explicit feedback about different components of the intervention, allowing participants to provide in-depth responses reflecting their opinions about included material. See Appendix D for the social validity questionnaire.

3.8 Data Analysis

3.8.1 Cultural Responsiveness Assessment

Cultural responsiveness assessments were given to all participants pre- and postintervention. Due to the small sample size, and based on recommendations from test creators,

a Wilcoxon rank-sum test was used to analyze the MAKSS-R (D'Andrea et al., 1991). Cronbach's alpha coefficients were computed to assess the internal reliability of each subscale (awareness, knowledge, and skills). Pearson's r coefficients were calculated to assess construct validity. Lower correlation results support the likelihood that subscales are measuring different constructs (D'Andrea et al., 1991). The MSS was also analyzed using the Wilcoxon rank-sum test and Cronbach's alpha. Pearson's r coefficients were calculated between the MSS and each of the MAKSS-R subscales to assess for predictive validity.

3.8.2 Case Study/Scenario Assessment

Case study/scenario assessments were given to all participants pre- and postintervention. Data were coded using a priori codes by the author and a secondary coder. The a priori coding guide listed provisional codes based on both behavior analytic and culturally responsive themes (Saldaña, 2016). Data were initially broken down into smaller units. Then, using constant comparison (Corbin & Strauss, 2015), data were analyzed to determine if they conformed to existing a priori codes or required a new code. First-round coding was done independently by coders 1 and 2. Results of each coder were then compared. A priori codes were comprehensive, but after discussion, coders refined the wording in two codes to better reflect data. Finally, coders 1 and 2 worked together using a consensual process to confirm updated codes. See Appendix E for the coding guide.

3.8.3 Reflective Writing Activities

Reflective writing activities were integrated throughout the intervention and also analyzed using a constant comparative method (Corbin & Strauss, 2015). No a priori coding guide was used; instead, coders started with content analysis to interpret participant responses to prompted questions (Saldaña, 2016). Concept and values coding were also used to understand how participants narrated their experience in the intervention. Data were initially coded by the author, and a coding guide was developed. The second coder used that guide to analyze data, adding two new codes during the process. After an initial round of coding, coder 1 themed the codes. A theme is an "extended phrase or sentence that identifies what a unit of data is about and/or what it means" (Saldaña, 2016, p. 199). Themes were finalized using a consensual process between coder 1 and coder 2, who used the updated guide for a second round of coding. See Appendix E for the coding guide.

3.8.4 Social Validity

Social validity questionnaires were provided to participants once the intervention was completed. Twelve questions were included, consisting of both Likert scale and open-ended responses. Likert scale data were assessed using descriptive statistics, such as range and mean. Open-ended responses were generally short and summarized by question content.

3.8.5 Procedural Fidelity

Each session had a preset curriculum and agenda. Each session was audio recorded, and all transcripts were reviewed by the author to ensure that all agenda and curriculum guide components were covered. Procedural fidelity was calculated for 50% of sessions by coder 2. Procedural fidelity was calculated by dividing the number of agreements by the number of agreements plus disagreements. Procedural fidelity was found to be 100%. See Appendix F for the procedural fidelity checklist.

3.8.6 Reliability

Intercoder reliability (ICR) was conducted on all qualitative measures. Cohen's kappa is one common ICR value computed to increase rigor, consistency, and believability of qualitative data (O'Connor & Joffe, 2020). All (100%) pre– and post–case study data were independently coded by the author and secondary coder. Cohen's kappa was computed to determine agreement between coders on all pre- and postdata. Combined results showed $\kappa = .758$, $p = .000$, which reflects substantial agreement between coders (O'Conner & Joffe, 2020).

For the reflective writing responses, the author (coder 1) coded all the responses and created a codebook. Coder 2 used that codebook and coded 66% of the responses, adding two new codes. The two coders met to discuss and review all the codes. The data were then recoded using the updated codebook until complete agreement was reached. Emergent themes were found to align with MSR framework. Using multiple coders, developing a codebook through consensus, and working from shared documents for transparency are several ways to increase the trustworthiness of qualitative analysis (Saldaña, 2016).

4.0 Results

4.1 Research Question 1

The first research question asked about the effect of a culturally responsive training program on participants' cultural awareness and on participant reflections on culturally responsive behavior analytic practice. Participants completed two rating scales, the MAKSS-R and the MSS, to assess their cultural responsiveness. Participant scores for both rating scales are found in Table 8. D'Andrea et al. (1991) recommend completion of Cronbach's alpha to assess internal consistency of the MAKSS-R. Cronbach's alpha for the three subscales of the MAKSS-R was .914 and .725 for the MSS, showing a high level of internal consistency of each of the rating scales used.

Table 8 Participant Results on MAKSS-R and MSS Rating Scales

		Pretest	Post-Test		
	n	M (SD)	M (SD)	Wilcoxon	p (two-tailed)
MAKSS-R	6	2.51 (0.41)	2.84 (0.31)	–1.99	.046*
Awareness**	6	2.63 (0.45)	2.75 (0.30)	–.42	.674
Knowledge**	6	2.50 (0.43)	2.92 (0.38)	–2.03	.042*
Skills**	6	2.40 (0.41)	2.85 (0.45)	–2.21	.027*
MSS	6	45.17 (6.68)	47.33 (9.25)	–.674	.500

Note. * denotes statistically significant results; ** denotes subscales of the MAKSS-R
MAKSS-R = Multicultural Awareness, Knowledge, and Skills Survey–Revised, MSS = Multicultural Sensitivity Scale

4.1.1 Pre- and Postassessment Results

Participants also completed written work as a method to assess their cultural responsiveness qualitatively. Participants responded to a case study prompt as part of the pre- and postassessment. See Table 9 for examples of each of the a priori codes.

Table 9 A Priori Coding Guide Results for Pre– and Post–Case Study

Cultural Responsiveness Code	Example Response	Number of Times Code Used
Awareness of own positionality	Pre: none	Pre: 0
	Post: "I would ask for dos and don'ts during this time."	Post: 3
Awareness of impact of high-context communication	Pre: "Are there any activities that you could foresee could be triggering for your child?"	Pre: 1
	Post: "I would ask what kind of accommodations they may be looking for."	Post: 5
Awareness of role of family dynamics	Pre: none	Pre: 0
	Post: none	Post: 0
Awareness of Islamic religion	Pre: "This would provide more time for prayer and time of reflection."	Pre: 5
	Post: "If allowed, student could be allowed a delayed start since family will likely be up late most nights."	Post: 3
Awareness of family norms during Ramadan	Pre: "I would ask about fasting and any cultural practices they take part in."	Pre: 3
	Post: "I would ask for a walkthrough of this holy time for them specific to their family."	Post: 4
Behavior Analysis Code		
Questions about family schedule changes (including eating and sleeping)	Pre: "We can work with your schedule if you plan to celebrate Ramadan."	Pre: 3
	Post: "I would ask for a list of their wants and needs during this time."	Post: 4
Potential situations for client that may require new skills to be taught prior	Pre: "I would ask . . . what their wants are for incorporating [new practices] into therapy."	Pre: 2
	Post: "Brainstorm with them on ways they can implement same procedures or find an alternative they can do."	Post: 1

Table 9 (continued)

Changes in services/school schedule needed to make in order to respect the family's celebration of Ramadan	Pre: "Organize some additional resources for them to use at home . . . if therapy is missed."	Pre: 6
	Post: "I would ask them . . . any modifications they see as being beneficial during this time."	Post: 5
Discussion of potential challenges of changes in routine during Ramadan	Pre: "Your child may demonstrate some increases in problem behavior due to disruption in routine."	Pre: 3
	Post: "I would also make them aware of possible behavior changes."	Post: 4

The number of culturally responsive codes used by participants increased from a total of 9 in the preassessment to 14 in the postassessment. Behavior analysis codes stayed constant at 14 for both pre- and postassessment, although there was variation in which codes were represented.

4.1.2 Reflective Writing Results

Participants completed written reflections on the topics of positionality, interfering behavior, and supervision. Multiple codes were developed and then condensed and combined into groupings of emergent themes. Several emergent themes align under components of MSR theory, including practicing democracy, analyzing circumstances of one's own life, and performing social action skills (Sleeter & Grant, 1999). No data or codes were found that represented the final MSR component of coalescing. One additional emergent theme labeled "after discussion" was identified outside of the MSR framework, which reflects participant comments after group discussion during sessions 3 (behavior) and 4 (supervision). See Table 10 for examples.

Table 10 Reflective Writing Codes With Emergent Themes

Emergent theme: practicing democracy		
Parent Codes	Example Subcodes	Example Responses
Professional experience with culture	Socially valid interventions	". . . making sure our interventions and the outcomes are applicable and effective, and part of that means making sure the results are important to the stakeholders."
	Culturally insensitive practices	"My client has pet names for family members in Arabic. . . . His mom specifically asked that we teach him the Arabic names, but he only learned them in English. . . . She taught us how to say each family member in Arabic and hoped it would be incorporated. I really pushed for learning both and incorporating both names into teaching sessions, but was vetoed."
Culture in supervision	Lack of cultural conversations with supervisor	"I'm not sure I would be comfortable bringing that [race/culture] up, both because of the power imbalance and because it feels accusatory."
	Lack of acknowledgment of diverse clientele	"I wish that we had more discussion about this, especially since many of our clients have ethnic and racial backgrounds different from my own. It would have been a nice addition to my experience to talk with my supervisor about how race and culture play in their professional relationships with their clients and clients' families."
Emergent theme: analyzing circumstances of one's own life		
Parent Codes	Example Subcodes	Example Responses
Positionality	Awareness of culture	"My race is white/Caucasian. I have ties to Italian and Irish culture. . . . I know my culture based on tradition, family lineage, etc."
	Awareness of bias	"As a woman of color, I may be biased to be more enthusiastic when listening to women of color or other people of color."

Table 10 (continued)

Awareness of educational needs	Need education on race/culture as practitioners	"In society, I notice the same sort of thing; we have festivals celebrating different cultures, but I have very little knowledge of them as a whole outside of maybe some foods that they eat and the music they listen to."
	Need education on race/culture as supervisors	"[My supervisor] also acknowledged that there is a severe cultural imbalance where we work, and all parties could use refreshers and new information about cultural responsiveness, inclusion, and sensitivity. I am looking forward to being a part of or possibly leading that discussion!"

Emergent theme: developing social action skills		
Parent Codes	Example Subcodes	Example Responses
How to increase culturally responsive skills	Work to "unlearn."	"To fully address my racial and cultural background, I also have to acknowledge that I was raised to not consider myself to have a racial or cultural heritage (though I know this to not be true now). My family and I were just the average or 'normal,' which is a kind of privilege."
	Need to consider other factors impacting student success	". . . paid more attention to environmental variables in classroom spaces, recognizing inclusivity outside of racial and ability-based intersections, and attending to interactions . . ."
Personal goals	Identify biases.	"I wanted to identify three ways in which my biases impacted my instruction by the end of training and select one tool I could use to address them. I found the biases but had trouble with the tools component."

Table 10 (continued)

	Talk to people with different beliefs.	One skill I targeted was talking to people who have different opinions than me in a respectful and productive way. I think this study helped me move closer to that goal because I now have more resources for doing so, have thought more widely about my own viewpoints.
Emergent theme: after-group discussion		
Parent Codes	Example Subcodes	Example Responses
Behavior Session	Focus on positives	"After the group discussion, I knew to look out for the positive behaviors and how those were not acknowledged by the teacher at any point in the video."
	Training needs	"Someone during our group discussion mentioned that the teacher offered no praise for students that were on-task; she only gave attention to those that were off-task. This was something that I never considered. Providing verbal praise or some form of reinforcement for students that are following directions may mitigate off-task behavior in the classroom."
Supervision Session	Mentors/supervisors	"I feel that you can choose your mentors, but you can't always choose your supervisor. I also think that supervisor is a very superficial relationship. I can interact with my supervisor about job duties and that would be the end, but a mentor is more focused on how those job duties contribute to my future goals. A mentor is focused not only on professional productivity and career paths, but also on their mentee's well-being and how they can help in shaping the mentee to be the best version of themselves."

Table 10 (continued)

	What's next in supervision	"My supervisor and I have actually talked about this study . . . said that she would be more than willing to arrange a discussion or learning opportunity for others based on the topics mentioned in this study."

The most prevalent emergent theme from reflective writing submissions was participant recognition of their own positionality. Positionality—or, using the MSR label, analyzing circumstances of one's own life—is an understanding of yourself and your culture, and how your lived experiences connect or disconnect you from different societal groups. Whether responding to questions about themselves, their observation of interfering classroom behaviors, or their supervision experience, each participant was able to expound on how their own life experiences affected their responses. Often, this awareness was very straightforward, such as listing their ethnicity or family background. At other times, it was more circumspect, such as recognizing the need for more training or to "unlearn" some cultural indoctrination from their upbringing. Delving into understanding one's life circumstances is not typically included in behavior analysis training. Participants' ability to consider connections between their positionality and a variety of common behavior analytic topics was notable.

A second emergent theme connects to what MSR theory refers to as practicing democracy. In the reflective writing pieces, participants referenced their experience with both culturally responsive and insensitive practices as a practitioner and a supervisee. As stated earlier, practicing democracy focuses on instruction and critical thinking about that instruction. Several participants provided specific examples of culturally insensitive practices they have seen and were concerned about in terms of their inability to intervene due to their lower-ranking job. Relatedly, multiple references were made regarding the need for socially valid interventions. A hallmark of behavior analysis is requiring beneficence and social significance to the client first and foremost. Participants were well aware that this tenet is a driving force in client programming. While their current position may not allow them to contradict the insensitive practices they witness, they are certainly critiquing and learning from those experiences.

A third emergent theme was related MSR's social action skills, which calls on individuals to address inequities facing students (or clients). Participants' social actions were referenced in individual ways through the setting of personal goals and, more broadly, by clarification of what they will do differently after participating in this intervention. For example, after the group discussion during session 3, several participants stated they would consider individual student learning histories prior to intervening with student behavior. Participants also reported they would focus more on what students were doing well and less on disruptive actions. These small changes can lead to fewer students being subjected to exclusionary discipline practices through more culturally responsive approaches to behavioral interventions. In session 1, participants were asked to write some personal goals for themselves. After session 4, they were asked to describe how those goals were addressed. Several participants wanted to work on acknowledging their own biases or to begin dialoguing with people of differing belief systems. Participants stated that they felt confident in progressing toward meeting their goals. These individual actions are an important piece of developing social action skills.

One final emergent theme, unrelated to the MSR framework, is change related to group discussion. In each session, direct questions were posed to participants after the didactic portion. Verbally during the session and then in reflective writings, participants commented that their thinking changed after the group discussion. This was especially prevalent in the sessions on behavior and supervision. During session 3 (behavior), we watched a video, collected data, and discussed what drew everyone's attention. Participants watched the video again after the session and wrote about what they saw differently based on the group discussion. The most frequent comment was the newfound focus on what positive actions students were engaged in. Another commonality was that the teacher needed additional skills in how to effectively engage the

students. During the supervision session there was a guided discussion on the difference between mentors and supervisors. Most participants had not considered what those roles meant to them personally and professionally, nor had they considered who might fill those roles for them. Lastly, there was explicit discussion about the role of culture from the view of being a supervisor and a supervisee. Participants were in agreement that culture was not an ongoing topic, but they would like to engage with their supervisors about culture, at least related to client services.

4.2 Research Question 2

The second research question asks if the participants found the program to be socially valid. Overall, participants rated the intervention high for usefulness across multiple components and found the intervention to be socially valid. See Tables 11 and 12 for results.

The written responses from the social validity questionnaire provided additional insight into how participants viewed different aspects of the intervention. The participants also provided supportive feedback for replications of the intervention. As one respondent noted, this information was of value to them, and they felt the time spent in the intervention was productive.

Table 11 Results of Social Validity Likert Scale Data

Likert Scale Question	Average Score
How would you rate the usefulness of the reflective writing exercises?	4.0/5.0
How would you rate the usefulness of the pre- and postintervention survey assessment?	3.3/5.0
How would you rate the usefulness of the case study exercise?	3.7/5.0
How would you rate the usefulness of the connections to the Behavior Analyst Certification Board Ethics Code and Task List?	3.5/5.0
How would you rate the usefulness of the group discussions?	4.7/5.0
How would you rate the usefulness of the textbooks?	4.0/5.0
How would you rate the effectiveness of the instructor in connecting the material to behavior analysis?	5.0/5.0
Average of all social validity questions	4.0/5.0

Table 12 Results of Social Validity Open-Ended Questions

Open-Ended Question	Sample Response
Was there one reflective writing exercise that was the most challenging or beneficial to you?	"I really enjoyed the supervision/mentor writing exercise. It really made me think about my current supervision experience and stimulated some thought about how I may conduct myself as a supervisor in the future." "I think the first one was beneficial since it required the most honest self-reflection."
Was there one group discussion that was most beneficial for you? Or one that was uncomfortable for you?	"I liked the conversation about privilege because it opened my eyes to some privileges I wasn't even aware I had. I also really liked the comment about when you don't have a certain privilege, you are very aware of it, but people with that privilege may have a harder time being aware of it." "I think the most uncomfortable part was recognizing how little I know about other cultures and practiced and how much that lack of knowledge could affect everyday events at the office."
Was there any topic that you particularly liked or disliked?	"I really enjoyed the last session [supervision] most, because it was almost all new information." "I liked the social components that we talked about. I have done a lot of gender and women's studies coursework that focused on self-reflection and critical race theory, so that was particularly interesting for me to see that tied into my current work. I didn't dislike anything topic related; I thought it was all really great information!"
Was there any topic that you would like to see included in future iterations of this intervention?	"Discussing more of case conceptualization; discussing how to present culturally responsive interventions to get buy-in from other stakeholders like teachers, admin, LEAs, etc." "Maybe what being culturally and racially aware looks like in practice."

Table 12 (continued)

Any other suggestions or comments?	"I don't know if it impacts your research to a great degree, but I would have rather had the group discussion questions as reflective writing and the reflective writing as group discussion. I know that we probably couldn't view the materials too far in advance for data collection and reliability purposes, but I think seeing the slides would have shaped my thinking a little more than going in blind." "Maybe skip over some of the more introductory information, like definitions. Since we were a self-selecting group, I imagine most of us had experience with these topics or terminology before."

5.0 Discussion

The aim of this intervention was twofold. First, the intent was to develop a curriculum for teaching behavior analytic topics using a multicultural framework to develop cultural responsiveness in graduate students in behavior analysis. Second, I intended to assess whether engaging with this curriculum influenced participants' cultural responsiveness through an analysis of data collected by questionnaires, one case study, and reflective writing. Instructional strategies included didactic training, group discussions, and multiple reflective writing activities. Overall, results show participants increased their knowledge related to cultural responsiveness, as well as their awareness of how to integrate culturally responsive and behavior analytic practices.

When working with clients from different cultures, it is important to have a thorough understanding of their specific cultural or familial beliefs (Tagg, 2021). Understanding can be achieved through in-depth interviews or intake forms when starting the working relationship and ongoing check-ins throughout treatment. Focusing on practicing in a culturally responsive way that is only based on an assumed identity of the client is not actually culturally responsive (Arredondo et al., 1996). Furthermore, it is necessary to recognize that there is tremendous individuality among clients who identify themselves as part of a particular culture or group (Stuart, 2004). For example, clients who identify as Asian American can represent a vast range of countries, religions, and languages. The training of behavior analysts needs to better represent a wide variety of viewpoints and contributions, especially from those practitioners, clients, and researchers who are often sidelined (Sleeter & Grant, 1999). As stated by Cooper et al. (2019), "Applied behavior analysts should be interested in *any* intervention that works, and curious about *how* it works, even if it means stepping outside the confines of familiar practices" (p. 517).

Research from fields such as nursing (Oikarainen et al., 2019), medicine (Jernigan et al., 2016), and psychology (Benuto et al., 2018; Bezrukova et al., 2016) have shown that culturally responsive interventions can be successful using self-reflection, didactic training, group discussions, and opportunities to practice. Since data exist to support the effectiveness of culturally responsive training from other fields, behavior analysts can step outside their so-called familiar practices to investigate how implementation looks for our field as well.

Knowing that culturally responsive training works is insufficient to create an intervention. What is taught and how it is taught must be grounded in the existing research as well. This intervention directly incorporated several of the recommended practices of Sleeter and Grant's (1999) MSR theory using the principles of BST. MSR's first recommendation is to practice democracy. As envisioned by Sleeter and Grant (1999), MSR theory involved teaching students skills for being active citizens in a democratic society. The intent is to empower students through debate and critical thinking. Desai (2000) recognized that multiculturalism or cultural responsiveness practices need to be analyzed and critiqued to ensure they are disrupting, as intended, the systemic inequities around race, ethnicity, and gender. In this intervention, I worked on empowering graduate students to engage with behavior analytic topics with a critical eye. For example, session 4 of the intervention presented increased cultural responsiveness in supervision. All participants acknowledged these were not conversations they were currently having, but they recognized the importance of discussions such as these. For example, participant 2 said, "If I ever become a supervisor, culture and privilege are definitely something I would like to establish as an open topic for discussion with my supervisees." Participant 2 is ready to set a standard for how they are going to supervise once they are able to do so.

The second recommendation in MSR theory is an analysis of one's own positionality. In other words, what is your culture and how does it fit, or not fit, into broader cultural systems? (Sleeter & Grant, 1999). Multiple fields recognize the need for self-awareness about personal values, beliefs, and biases when learning how to be culturally responsive (Arredondo et al., 1996; Benuto et al., 2018; Sue et al., 1982). In session 1, we explored the meaning participants associated with different terms associated with cultural responsiveness, such as *culture*, *diversity*, and *cultural competence*. Integral to culturally responsive practice is the requirement that you are working with cultures other than your own (Desai, 2000). For example, after session 1, each participant responded to a series of questions from Milner (2007) that asked them to reflect on their own identities and interactions between their culture (e.g., What is my racial and cultural heritage?) and their profession (e.g., What do I believe about race and culture in society and education? How do I attend to my beliefs in my practice as a behavior analyst?). For example, participant 3 stated, "My cultural background hasn't influenced my work in a way that I can see entirely. I think that I make an effort to ask questions about cultural topics a lot more than my coworkers have done and continue to do." Participant 3 also set a personal goal to identify their own biases and increase self-reflection. This statement helps clarify one way they are pursuing their personal goals.

The third recommendation from MSR theory is to engage in social action skills. While it is not yet commonplace, some scholars have been asking fellow behavior analysts to do more to bring about change in our field. From multicultural guidelines developed by Fong and Tanaka (2013) to Najdowski et al.'s (2021) recommendation that faculty be allies and use positions of power to further social justice aims, this movement is growing. Participants in this study are no different. Perhaps because several identify with historically marginalized groups, they are interested in and ready to advocate for change. For example, participant 6 stated, "I believe that

race and culture needs to be addressed in schooling and that the only way to show professionals the harm that is occurring is to explain how clients can be affected by a lack of knowledge from their caregivers." Participant 6 also reflected on what they would do differently with regard to supervision.

The fourth and final recommendation from MSR theory is coalescing. Coalescing reflects the idea that if groups who are oppressed work together, they will be more likely to effect change than if they had worked individually. Cohesion with other practitioners is a requirement of behavior analysts as well through the BACB Ethics Code. Behavior analysts must work with colleagues from other professions as it is in the best interests of their clients. Behavior analysts also need to recognize that other related disciplines align with behavioral principles, such as being applied and committed to experimentation (Miller et al., 2019). Understanding that working together both as allies and historically marginalized groups is one step. We need to transition from recognizing that cultural responsiveness is an issue to integrating and implementing culturally responsive skills into our practice (Weiss et al., 2021).

According to January 2022 statistics from the BACB, this study's demographics are somewhat varied compared to the field overall. The BACB reports that 85% of behavior analysts identify as female, with only .35% identifying as nonbinary; in addition, 10% identify as Black, 54% white, and 22% as Latinx (BACB, n.d.-a). This study had 16% (one participant) identify as nonbinary, 33% (two participants) identify as Black, and 16% (one participant) self-identify as Hispanic. This means that only 33% of these participants self-identified as white, female, and non-Latinx, which is a much smaller percentage than would be expected in a group of behavior analysis professionals based on the most recent demographic data reported above. Participant diversity may have affected the statistical significance of rating scales. However, it is beneficial to know that if

this diverse group of participants supported the intervention goals and procedures of a researcher who identifies as a white, cisgender female, that increases the social validity of the intervention overall (Wolf, 1978).

5.1 Limitations

Several limitations are present in this study. This study had only six participants, which is a small sample size. The research design, a single-group pre-post analysis, lacked a control group and randomization. The small sample size affected the statistical analyses that could be conducted; with more participants, parametric analysis could be used. In addition, due to the COVID-19 pandemic, sessions were held via Zoom. While the online format allowed for effective lecture and discussion opportunities, it inhibited the use of role-play as part of the instructional design. Engaging in role-play experiences and receiving feedback would have provided better alignment with BST. Obtaining quantitative data from participants was done using self-report questionnaires, which can be susceptible to biased responding; more objective measurements would bolster the analysis. The case study/scenario example provided to participants is a newly published vignette, which does not have reliability or validity data completed at this time. Additionally, as participants volunteered to partake in this intervention, they have an active interest in the topic of cultural responsiveness. Finally, these participants were a more diverse group than would be expected with a group of behavior analysts. This level of diversity is beneficial when interpreting the social validity data, but may limit the generalizability to the broader field of practitioners.

5.2 Implications for Practice

Most behavior analysts work with clients in a variety of settings. One implication for practice would be to ensure that forms and paperwork use language and terms that are culturally responsive and free of technical jargon when possible. In addition, while in training, behavior analysts should have the opportunity to practice integrating multidisciplinary skills while still focusing on skills required by the BACB Task List. Another recommendation for practice is for current behavior analysts to work to ensure they are modeling culturally responsive behaviors for their supervisees or direct service personnel. Lastly, I encourage sharing of multidisciplinary materials to minimize effort for other practitioners. There are behavior analysts who are working to support culturally responsive approaches already; therefore, there are materials and guidance available. For example, the textbooks used in this intervention have materials for practitioners. Furthermore, the Association for Behavior Analysis International has two special interest groups (SIGs) for behavior analysts interested in increasing cultural responsiveness. The Culture and Diversity SIG and the Behaviorists for Social Responsibility SIG both have active research and practice agendas.

5.3 Implications for Research

Future research in this area should include multiple approaches. One approach is to conduct randomized controlled experimental designs. Increasing the rigor of the research design expands the ability to draw conclusions and improve interventions. If experimental group designs are not an option, conducting multiple replications of single-group designs could help verify these

findings. Another approach is to increase data collection methods; for example, using participant comments within the sessions as a unit of measurement with discourse analysis would provide additional context to topical discussions. A third approach would be to expand the intervention to include additional sessions. The original proposal for this study required six sessions. Due to recruitment concerns, I downsized to four. A fourth approach is to conduct the intervention sessions in person; this allows for more complete adherence to the BST model by integrating role-playing and feedback components. A fifth approach for research practices is to increase the reported demographic information of both participants and investigators in journal publications. This increased transparency will help increase the external validity and potentially minimize some of the research-to-practice gap. Relatedly, increased clarification about specific intervention materials can help replication. For example, I can provide the curriculum and PowerPoint slides to another researcher. One final approach would be to assess the intervention using the rubric developed by Trainor and Bal (2014). This rubric evaluates culturally responsive research using 15 items. Determinations are made as to whether the research study demonstrated everything from the relevancy of the problem to a justification of the theoretical framework to a complete discussion of the dissemination of findings. It would be helpful for an external reviewer to assess this intervention for replication and expansion purposes.

5.4 Conclusion

Many other fields have done the work of training graduate students in cultural responsiveness with success (Benuto et al., 2018; Jernigan et al., 2016; Oikarainen et al., 2019). Behavior analysts can learn from their work, the work of social justice scholars, and the integration

of the MSR theoretical framework. Developing culturally responsive skills as behavior analysts does not require additional coursework. What it does require is an intentionality of teaching the science of behavior in ways that address the historical inclusion and exclusion of people through explicit and well-defined training (Conners et al., 2019). Drawing on the tenets of the MSR approach, we can focus on differences and not deficiencies of both our clients and our behavior analysis students (Sleeter & Grant, 1999). We must learn from other fields and shift how we teach behavior analysis. Becoming culturally responsive behavior analysts will allow us to meet the true dimensions of our science, be socially valid, and perhaps use our science to change the world.

Appendix A Intervention Curriculum

Session 1: Introduction

Objectives: introductions; purpose of study; review of guidelines of how each meeting will run; understanding of different terms, why this topic matters, and connection to Behavior Analyst Certification Board (BACB) Ethics Code and Task List; familiarization of group with positions of professional associations

Agenda items	Applicable Literature	Group Activities	Assessment
•Introductions •Group rules activity •Terminology •Group activity •Ethics Code and Task List •Professional guidelines •Group activity •Wrap-up •Assessment	•BACB Ethics Code (BACB, n.d.-c) •BACB Task List (BACB, n.d-b) •Milner (2007)	•Group rules •Goals for group •Individual goals •Task List activity •Professional guidelines discussion	Positionality writing reflection

Session 2: ADDRESSING Framework

Objectives: intersectionality and the ADDRESSING model, operationalization of terms for behavior analysis (BA) (collecting data on private events), connection to BA through BACB Ethics Code and seven dimensions

Agenda items	Applicable Literature	Group Activities	Assessment
•ADDRESSING •Intersectionality •Connection to BA •Ethics Code and Task List •Other considerations •Culture and Milner (2020) •Fong & Tanaka (2013) guidelines •Wrap-up •Role-play practice	•Chapter 2 of Conners and Capell (2021) •Ethics Code •Baer et al. (1968) •Fong & Tanaka (2013) •Milner (2020)	•Components of ADDRESSING •Discussion questions •Role-play practice	None this meeting

Session 3: Interfering Behavior and Cultural Responsiveness

Objectives: methods for culturally responsive individualized approach to interfering behaviors and broader conceptualization of systemic inequities and how they impact approaches to interfering behaviors

Agenda items	Applicable Literature	Group Activities	Assessment
•Discussion and video •Functional Behavior Assessment and Positive Behavior Support Plan •Ethics Code and Task List •Disproportionality/School-to-Prison-Pipeline •Culturally Responsive Pedagogy •What is capital? •Wrap-up •Assessment	•Chapters 3 and 4 of Conners and Capell (2021) •Enders et al. (2021, in press) •PBS Wisconsin Education (2020) Yosso (2017)	•Role of BCBA •Video and discussion •Ladson-Billings clip	Reflective writing

Session 4: Culturally Responsive Supervision			
Objectives: understand of various roles and responsibilities of supervision process, how culture impacts supervision			
Agenda items	**Applicable Literature**	**Group Activities**	**Assessment**
•Group discussion •Mentor tree •Privilege breakdown •Ethics Code and Task List •Recommended practices •Assessment	•Chapter 15 of Conners and Capell (2021) •Kazemi et al. (2019) •Sellers et al. (2016)	Mentor/supervisor questions	Supervision reflective writing

Appendix B Pre- and Postintervention Assessments

Culturally Responsive Assessment Rating Scales

Multicultural Sensitivity Scale (Jibaja et al., 2000)

Choose any number between 1 and 6 to indicate your agreement or disagreement with each of the following statements.

1 = strongly disagree; 2 = disagree; 3 = slightly disagree; 4 = slightly agree; 5 = agree; 6 = strongly agree

1. _____ I have a tendency to trust people of my ethnic group more than I trust those of other ethnic groups.
2. _____ I feel very uncomfortable in the presence of members of ethnic groups other than my own.
3. _____ When I observe the hardships of some people, I understand why they are not proud of their ethnic identity.
4. _____ Individuals should be deeply sensitive to the thoughts others have of them.
5. _____ It is good to avoid encounters with people who are different from you.
6. _____ Each ethnic group should strive to become more Americanized rather than maintaining the characteristics of their ethnic group.
7. _____ I feel more secure when I am in the presence of members of my ethnic group.
8. _____ I feel less comfortable when I socialize with persons outside my ethnic group.
9. _____ When I understand the environment from which many people of ethnic minority backgrounds come, I understand why they do not have pride in their ethnic identities.
10. _____ I feel threatened by members of other ethnic groups.
11. _____ The ethnic group that persons belong to frequently determines how I respond to them interpersonally.
12. _____ When I am offended by an ethnic minority, I generalize the behavior to other members of that group.
13. _____ In order to be accepted by persons of other ethnic groups, I frequently find myself altering my behavior.
14. _____ I have discovered that it is better to avoid associating with people who think differently than me.
15. _____ I naturally respond more favorably to people of my ethnic group.
16. _____ I prefer working with people with whom I can identify ethnically.
17. _____ I have not been able to overcome my feelings of uneasiness when I see a group of people from a particular ethnic group together.

18. _____ I feel tense and uptight when I have to work closely with persons who are of a different ethnic group than my own.
19. _____ I would feel more relaxed if I could work with people of my own ethnic group.
20. _____ I do not enjoy associating with persons of other ethnic groups.
21. _____ I classify people on the basis of obvious ethnic characteristics.

Multicultural Awareness, Knowledge, and Skills Survey–Revised Edition (Kim et al., 2003)

Awareness

1. Promoting a client's sense of psychological independence is usually a safe goal to strive for in most work with clients.

   Strongly disagree Disagree Agree Strongly agree

2. Even in multicultural work with clients, basic implicit concepts such as "fairness" and "health" are not difficult to understand.

Strongly disagree Disagree Agree Strongly agree

3. How would you react to the following statement? In general, behavior analytic services should be directed toward assisting clients to adjust to stressful environmental situations.

Strongly disagree Disagree Agree Strongly agree

4. While a person's natural support system (i.e., family, friends, etc.) plays an important role during a period of crisis, formal services tend to result in more constructive outcomes.

Strongly disagree Disagree Agree Strongly agree

5. The human service professions, especially behavior analysis, have failed to meet the mental health needs of ethnic minorities.

Strongly disagree Disagree Agree Strongly agree

6. The effectiveness and legitimacy of the behavior analysis profession would be enhanced if practitioners consciously support universal definitions of normality.

Strongly disagree Disagree Agree Strongly agree

7. Racial and ethnic persons are underrepresented in behavior analysis.

Strongly disagree Disagree Agree Strongly agree

8. In behavior analysis, clients from different ethnic/cultural backgrounds should be given the same treatment that White mainstream clients receive.

Strongly disagree Disagree Agree Strongly agree

9. The criteria of self-awareness, self-fulfillment, and self-discovery are important measures in most work with clients.

Strongly disagree Disagree Agree Strongly agree

10. The difficulty with the concept of "integration" is its implicit bias in favor of the dominant culture.

Strongly disagree Disagree Agree Strongly agree

Knowledge

At the present time, how would you rate your understanding of the following terms?

11. "ethnicity"

Very limited Limited Good Very good

12. "culture"

Very limited Limited Good Very good

13. "multicultural"

Very limited Limited Good Very good

14. "prejudice"

Very limited Limited Good Very good

15. "racism"

Very limited Limited Good Very good

16. "transcultural"

Very limited Limited Good Very good

17. "pluralism"

Very limited Limited Good Very good

18. "mainstreaming"

Very limited Limited Good Very good

19. "cultural encapsulation"

Very limited Limited Good Very good

20. “contact hypothesis”

Very limited Limited Good Very good

21. At this point in your life, how would you rate your understanding of the impact of the way you think and act when interacting with persons of different cultural backgrounds?

Very limited Limited Good Very good

22. At this time in your life, how would you rate yourself in terms of understanding how your cultural background has influenced the way you think and act?

Very limited Limited Good Very good

23. How well do you think you could distinguish “intentional” from “accidental” communication signals in multicultural work with clients?

Very limited Limited Good Very good

Skills

24. How would you rate your ability to effectively consult with another professional concerning the needs of a client whose cultural background is significantly different from your own?

Very limited Limited Good Very good

25. How well would you rate your ability to accurately assess the behavioral needs of lesbian women?

Very limited Limited Good Very good

26. How well would you rate your ability to accurately assess the behavioral needs of older adults?

Very limited Limited Good Very good

27. How well would you rate your ability to accurately assess the behavioral needs of gay men?

Very limited Limited Good Very good

28. How well would you rate your ability to accurately assess the behavioral needs of a person who come from very poor socioeconomic backgrounds?

Very limited Limited Good Very good

29. How would you rate your ability to identify the strengths and weaknesses of psychological tests in terms of their use with persons from different cultural/racial/ethnic backgrounds?

Very limited Limited Good Very good

30. How would you rate your ability to accurately assess the mental health needs of men?

Very limited Limited Good Very good

31. How well would you rate your ability to accurately assess the behavioral needs of individuals with disabilities?

Very limited Limited Good Very good

32. How would you rate your ability to effectively secure information and resources to better serve culturally diverse clients?

Very limited Limited Good Very good

33. How would you rate your ability to accurately assess the behavioral needs of women?

Very limited Limited Good Very good

Case Study/Scenario

Adapted from Olsen & Kelly (2020)

You are a behavior analyst working in an educational setting with an Arab-Muslim family in the United States. During a meeting to discuss the client's IEP, the parents ask what modifications can be made to their child's program during the holy month of Ramadan. They are also curious about what behavioral changes, if any, they should expect. How do you respond?

Appendix C Reflective Writing Prompts

Session 1, adapted from Milner (2007)

- What is my racial and cultural heritage? How do I know?
- In what ways do my racial and cultural backgrounds influence how I experience the world, what I emphasize in my teaching pedagogy, and how I evaluate and interpret others and their experiences? How do I know?
- What do I believe about race and culture in society and education, and how do I attend to my own convictions and beliefs about race and culture in my practice as a behavior analyst? Why? How do I know?

Session 3, Consider the following prompts based on the video.

- What did you notice about the student's behavior? What did you ignore?
- Did you focus on behaviors to increase or behaviors to decrease?
- Did you connect any student behaviors to teacher behaviors?
- What, if anything, changed about your perspective on the observed behaviors after the group discussion?
- What, if anything, would you do differently now than before we had those discussions?

Session 4, adapted from LeBlanc et al. (2020)

- Do you consider the roles of mentor and supervisor to be different? Why or why not? Do you have people in each of those roles? (Do not list identifying names.)
- What experience or training do you hope your BACB supervisor provides for you?
- Have you ever talked with your supervisor about culture, race, or ethnicity and the impact of those variables on being a practicing behavior analyst?
- Are there any professional skills you have targeted to learn this semester?

Appendix D Social Validity Questionnaire

Please circle one response or write a short reply to each question.

1. How would you rate the usefulness of the reflective writing exercises?
1 2 3 4 5

2. Was there one reflective writing exercise that was the most challenging or beneficial to you?

3. How would you rate the usefulness of the pre- and postintervention survey assessment?
1 2 3 4 5

4. How would you rate the usefulness of the case study exercise?
1 2 3 4 5

5. How would you rate the usefulness of the connections to the Behavior Analyst Certification Board Ethics Code and Task List?
1 2 3 4 5

6. How would you rate the usefulness of the group discussions?
1 2 3 4 5

7. Was there one group discussion that was most beneficial for you? Or one that was uncomfortable for you?

8. How would you rate the usefulness of the textbooks?
1 2 3 4 5

9. How would you rate the effectiveness of the instructor in connecting the material to behavior analysis?
1 2 3

10. Was there any topic that you particularly liked or disliked?

11. Was there any topic that you would like to see included in future iterations of this intervention?

12. Any other suggestions or comments?

Thank you for your participation and your feedback.

Appendix E Coding Guides

A Priori Guide (Adapted From Olsen & Kelly, 2020)

Cultural Responsiveness	Behavior Analysis
Awareness of own positionality	Questions about family schedule changes (including eating and sleeping)
Awareness of impact of high-context communication	Potential situations for client that may require new skills to be taught prior
Awareness of role of family dynamics	*Changes in services/school schedule needed to make in order to respect the family's celebration of Ramadan
Awareness of Islamic religion	**Discussion of potential challenges of changes in routine during Ramadan
Awareness of family norms during Ramadan	

* Wording changed from "Changes in services needed to make in order to respect the family's celebration of Ramadan"
** Wording changed from "Discussion of potential challenges of transition in and out of Ramadan routine"

Reflective Writing Coding Guide with Multicultural and Social Reconstructionist Theory and After Discussion Themes

Emergent theme: practicing democracy	
Parent Code	**Subcodes**
Professional experience with culture	Importance of socially valid interventions
	Experience with culturally sensitive practices at work
	Experience with culturally insensitive practices at work
	Professional perspective with young clients
	Personal experience to guide professional work
	Systemic bias in education and ABA
	Inequity in services in education and ABA
	Professional goals' relation to improved ABA for diverse clients
	Openness and respect connected to family interactions
	Professional experience incongruent with personal experience
Culture in supervision	Lack of cultural responsiveness at work
	Ability to use these materials to train others
	Some cultural discussion with supervisor
	No culture discussion specific to participants' own identity
	Not comfortable broaching culture/power imbalance now
	Minimal discussion about race with supervisor
	Preference for more discussion about race
	Clients are often different culture than own.
	Wants to discuss culture with supervisor

Emergent theme: analyzing circumstances of one's own life	
Parent Code	**Subcodes**
Positionality	Awareness of identity
	Awareness of cultural impact of upbringing
	Awareness of privilege/lack of privilege
	Awareness of self as a person of color
	Awareness of culture
	Identification as American
	Awareness of bias
	Physical location and appearance tied to identity
	Self as part of a micro-culture
Awareness of educational needs	Need education on race/culture as supervisors
	Need education on race/culture as practitioners
	Self as learner of other cultures
	How to define culture
	Willingness to "unlearn"
	Understanding of default to "norms" and need to push back

Emergent theme: developing social action skills	
Parent Code	**Subcodes**
How to increase culturally responsive skills	Work to "unlearn"
	Need to consider other factors impacting student success
	Plan to have these conversations with supervisor.
	Political perspective/want of diverse leadership
	Awareness of culture as method of exclusion
	Attend to context/setting events for student behavior.
Personal Goals	Identify biases
	Find tools to address personal biases.
	Ability to talk about race and culture in work setting
	Talk to people with different beliefs.
	Importance of self-reflection/understanding of self and others
	Understand perception of others regarding your race.

Emergent theme: after-group discussion	
Parent Code	**Subcodes**
Behavior session	Focus on positives.
	Training needs
	Importance of classwide reinforcement system
	Learn how to organize environment for success.
	Less attention to off-task, more attention to on-task behaviors
	Consider what else is impacting student success.
Supervisor session	What's next in supervision
	Mentors/supervisors have different roles.
	Supervisors are profession-based.
	Mentors are not tied to professional space.
	Mentor label must be earned.

Appendix F Procedural Fidelity Checklist

	Meeting 1		Meeting 2		Meeting 3		Meeting 4	
	Coder 1	Coder 2	Coder 1		Coder 1	Coder 2	Coder 1	
Introduction/ check-in								
Didactic								
Group activity								
Ethics Code								
Task List								
Group activity								
Wrap-up								
Reflective writing review								

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