Evaluating Cultural Humility and Responsiveness Training on Professionals Working With Diverse Clients in the Field of Applied Behavior Analysis

Mohammed Faiz Alasmari

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Reading Committee:

Kathleen Artman Meeker, Chair

Ilene Schwartz

Carly Roberts

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Abstract

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Mohammed Faiz Alasmari

Chair of the Supervisory Committee:

Kathleen Artman Meeker

College of Education

This study examined the effects of using an online module to train in-service BCBAs and practitioners on practicing cultural humility, responsiveness, awareness, and self-reflection within the ABA field. In the online module intervention, participants were exposed to case scenarios, course materials, and individual cultural humility questions, which highlighted cultural and practice-influenced dilemmas for BIPOC clients. The study implemented training models in culturally humble, responsive and aware practices to improve professionals' skills and understanding. BCBAs and practitioners reported improved skills and comfort levels when implementing ABA evidence-based practices, particularly for clients who may represent culturally diverse backgrounds. The results indicated that BCBAs and practitioners who had

training in cultural humility and awareness practices (i.e., case scenarios, course materials, or individual cultural humility questions) reported better understanding of culturally humble, self-reflective, and personal accountability practices for individuals and families from diverse backgrounds. Professionals who participated in this study reported increasing reflective and culturally aware understanding of practices and applications with BIPOC clients after receiving continuing education materials designed to bring attention to diversity and cultural differences.

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DEDICATION

To the two friends who I separately lost along this journey: Adel and Soundarya, I dedicate this work to your kind and loving souls.

Your impact on me has rather deepened and expanded my horizons on existence.

You are gone, but your memories with me that existed once will never be lost.

Peace be upon your souls.

CHAPTER ONE

INTRODUCTION

Public health services are fundamentally ill-equipped to keep up with the needs of an increasingly diverse population, resulting in inequitable access to health care services (Fong et al., 2017). That is, insufficient numbers of diverse professionals, language barriers for consumers, and the failure of social and academic systems to include and train qualified diverse professionals are specific problems for public health systems. Also, such health system has not attended to the issues of how to train therapists to be better prepared to treat clients from different backgrounds. Education is no better: ethnic and racial disparity is present today between diverse children and professionals despite organizational calls and policy recommendations supporting diversity in the field (Bettini et al., 2018).

Moreover, research shows that public health services and educational systems have been struggling to resolve inequity issues of professional diversity and cultural practices (Fong et al., 2017; Miller, Cruz, & Alai-Rosales, 2019). The professional inequity that has surfaced in both public health and education raises many questions regarding social justice and matters of equity in U.S. society (Fong et al., 2017; Trainor et al., 2019). One might speculate that the existent inequity communicates a hierarchical system of power and imbalance of opportunity rooted in society that possibly contributes to disparity in children's outcomes as well as in the negative and biased expectations of culturally and linguistically diverse (CLD) children (Campbell-Whatley, 2003; Trainor et al., 2019).

Positioning Equity and Social Justice in the Center

The idea of institutional and structural power imbalance is simply a wide range of acts that manifest in some forms of racial disparities that are reflected in real-life examples; these

include lower life expectancy rates, hindered ability to access health care services, ethnically biased incarceration and crime assumptions, higher unemployment rates, decreased housing opportunities, and poorer educational opportunities (Ridgeway, 2016). Educational opportunities, in particular, speak to the current numbers of diversity among professionals in the workforce.

There is a need to foster and continue to develop a deep understanding that having diverse professionals in the workforce reflect cultural practices, and is associated with a perspective of social justice and equity (Nieto, 2000). However, although it has been long theorized that all children and their families, regardless of race and cultural background, should access an equitable and balanced public educational system that meets their needs without exceptions, many institutions and schools have failed to meet this goal, demonstrating consistent unfairness and inequity against children from different social statuses, races and ethnicities, and languages that differ from the mainstream (Nieto, 2000).

Historically, colleges of education are also, in part, involved in this situation, with ties to educational inequity. For example, many programs have established concepts and frameworks based on the deficit theories of diverse populations—from nondominant groups—based on the assumption that these groups are culturally or genetically inferior and did not introduce much educational value (Nieto, 2000). Higher education programs were once defined by an ideology that emphasized identity integration and assimilation to maintain the existing status quo (Nieto, 2000). Due to the lack of diversity recognition concepts in higher education programs, any educational failure of diverse children and their families was attributed to the families' negative characteristics. In this way, higher education programs were excused by placing blame on these groups rather than on their own practices and policies designed to perpetuate such stereotypical

images of "the other." Equitable access to all higher education program resources to dismantle any forms of oppression against the other is warranted (Trainor et al., 2019).

Therefore, diversity in the workforce cannot occur without the collective efforts of higher education programs. For example, Kozleski and Proffitt (2020) recommended three dimensions to advance diversity in the workforce: (a) establishing pathways to attract diverse professionals to teaching and education careers, (b) formulating supportive hiring systems that meet the needs of the newly recruited diverse professionals, (c) improving the work conditions for diverse professionals by developing school leadership. Applying such dimensions will lead to improved and equitable access to higher education programs.

Current Diversity in Applied Behavior Analysis

Applied behavior analysis (ABA) is a natural science that often finds itself at the intersection of public health and education. The ABA field endures a similar scenario of scarcity among CLD professionals working in the field (Fong et al., 2016; Miller et al., 2019). Moreover, in addition to a dearth of CLD professionals, the field of ABA has been lacking cultural knowledge on many different fronts such as intervention, design, training, and service delivery (Fong et al., 2017). As family therapy expands globally, the majority of interventions, training programs, and supervision protocols are established based on Western values and ethics (Ennis-Cole, Durodoye, & Harris, 2013; Seponski & Jordan, 2018; Sumari & Jalal, 2008), and ABA practices are similarly based on Western values and ethics within its interventions and training programs (Fong et al., 2017).

The growing diversity of families of children requesting behavioral services, including those with autism spectrum disorders (ASD) and related disorders, has highlighted the need to consider sociocultural perspectives in ABA practices (Fong & Lee, 2017). It is important to

acknowledge that families' decisions pertaining to ASD diagnosis and ABA intervention practices are primarily contingent upon diversity, cultural values, and beliefs as reflected in the cultural background (Fong et al., 2017). The impact of culture on families and their children with ASD cannot be overlooked while receiving ABA intervention services (Ennis-Cole et al., 2013). Furthermore, consideration of contextual factors is essential to intervention practices because they increase intervention effects on dependent variables. The contextual factors include race, age, gender, disability type and severity, educational level, and socioeconomic status; to facilitate intervention effectiveness, researchers should be aware of and attend to the significant roles of these contextual factors in applied ASD research (West et al., 2016).

The U.S. Census Bureau anticipates that by 2044, America will have become a majority minoritized population in which no dominant group can be identified, and one in five Americans is predicted to reflect a minoritized group other than White or Hispanic (Colby & Ortman, 2017). The increasing diversity of the population cannot be neglected because it will be overwhelmingly part of public-school demographics that reflect families and their children who receive public health ABA services. Currently, nearly 84% of BCBA professionals identify as White (Miller et al., 2019). Thus, we need to create a compatible representation that balances the changing demographics in U.S. society by attempting to address cultural aspects and investigate key factors that cause such scarcity among diverse professionals (Pugach, Gomez-Najarro, & Matewos, 2019; Tyler et al., 2002).

Despite the variation the term "culturally and linguistically diverse professionals" may imply (e.g., race, gender, disability, religion, language), the term here is defined as the individuals who represent minoritized populations in the U.S. and people from historically underrepresented groups (Wald, 1996; Tyler et al., 2004), as well as it represents Black,

Indigenous, and people of color (BIPOC). The terms "professionals" and "behavior analysts" will be used interchangeably throughout to reflect either (a) CLD board-certified behavior analysts (BCBA) and registered behavior technicians (RBT), or (b) individuals who seek to enroll in ABA programs to become board-certified behavior analysts (BCBA).

Equity and Social justice in ABA Practices and Discourse

While this discourse, highlighted by Nieto (2000) above, occurred almost 2 decades ago, the issue of equity and social justice in special education workforce persists today, which in turn, imposes threats to understanding and application of culture diversity practices. Social justice and equity in relation to diversity of children and professionals has been continually discussed in educational programs (Fong et al., 2017; Puagch et al., 2019; Miller et al., 2019). Additionally, the ABA field has been barely part of this discourse, in which a small group of scholars have been applying an ongoing examination of ABA practices delivery to understand its interaction with cultural perspectives and diversity in the United States (Connors et al., 2019; Fong et al., 2017; Miller et al., 2019).

Although the term "social justice and equity" in U.S. society encompasses various meanings in education, in this context, it is directed predominantly at the urgent need to train future professionals in ABA on culture responsiveness. Cultural responsiveness is "defined as using the cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more effectively" (Gay, 2002, p. 106). It focuses on building awareness of one's own and other's cultures while working with diverse populations and accepting, hiring and recruiting diverse professionals to the ABA workforce who are representative of the growing diversity in U.S. schools and communities. These professionals

should fundamentally represent cultures and languages that differ from the systemic mainstream found in the current ABA workforce.

Cultural responsiveness is a stepping stone towards social justice. In other words, social justice means giving all people basic human rights regardless of their various characteristics regarding identity, ability, or social status (Miller et al., 2019). Being responsive to others, including but not limited to: identity, ability, social status, or culture, is honoring aspects of their existing experience and background. Thus, responsiveness to diversity reflects a minor effort to social justice. Denial or failure to meet health, education, political, and civil rights requirements is considered a violation of justice.

All individuals should be uniquely treated according to features they value and possess without being obliged to the hegemonic ideology. At the core, ABA as a field should be involved in this discourse of equity and should expand its philosophical foundation, academic research, organizational policy, and professional and intervention practices to holistically absorb cultural themes (Miller et al., 2019).

Because culture matters, it is ethically necessary to have professionals who are responsive in delivering ABA services to many families and their children from various backgrounds. The relationship between professionals and diverse families should encompass a common ground that positons both parties' beliefs and values to a level of mutual understanding (Rosenberg & Schwartz, 2019). For example, having cultural responsiveness is one form of implementing socially just practices, which begins by acknowledging one's identity and incorporating professionals' values and beliefs – awareness of their biases and personal values- into services delivery for children and families. Therefore, professionals are sensitive to what is effective for their clients (Fong et al., 2017; Miller et al., 2019).

Another important aspect of social justice in ABA is adapting institutionalized cultural knowledge and diversity into professional training coursework and programs. That is, behavior analysts must learn cultural perspectives and directly interact with the diverse children they serve within their educational environment. ABA institutions are better equipped with productive outcomes when culturally relevant services are cultivated to incorporate cultural awareness and responsiveness philosophy into training programs for behavior analysts (Fong et al., 2017; Miller et al., 2019). In fact, part of a democratic society is being culturally competent and responsive to others' values and diverse beliefs and needs (Miller et al., 2019). Therefore, there needs to establish practices in ABA that consider such diversity and are responsive to various cultures.

For the field of ABA to become a thriving, socially-just profession, the field must consider the diverse perspectives of current and future ABA professionals. First, scholars, faculty, and professionals must acknowledge the social alienation, disrespect, and marginalization experienced by racialized groups in ABA (Bettini et al., 2018). Fong et al. (2017) emphasized that a friendly and socially accepting climate must be embedded within many layers of the institutional level that allows use of and access to academic resources: an atmosphere that reflects inclusion of diverse students, faculty, and administrators, as well as commitment to curricula development that infuses historical and current experiences of diverse population, proactive policy, and programs enhancing graduation, recruitment, and retention of diverse prospective professionals and continues efforts by the university programs to foster and improve diversity and equal opportunities.

Conners et al. (2019) stated that ABA graduate programs should incorporate what they called "cultural competency" training into behavior analysts' fieldwork. Driven by what other fields have been using, health care, for example, future behavior analysts should be exposed to

five critical constructs. These five constructs by Conners et al. (2019) include cultural awareness (i.e., examining one's own culture), cultural knowledge (i.e., pursuing foundational education about diverse populations), cultural skills (i.e., collecting culturally influenced data and conducting culturally responsive assessments), cultural encounters (i.e., integrating a cross-cultural approach with clients), and finally cultural desire (i.e., understanding the professional's inclinations to learn about aforementioned constructs). These constructs should be incorporated into the intervention procedures. Supervisors might need to use these five constructs with their future behavior analysts to allow them to evaluate themselves accordingly. The present study is designed to explore these issues and this gap in research and practice. The following research questions are proposed:

Research Questions

1. How do in-service behavior analysts/practitioners rate their knowledge, confidence, and exposure to cultural responsiveness in their ABA practice?
2. How prepared do in-service BCBAs/practitioners feel to serve culturally diverse and Black, Indigenous, and people of color (BIPOC) clients?
3. How do in-service BCBAs/practitioners rate their own likelihood to use culturally responsive and humble practices in their work?
4. Following a brief online module focused on the constructs of cultural responsiveness to what extent do behavior analysts apply these constructs to a hypothetical case?

CHAPTTER TWO

LITERATURE REVIEW

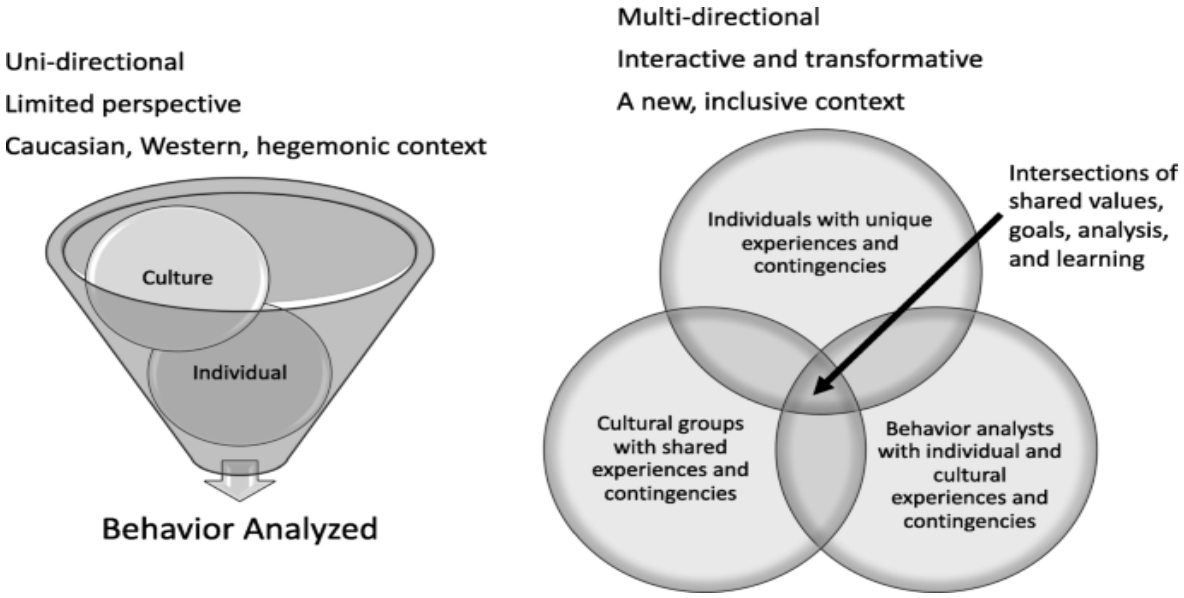
This chapter examines the current state of the literature on cultural practices within ABA. First, the role of culture and identity in ABA is explored. Next, frameworks for preparing future behavior analysts are summarized and critiqued. Finally, recommendations are made based on the literature to encourage cultural humility, responsiveness, awareness, and self-reflection among in-service BCBAs.

ABA is established on the premise of delivering scientific behavioral interventions that address individuals' socially significant needs (Miller et al., 2019). Though the basic behavioral principles are well-established, applying those principles should reflect the consumers' needs. That is, some elements of behavior analysis scholarship and application should be reconceptualized because they may hinder social justice and equity (see Figure 1). As shown in Figure 1, the science of ABA was largely built on linear relationships between an individual and their behavior. Culture played a limited role in the understanding of antecedents, behaviors, and consequences. Such models are in large part due to the historical demographics of behavior analytic leadership and decision-making elites, which reflects a colonial White, male, and Western hegemony (Miller et al., 2019). As a majority, this dominant group disproportionality influences research procedures and practices in the field's scholarly work, which may be exhibited in the current behavioral practices of ABA in which cultural perspectives have not been clearly addressed (Connors et al., 2019; Miller et al., 2019; Fong et al., 2017). As a result, more recent conceptualizations place culture and shared values and beliefs at the center of behavioral relationships. The relationships between culture, an individual, and their behaviors are

multidirectional and complex. Context is essential for understanding the contingencies influencing behaviors.

Figure 1

Future ABA Practices



(Miller et al., 2019)

Note. The figure shows current ABA on the left compared to future ABA practices on the right.

While numbers of female researchers and editors in behavior-analytic disciplinary journals have increased, as noted above 84% of BCBA professionals identify as White (Miller et al., 2019). Notably, diversity information in the field of ABA has been underreported. This sparse information about race or ethnicity might create a form of what is called “cultural blindness” or “color blindness” (Annamma, Jackson, & Morrison, 2017; Miller et al., 2019). Cultural blindness ideology, unfortunately, discounts the importance of race or ethnicity as a significant construct, which perpetuates White supremacy in the way that social and political power is maintained within a group of Whites over other racial or ethnic groups (Annamma et al., 2017; Rogers-Ard, Knaus, Bianco, Brandehoff, & Gist, 2019).

Thus, it is worth examining to understand why ABA as a field has been voiceless on racial and ethnic matters by ignoring the differences exist between cultures (e.g., behaviors, reinforcers) and has encouraged colonialism (Sumari & Jalal, 2008; Miller et al., 2019) in which assimilation to the hegemonic and oppressive group is mandatory (Sumari & Jalal, 2008; Miller et al., 2019; Trainor et al., 2019). Despite a cultural movement in ABA practice among some scholars (e.g., Fong et al., 2017; Sugai et al., 2012), it seems that ABA as a field must better reify, within its behavioral paradigm, a perspective of postcolonial concepts that reject authority and subjugation and rather increase participation, equity, and shared input between stakeholders and professionals (Miller et al., 2019).

Likewise, another conflict within ABA research is related to demographics of racially and ethnically diverse participants and their families. The results of a systematic literature review conducted to examine racial or ethnic backgrounds of participants in evidence-based practice (EBP) research related to children with ASD, revealed that most EBPs in ASD applied research did not include or provide a complete description of participants' demographics (West et al., 2016). This conflict between evidence-based practices and cultural identity representation in ASD research raises many questions about whether these practices are effective when implemented for diverse children (West et al., 2016). That is, research is conducted without attribution to cultural identity such as race and ethnicity information and are instead mostly focused on concerns related to internal validity; as a result the external validity is less likely to be regarded, which draws suspicions around its effectiveness for other diverse groups (West et al., 2016; Miller et al., 2019).

A possible solution to this tension is to expand the ABA worldview through equitable inclusion of more diverse behavior analysts who can bring attention to the intersectional factors

found between race or ethnicity and disability (e.g., ASD). Training and increasing the diversity of professionals in ABA workforce will benefit the field as it broadens the core principles of ABA knowledge about cultural nuances related to behaviorism and its research (Fong et al., 2017).

Various Roles and Impacts of Culture

ABA has been found an effective treatment for learners across disability categories, but the role of culture in the acceptability and use of ABA is undeniable. For example, culture plays a significant role in ASD diagnosis, including the way families perceive such diagnosis and how they make sense of the intervention plans recommended by professionals (Ennis-Cole et al., 2013; Welterlin & LaRue, 2007). Many studies have demonstrated differences across cultures in the traditional perspectives, beliefs, and values regarding ASD acceptance and the use of intervention. African Americans, for example, are most likely to seek family consultation before requiring a professional treatment, whereas White Americans tend to immediately ask for help from service providers (Ennis-Cole et al., 2013). However, Asian Americans might attempt to independently deal with their child's diagnosis before searching for professional treatment. Each individual family holds cultural nuances or identity markers that are invisible and complex (Ennis-Cole et al., 2013). Recognition of multiple nuances and identity markers may necessitate showing the existent differences between cultural groups. The end goal of such recognition aims to limit perpetuating stereotypical prejudices that could emerge from the given previous examples.

The society integrates many forms of sociopolitical dynamics that affect nondominant communities. These dynamics should be considered while introducing ABA practices and interacting with families from different racial and ethnic backgrounds. Given that there is a

common myth and misunderstanding inherent in the White American model of practice (i.e., counseling) toward racial and ethnic groups, it is possible to see that such model of practice is considered valid and applicable across cultures (Sumari & Jalal, 2008; Welterlin & LaRue, 2007). Moreover, counseling practice is thought of as superior and scientifically-based because it reflects the White "desirable and normative" culture. This is not different from the current ABA practice and research in which data concerning cultural bias within the field are still limited, and that cultural matters impact ABA practice and treatment (Wright, 2019). Attending to cultural background of clients and families within the field of ABA should be taken into consideration as cornerstone.

Without considering culture professionals are likely to make wrong assumptions about what works best for BIPOC families with racial and ethnic backgrounds while introducing intervention practices (Sumari & Jalal, 2008; Welterlin & LaRue, 2007). It is possible to assume that cultural identity is singular although it is multi-dimensional (Ennis-Cole et al., 2013; Pugach et al., 2019). As a result, professionals may exert biased and prejudiced intervention practices when failing to acknowledge the subtle and multiple cultural identity markers (Ennis-Cole et al., 2013). That is, identity markers, multiple identities, or multiple social identity markers are defined as the layers found in an individual's identity, such as race, type of disability, gender, social class, and language (Garcia & Ortiz, 2013; Pugach et al., 2019). These multiple identities are immensely influenced and shaped by the current institutional practices demonstrated in the over-referrals of diverse children to special education programs and in less than proportionate representation in gifted programs. For example, labeling a student with a disability in a general education classroom subjects that student to a lower status based on the socially perceived image of disability; however, other characteristics/markers such as gender or social class may reduce

this label and create a form of privilege for some (e.g., White, male, middle class), unlike African American males, who might be further oppressed and disadvantaged by the label of disability as well as a low-income background (Garcia & Ortiz, 2013). Black children are more likely to be labeled as emotionally disturbed or having learning disability than their White peers (Abrams & Moio, 2009). This example suggests how a professional educator might look differently at both students regarding the interaction of their race, disability, and social class (e.g., African Americans), which creates a form of multiple markers of identity that leads to exacerbated oppression for some nondominant groups.

The interplay of two or more identity markers or differences (e.g., disability, race, gender, social class, language), also known as *intersectionality*, is concerned with matters of educational inequity, marginalization, social justice, and political power misrepresentation (Garcia & Ortiz, 2013; Pugach et al., 2019). Among various views that have been applied to explain the interaction between multiple factors of cultural identities are critical race theory (CRT) and dis/ability critical race theories (DisCrit). CRT seeks to uncover racial power and the subsequent effects of racial hierarchies as well as attempts to understand the underlying layers that keep this dynamic persistent, and CRT does so in the pursuit of promoting social actions that discontinue and disrupt its effects (Ladson-Billings & Tate, 1995; Parsons, Rhodes, & Brown, 2011). Furthermore, DisCrit combines two aspects of CRT and disability studies (DS) to introduce a new theoretical framework that investigates both race and ability as constructs that perform together; DisCrit investigates these dual constructs and their effects on education and society in the United States (Annamma et al., 2013). Theoretical frameworks are certainly needed to understand and deconstruct complicated phenomena (e.g., race or racism and ability or ableism and their intersectionality) to create tools and concepts that assist us in rejecting forms of

inequities and marginalization against people from all racial and ethnic backgrounds (Ferri & Connor, 2014). The current study draws upon the basic tenets of CRT and DisCrit in its examination of BCBAs' perspectives on racism and ableism.

Furthermore, intersectionality rejects the principle of unitary analysis that examines the individual in isolation without considering other identity markers inherent in people. Rather, it acknowledges the need to analyze all compounding and complex effects of the racial, socioeconomic, and gender identities represented in the individual to help reconceptualize and understand the social structure that formulates this combination of individual's identities to unmask perceptions, meanings, and stereotypes produced by these interactive multiple identity markers, which results in the marginalization and disempowerment of racially and ethnically diverse groups (Garcia & Ortiz, 2013; Pugach et al., 2019).

Theoretical frameworks help shape various aspects of professionals' practices. To help improve cultural awareness, professionals should engage in training sessions that allow them to have the opportunity to reflect on their own culture, thoughts and beliefs (Fong et al., 2016).For example, specific to this study, they are encouraged to develop a broad understanding of the family/child's cultural identity, including community members, relatives, teachers, and administrators. Building a sociocultural framework of the child/family's language and culture can occur through connecting with individuals close to the family. In addition, professionals may ask families what their treatment preferences are in terms of their cultural norms and beliefs. For example, Filipino families prefer having children sleep in the room with parents and consider it the best choice for the child's care and development (Conners et al., 2019; Ennis-Cole et al., 2013; Fong et al., 2016; Lindsay et al.,2012). Thus, professionals should be aware that cultural knowledge is reflective of all families and their needs. Although many diverse families have

immigrated to other countries and may have adapted habits of the new cultural identity, professionals should critically assess the contextual culture in addition to embedded ethnic or racial identity (Sumari & Jalal, 2008).

Immigrants and Multiple Identities. Moreover, intersectionality highlights not only the interactions between individuals' identities but also those of both individual and institutional identities (Pugach et al., 2019). For example, immigrants represent a complex status of invisibility in addition to other statuses as English learners, people who encounter economic hardship, and racial and ethnic minoritized population as well as having a child with ASD (Miller et al., 2019; Pugach et al., 2019). It is often easy for an immigrant to only be identified as an English language learner. In contrast, an immigrant status puts the individual at a crossroads consisting of complex political, social, and cultural processes that increase in difficulty if one considers immigrants' dislocation and other identity factors of race, class, gender, and religion (Pugach et al., 2019). The intersectionality lens attempts to surface the immigrants' multiple marginalized and complex identities positioned within the individual and societal level. All these identities can shape and conflict with societal and institutional structures in the ways they interact and intervene with families and their children from immigrant backgrounds.

That is, immigrant families with children with ASD can encounter further challenges with these conflicting identities when attempting to access ASD services as not being able to have appropriate cross-cultural services. Given that many universities and medical agencies are Western-based, professionals are most likely to be trained in practices that reflect Western perspectives, that do not reflect families' various cultures, and that demonstrate an inadequate understanding of the intersection of multiple identity markers (Welterlin & LaRue, 2007). For example, when professionals depend only on the "medical model" of the *Diagnostic and*

Statistical Manual of Mental Disorders (DSM-5) to classify and diagnose immigrant children with ASD and their families, they fail to recognize the multiple markers of race, social status, and religion with other many identities embedded in these families' cultural background (Suamri & Jalal, 2008; Welterlin & LaRue, 2007). Moreover, what appears typical and atypical based on the Western views may not be accepted by immigrants, who might have different interpretations of the disability that they associate with their unique historical, social, and political factors (Welterlin & LaRue, 2007). It is therefore misleading to assume that expected behaviors and assessment standards are universally accepted as a truth, and professionals from dominant groups should not be tempted to value normalization principles while interacting with diverse racial and ethnic families with their children with ASD (Welterlin & LaRue, 2007).

One of the foundational dimensions of ABA is its focus on socially important behaviors (Baer, Wolf, & Risely, 1968). ABA interventions are widely accepted and recognized for their effectiveness with children with ASD (Ennis-Cole et al., 2013; Welterlin & LaRue, 2007). However, it might not be the case for all families considering those from diverse backgrounds. In some cases, families' influence on outcomes may be discounted and that people with expertise—in this context, ASD researchers—had the right to determine the outcomes and what may or may not work for families and their children based on their knowledge. Unfortunately, this view may be based on the medical model perspective in which professionals are not only responsible for diagnosis and pre-intervention information, but they also decide on the best interventions that these families should receive and implement (Artiles, 2013). For example, Asian immigrant families might not agree with some practices that focus on teaching independent skills (e.g., eye contact) for their children with ASD, and they consider it disrespectful to have eye contact with elders (Welterlin & LaRue, 2007). The medical model disregards components such as societal

and historical factors, focusing only on the individual as the unit of interest. In this way, the individual is isolated from contextual factors, and he or she is treated as a unit of either race or disability, without paying attention to the intersection of race and disability (Artiles, 2013). In fact, various scholars from different fields, including education, have perpetuated this divide between race and disability, thereby reinforcing invisible and silent prejudice and inequities against marginalized groups. Understanding the historical damage that the medical system has caused for racial and ethnic minoritized families may help increase collaborative and successful planning in ASD interventions (Miller et al., 2019).

Intersectionality of Race and Disability. The complexity described in the previous section poses challenges to the extent that several factors, of which race is but one, can affect interaction with individuals from various racial or ethnic backgrounds, including immigrant populations. While race alone may be a sensitive construct that affects interventions for children with ASD and their families, both race and disability, interdependently, can have a whole different relationship that subjects nondominant groups to another form of social inequity and hinders access to ABA services (Annamma, Connor, & Ferri, 2013). A combination of race and disability, stated earlier as dis/ability critical race theory (DisCrit), interconnect and intersect in more complex ways that are seen in schools and society (Annamma et al., 2013). DisCrit examines how race and ability are socially constructed: for example, ways in which children with ASD encounter both forms of being differently raced and disabled. DisCrit attempts to explore the structural power of racism and ableism by highlighting the historical, social, and economic interests of restricting access to educational settings for children with ASD from nondominant communities.

In other words, ability is perceived and established based on ideologies of race and is therefore positioned within institutional and social structures that are influenced by personal attitudes (Annamma et al., 2013). Consequently, the interlocking identity of race and disability formulates and affects, in an implied way, how behavior analysis services are delivered, in that children with ASD and their families might be approached differently because of the intersectionality of race and disability identities (Miller et al., 2019).

In addition to the necessity to recruit and increase numbers of CLD behavior analysts (Fong et al., 2017; Trainor et al., 2019), it is also important to educate all professionals of various backgrounds in the ABA workforce to foster multiple ways of understanding sociocultural identities and their intersectionality to reflect on those of the children and families with whom they work (Boveda & Aronson, 2019). Training ABA professionals to recognize the intersectionality inherent within their own personal sociocultural identities and experiences has been shown to have a greater effect on diverse children and their families because, as part of a racialized society, these professionals have grappled with these identities; thus, reflecting on the past may assist them in helping diverse children and their families manage multiple sociocultural identities (Tarinor et al., 2019; Pugach et al., 2019). All identity markers should be considered within the behavior-analytic approach as contextual variables that in a way or another have a meaningful impact on children and families receiving ABA services (Sugai et al., 2012).

Culture Awareness, Responsiveness and Humility Through an Ethical Lens

Complex situations involve choosing solutions that are not necessarily governed by a professional code (Kidder, 2003). Behavior analysts must be aware of scenarios that put them in ethical dilemmas. These dilemmas are challenging to address in a manner that represents a clear-

cut rule; it is possible that producing solutions to these dilemmas might involve choosing between right versus right decisions (Kidder 1995; Rosenberg & Schwartz, 2019).

Our personal and cultural lenses shape our values and beliefs, which may affect our judgment of others' behavioral contexts (Rosenberg & Schwartz, 2019). ABA is most likely to disregard the impacts of personal values and beliefs. These personal values and beliefs influence our interpretation of an ethical code and reflect decisions about what we assume an ethical and moral behavior (Rosenberg & Schwartz, 2019). The need to consider ethical code and culture in a concurrent approach is warranted. Thus far, ABA ethical code and coursework have fallen short of raising awareness and have failed to include training in conjunction with cultural matters perceived through an ethical lens.

The Behavior Analyst Certification Board (BACB)[1] mentions multiculturalism and diversity in the Professional and Ethical Compliance Code for behavior analysts only under Code 1.03, as Maintaining Competence Through Professional Development. This code highlights the significance of maintaining skills and responsiveness in areas that need specialized professional knowledge and development (Behavior Analyst Certification Board, 2017). But BACB behavior analysts are not required to take courses or receive training in multiculturalism or diversity; instead, it is only encouraged that behavior analysts obtain professional development. Therefore, the BACB requires training and education in supervision and ethics while ignoring the importance of being ethically and culturally responsive (Conners et al., 2019). The BACB has not kept pace with many calls of the recent cultural movement toward systematic change and attention to possible matters of racism and prejudice in the field.

[1] The new Ethics Code for behavior analysts about cultural responsiveness and diversity will be effective January 1, 2022

With the dire necessity to educate and expose future behavior analysts to multiculturalism and diversity perspectives, anti-bias and anti-racism work involving consistent activities to decolonize practices is also warranted. Unfortunately, after 50 years of research, behavior analysis literature rarely discusses racism and prejudice (Matsuda, Garcia, Catagnus, & Brandt, 2020). It is frequently stated in the applied behavior analysis' recent research that behavior analysts still lack experience and knowledge with the needed training to work with cultural minoritized populations from diverse backgrounds (Conners et al., 2019; Beaulieu, Addington, & Almeida., 2018; Matsuda et al., 2020). While the ABA field has long ways to go, Matsuda et al. (2020) introduced many valuable recommendations, to begin with, to make a change to various issues of cultural bias and racism. Some of these recommendations are: (a) behavior analysts should be aware of and attentive to personal and professionals biased behaviors, (b) collect data in applied settings about prejudicial behaviors, (c) explore ways to reduce overt prejudiced behaviors in different settings, (d) establish organizational procedures to systematically reduce cultural and racial bias, (e) extend and replicate current studiers to other diverse groups, and (f) investigate the racial experience of professionals and participants.

Cultural Variables Significance. Furthermore, it is crucial to know that cultural variables function together, which may result in the success or failure to establish rapport with caregivers and families. The variables of culture play essential roles for families and caregivers when caregivers perceive a diagnosis and plan intervention treatments (Beaulieu et al., 2018). Awareness of cultural variables may determine whether families choose to continue or discontinue ABA services. Thus, behavior analysts should know how to engage with culture in different forms from the moment a health care agency agrees to introduce services to the client.

Although cultural variables are arising more than ever in recent research of ABA, research on their effects is scarce (Beaulieu et al., 2018).

Leaders in the field of ABA have acknowledged contextualism as part of ABA's worldview, and although there are still many problems associated with culture and racism, such worldview emphasizes the importance of studying behavior in context and the role context plays in evaluating behavioral interventions. The basic science behind behavior might not change based on culture; however, recognizing the client's culture will affect interventions or treatment outcomes (Neely et al., 2019). Because behavior analysts are likely to provide services for BIPOC populations, identifying cultural values (e.g., preferences and repertoires) increases therapeutic benefits in the client's behavioral context. Cultural values include "behaviors likely to be reinforced by the client's community," or "stimuli established as reinforcers through a learned history" (Neely et al., 2019, p. 1), though it is worth emphasizing not all culturally diverse clients share the same faith in the scientific evidence of behavior analysis that a behavior analyst holds (Rosenberg & Schwartz, 2019).

Behavioral variables operate in tandem with the social environment, reinforcing or decreasing historically learned behaviors. Highlighting the importance of behavioral variables allows behavior analysts to improve and modify goals before conducting assessments or when applying interventions. In doing so, behavior analysts will implement intervention plans with the social validity needed to meet the client's social environment (Neely et al., 2019).

The incorporation of cultural variables and the awareness of cultural responsiveness- described earlier - within behavioral services strengthens and improves ABA principles. It also demonstrates "an ethical commitment to patience and justice" (Miller et al., 2019, p. 3). According to the BACB Guidelines for Responsible Conduct, behavior analysts should pursue

cultural competency and sensitivity training to increase their knowledge when working with CLD clients. They should seek to learn new skills about diversity and cultural competency from experts in that area. Also, behavioral analytic tools should be culturally sensitive and should be translated for global access (Fong & Tanaka, 2013). A new requirement issued in the BACB Task List (fifth edition) includes a supervision training course that provides the opportunity to embed multiculturalism and diversity topics into the ABA clinical supervision practices (Conners et al., 2019).

Cultural competence is "a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or profession to work effectively in cross-cultural situations" (National Center for Cultural Competence, 2018). Connors et al. (2019) suggested that "cultural competency is achieved when a person is capable of integrating and transforming knowledge about diverse individuals and groups into specific standards, practices, policies, and attitudes that are applied in appropriate cultural settings to enhance the quality of services provided, thus producing better outcomes." The intrinsic role cultural competence or responsiveness training implies is the ability to incorporate others' values and beliefs into ABA scientific practices and intervention plans. Cultural responsiveness and awareness intend to support cultural humility, emphasizing self-reflection, and accountability toward diverse cultures.

Cultural Humility. Wright (2019) proposed a set of questions for individuals and organizations to consider within the ABA practices. Using such questions will allow professionals in the ABA field to apply culturally humble and self-reflective practices. On the individual level, the essential questions that promote critical self-reflection and personal accountability are: "What are my cultural identities? How do my cultural identities shape my world view? How does my own background help or hinder my connection to

clients/communities? What are my initial reactions to clients, specifically to those that are culturally different than me? How much do I value input from my clients? How do I make space in my practice for clients to name their own identities? What do I learn about myself through listening to clients who are different than me?" (Wright, 2019, p. 807). Thus. professionals might need to use these questions as an applied practice, which is intended to improve critical self-reflection. Examining the concept of individual cultural humility questions is recommended within the practice of behavior analysis (Wright, 2019).

The ABA foundations allow us to accomplish a great deal of progress in socially just practices and cultural matters (Miller et al., 2019). Whether it is cultural competence, humility, or responsiveness (Miller et al., 2019), implementing humble practices and considering one's identities should be the focus of behavior analysts' endeavors. Cultural humility "incorporates a lifelong commitment to self-evaluation and critique to address power imbalances and develop mutually beneficial and nonpaternalistic partnerships with communities" (Wright, 2019, p. 805). Keeping openness to the other in terms of cultural identities, its importance concerning the other "other-oriented" defines the key elements of cultural humility (Wright, 2019). Using cultural humility is further feasible compared to cultural competence because the latter requires mastery of others' cultures (Wright, 2019), which may be challenging. In contrast, cultural humility encourages the need to have a lifelong and ongoing learning process about other cultures (Wright, 2019).

However, the newer term in the research literature "cultural competemility" integrates cultural humility and competence to emphasize the need to apply a continuous learning process about diverse cultures (Najdowski, Gharapetian, & Jewett, 2020). Culturally humble individuals allow themselves to make mistakes within learning and self-reflective journeys, which require

personal accountability for them to be culturally competent. (Najdowski et al., 2020). To reflect on cultural humility and competence or responsiveness practice is to know how to interpret related knowledge of policies, attitudes, traditions, and history about diverse cultures, and then implement them in a way that meets the best equity goals possible for specific cultures (Najdowski et al., 2020). Practitioners in the ABA field must evaluate their cultural influences and biases about the other, review the historical impact of such influences, and learn about the effects of their cultural upbringing in terms of evoking overt and covert behavior patterns about other cultures (Najdowski et al., 2020).

It is optimal to establish self-management and reflection programs to build culturally humble repertoires (Wright, 2019). Self-reflection involves being aware of individual accountability, including private events. Wright (2019) provides an example as that when prejudicial thoughts or personal bias arise in one's mind during the intervention with clients, it might help vocalize these thoughts with the supervisor to assess them and attempt to eliminate such bias from one's behavioral repertoire. Thus, dealing with dilemmas derived from cultural conflicts that will affect behavior analysts' decision-making and cultural practices is essential. Professionals should learn how to manage such dilemmas in the future (Rosenberg & Schwartz, 2019). Behavioral skills training (BST) is one approach to implement cultural practices into the ABA field.

Preparing Behavior Analysts for Effective, Culturally Responsive, and Humble Services

Preparing behavior analysts to adequately implement culturally influenced interventions is significant. There is evidence that behavioral approaches such as Behavioral Skills Training are effective at improving culturally responsive behavioral assessment and intervention (Neely et al., 2019). While promising outcomes may result from cultural responsiveness training, such

outcomes are not guaranteed to occur. There is a crucial need for additional research on training systems that not only teach White behavior analysts to build cultural awareness, but also work for BIPOC behavior analysts to build on their funds of knowledge. While no system yet exists that adequately prepares behavior analysts to provide culturally humble and responsive services, there are several existing models that teach and support applied decision-making during complex and nuanced situations. Such models hold promise for teaching the constructs of cultural responsiveness. In this section, I review research on two decision-making frameworks: ethical decision-making and case method of instruction.

Ethical Decision-Making (EDM) -- Various Approaches

EDM includes a variety of principles and approaches (Kidder, 2003). All relate to the intrinsic notion of making EDM in situations that entail right versus right circumstances. The right versus right scenario occurs in different situations; making two right options seem suitable and challenging at once. Such a scenario may impose consequences and benefits on both sides of one's action or decision making. Of these many principles variations that existed, a discussion of three EDM principles of moral philosophy will be demonstrated in this context. These principles are ends-based, rule-based, and care-based (Kidder, 2013).

First is the ends-based thinking known as utilitarianism. In this principle, a key element is doing “the greatest best for the greatest number” (p. 12). That requires some cost-benefit analysis to measure who will or will not benefit, and then evaluate the intensity of such benefit. It is an assessment of the best outcomes and consequences that could result from making an ethical decision. By examining different possible results, ends-based thinking relies on producing the best effects over the other most significant variation.

Second is ruled-based thinking, known as the categorical imperative in which ethical decision making depends on the individual's moral responsibility. It is also known as deontological thinking, meaning "obligation" or "duty" (Kidder, 2013, p. 13). Follow the principles you want to see others follow, so such principles become universal and do justice to everyone. This principle is identified with the well-known philosopher Kant; the quest is to hold anyone to the best action to create the greatest good for others. Ruled-based thinking stands in opposition to ends-based thinking. It argues that it is impossible to predict a clear image of the consequences that follow our actions. Therefore, rule-based thinking urges individuals to stick to the duty that everyone must do regardless of consequential outcomes. Its cornerstone emphasizes doing what one must do per the fixed rules, rather than doing what one thinks it may work as an outcome (Kidder, 2013).

The third principle is case-based thinking, within which love for others comes first (Kidder, 2013). Case-based thinking stands on the premise of treating others just as you would like to be treated. It is also known as the golden rule, or as philosophers call it, the reversibility thinking. This principle encourages individuals to test their actions by placing themselves in others' shoes. As a recipient, imagine what outcomes you would like to get. Often case-based thinking is linked with Christianity and many universal religions' teachings, in which love and good deeds will circulate back to the doer (Kidder, 2013). Although some philosophers (e.g., Kant) argue that this principle does not stand alone as a practical principle, many individuals believe in it as a valuable ethical principle for centuries.

As such, it is worth noting that reviewing these three principles related to EDM is significant. Learning how to make informed decisions in these complex situations is a necessary skill that behavior analysts need to acquire, especially when competing factors of ethics and

culture operate together. Knowledge per se will not be sufficient for professionals and behavior analysts to illustrate responsiveness because cultural and ethical issues overlap. Such complex problems may not be easily translated into a set of procedures to apply to each family and culture (Snyder & McWilliam, 2003).

At present there is no road map that can be followed in every circumstance involving ethical behaviors and cultural issues. For example, the BACB code seems to suggest unclear or conflicting considerations about culturally influenced contexts and provides little guidance (Rosenberg & Schwartz, 2019). It might be unfeasible to propose a set of rules and solutions that work for widely diverse cultures. Thus, reliance on scientific knowledge as a cornerstone of ABA is valid, but it is not the only way to discuss matters of culture and diverse family beliefs (Rosenberg & Schwartz, 2019). When dealing with ethical dilemmas, it is advisable to consider different ethical lenses to reach well-reasoned and ethically inclined decision-making (Rosenberg & Schwartz, 2019).

The Ethical Decision-Making Model (EDMM). Rosenberg and Schwartz (2019) defined EDMM as "a process of systematically evaluating an ethical dilemma, considering not only the profession's ethical guidelines but also other factors that might influence an ethical decision" (Rosenberg & Schwartz, 2019, "Ethical" section, para. 1). The EDMM involves a systematic process to evaluate ethical dilemmas through different lenses, not only by following the BACB ethical code but also by investigating the nuances that affect a well-studied ethical decision (see Figure 2).

The first step in ethical decision making outlined in Figure 2 is to reflect on one's own reaction. Behavior analysts reflect their own cultures, so their ethical behavior may be susceptible to previous beliefs. The morality of following rule-based ethics or decisions does not

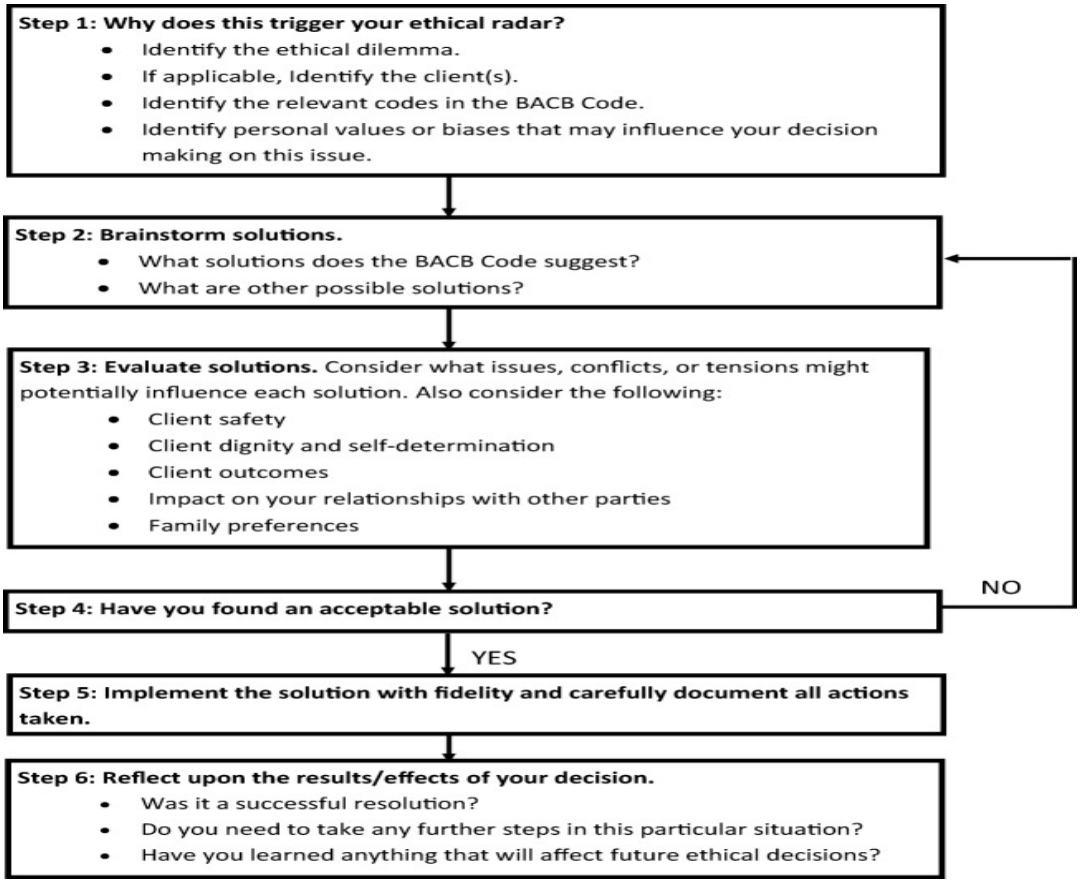
produce the absolute truth of ethical behavior. The rule-based approach proposes that specific rules govern moral and ethical behaviors, and these rules can work in different contexts and circumstances. As discussed earlier, Kant's position is that everyone should follow principles that eventually derive from universal standards.

But, following principles to meet universal standards will not suffice. There should not be a standard, philosophically speaking, that applies to the universal agreement. Universal standards should not be sought per se because they will logically contradict cultural responsiveness, diversity, and understanding of the other. As shown in Step 2, the behavior analyst must consider first the universal standards of the BACB code, but they must also consider other possible solutions and evaluate these carefully. They must also evaluate the impact and effectiveness of their decisions for themselves, clients, and communities. Finally, they must reflect on the final decision results, determine its success, and whether they need to take further steps in the current situation and toward future ethical decisions.

Relying on these ethical rules based on adherence to the moral rule in the Kantian sense will not serve the highest good because this view is limited as it is only presented through a Western-centric lens (Rosenberg & Schwartz, 2019). As behavior analysis is rapidly spreading globally, ABA must develop a comprehensive approach to EDM, including various cultures. Behavior analysts must develop an in-depth understanding through discussion and practical role-playing to learn the rationale for each ethical guideline (Rosenberg & Schwartz, 2019).

Figure 2

Ethical Decision-Making Model



(Rosenberg & Schwartz, 2019)

Note. BCBAs can take decision-making steps when facing ethical dilemmas.

Ethical decision-making and EDMM are teaching and learning frameworks. As such, they may also be supported by instructional approaches such as the Case Method of Instruction (CMI). All three offer opportunities to practice decision-making and problem-solving skills in complex contexts.

The CMI and Decision-Making Skills. The CMI is one category of the broader class of discussion methods of instruction. It was first introduced and adopted by Harvard Business School (McWilliam, 1992). Because management and administrative students lacked practical

knowledge dealing with actual organizational problems through lecturing, CMI was applied to bridge the gap between theory and practice (McWilliam, 1992). Though CMI is mostly known in the business, medical, and law schools, it has been applied in teacher education for quite some time as early as the mid-1800s (Snyder & McWilliam, 2003).

In 1992, McWilliam recognized the value and skills CMI brought to the educational field and introduced its applications to early intervention by co-authoring the first casebook related to realistic cases that may occur in early intervention practice (Snyder & McWilliam, 2003). CMI proposed an alternative strategy to train early interventionists on the growing complexities of teaching tasks that involve working with families from various backgrounds (McWilliam, 1992).

Further, it is implemented to educate professionals on bridging the gap between family-centered principles and family-centered practices (Snyder & McWilliam, 1999). CMI uses an active and engaging instructional strategy that helps professionals enhance problem-solving and critical-thinking skills (see Figure 3). CMI aims to teach professionals to evaluate and analyze potential influences on their decision-making process using belief clarification and valuing multiple perspectives (Snyder & McWilliam, 2003).

CMI uses open-ended cases to enhance professionals' critical thinking to arrive at well-studied solutions. Often, cases are written based on real-life narratives that possibly happen in the professionals' daily encounters. The cases are developed as a dialogue between the professional and clients to enhance the communication process and reflect on clients' inclusion and participation. While CMI emphasizes training professionals on implementing practical skills to various dilemmas, its end goal reflects not reaching the right or wrong answers. It aims at challenging professionals to consider alternative answers and solutions, even in the future. Through the instructor's facilitation, professionals propose solutions to cases and engage in

discussions interactively, attempting to develop a decision-making process. Within this process, professionals listen to each other's' perspectives while discussion happen in two forms; whole-group participation and small groups such as role-plays, team-simulations, and cooperative learning activities.

The CMI has shown its effectiveness as several studies were conducted in early intervention, reporting the increase of professionals' knowledge, application skills, modifying personal attitudes, and developing of problem-solving skills (Snyder & McWilliam, 1999; Snyder & McWilliam, 2003). A study conducted using CMI to train students enrolled in an interdisciplinary course to implement family-centered content working with families demonstrated that students changed attitudes and acquired application skills related to families-centered service delivery. Moreover, students reported that they could implement problem-solving skills in novel cases (Snyder & McWilliam, 1999). Using reflective thinking, understanding multiple perspectives to surface one's beliefs, which influence decisions, are essential goals of CMI (Snyder & McWilliam, 2003).

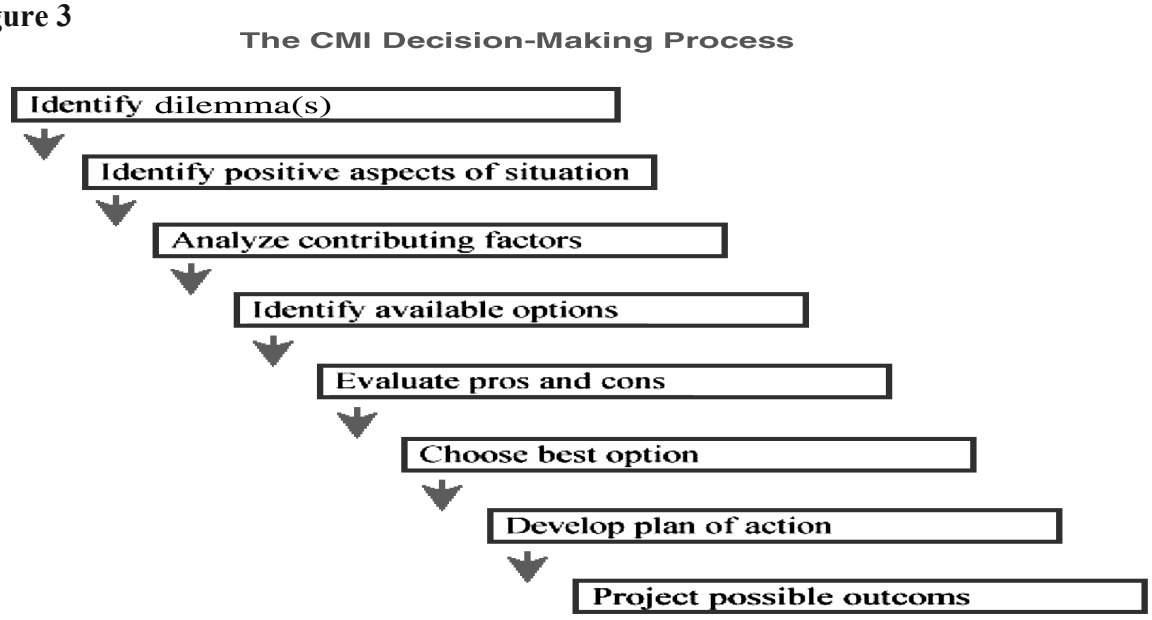
In short, CMI fosters a principle of developing decision-making skills when faced with family-centered service issues or when working with families who represent complex cultural and behavioral backgrounds. Arguing that EDM, EDMM, and CMI could fit in one context is possible, in a way, that all apply together. At the heart of CMI’s philosophy is adhering to teach problem-solving and decision-making process.

Thus, CMI can prepare professionals for realities, complex problems, and real-life cases that they might encounter in the workplace (Snyder & McWilliam, 2003). In particular, Figure 3 outlines what professionals are encouraged to do when facing dilemmas related to families representing complex cultural and behavioral backgrounds. They are trained to use the CMI

decision-making process, which consists of: (a) identifying challenges, (b) identifying valuable points of the current dilemma, (c) highlighting and analyzing contributing/related factors to the challenge, (d) considering all sides of the challenge, (e) select best options and write a plan with possible outcomes. Professionals can use these steps to problem solve challenges with different families.

Researchers implemented CMI in early intervention practice; however, its application to the specific ABA field may not be existent. The current project attempts to utilize CMI within the ABA profession as a training medium. Having behavior analysts exposed to future culturally and behaviorally influenced dilemmas is warranted.

Figure 3



(Snyder & McWilliam, 2003)

Note. CMI demonstrates what leads to the evaluation of decision-making outcomes.

This project's centerpiece is to acquire broader learning skills about cultural humility practices and deal with future culturally influenced issues that sometimes manifest in a complex and sophisticated form. As stated earlier, cultural dilemmas rarely appear in a clear-cut scenario

leaving an individual with little to act upon, especially without having exposure to an applied and appropriate cultural training. Admittedly, practicing cultural humility and self-reflection within the ABA field might be challenging because there are no clear applied research studies that provide guidance, except for some suggestions about culturally influenced contexts. There is still little known about cultural humility practices and their implementation in ABA.

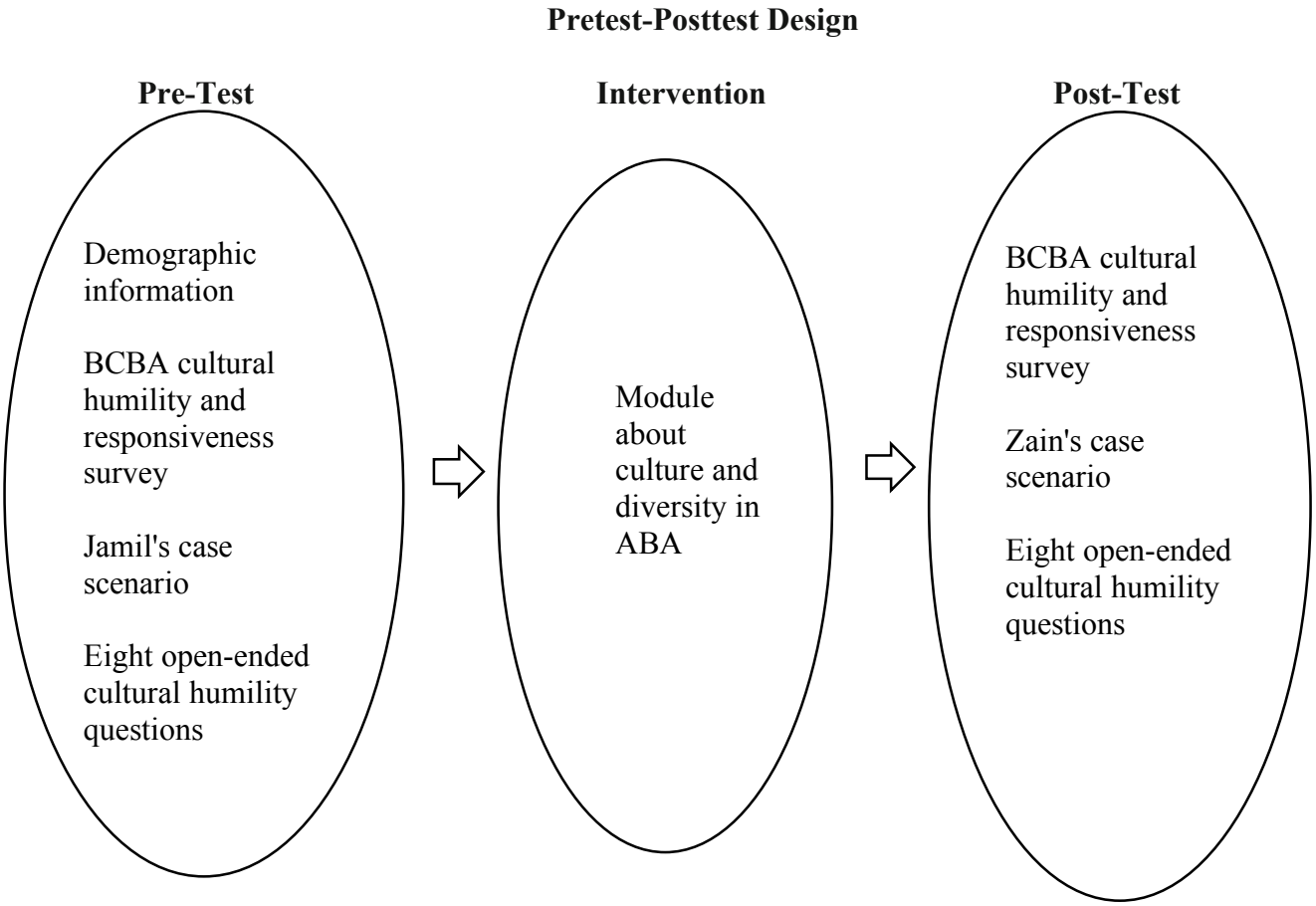
Therefore, the current research project will highlight the importance of cultural diversity practices in ABA using recommended individual questions to assess and improve professionals' cultural humility (Wright, 2019). Participants will be exposed to case scenarios representing cultural and practice influenced dilemmas. The researcher will use the designed individual questions of cultural humility to train participants to apply self-reflection and personal accountability practices for future culturally inclined dilemmas. The cultural humility assessment introduces promising multiple questions necessary now more than before to cultivate a culturally humble practice that deals with future behavioral treatment delivery and stimulates critical thinking in cultural contexts.

CHAPTTER THREE

METHODS

The current study implemented a pretest-posttest design (see Figure 4) to evaluate the individual questions of cultural humility and train participants on applying self-reflection and personal accountability practices for future culturally inclined dilemmas. Course materials and case scenarios used in the study primarily emphasized cultural humility, responsiveness, and differences specific to diverse families, and didn't specifically discuses perspectives related to disability and race.

Figure 4



Participants

The researcher recruited 30 participants via convenience sampling to participate in the study (see Table 1). All participants were Board Certified Behavior Analysts seeking continuing education training. Pre-service behavior analysts were also eligible. To ease recruitment during public health restrictions associated with the global pandemic, all research activities took place online. Participants had access to the internet and a device upon which to complete the modules. All participants had to read and write in English to access the modules. There were no exclusion criteria related to age, gender, or ability. Informed consent was gathered through an online consent form completed before beginning the online module. Participants were volunteers and were told they could leave the study at any time, but CEUs (described in the next paragraph) would only be earned for completing all parts of the online module and online assessments.

Participants were recruited through the Haring Center Professional Development Unit. Social media postings and email newsletters were sent to the Haring Center's email distribution list. To incentivize participation, two hours of Continuing Education Units (CEUs) were offered at no cost to participants who completed the module and pre- and post-test. The Haring Center is an authorized provider of BCBA CEUs. The faculty advisor, Dr. Meeker, was the CEU trainer of record and had oversight over all aspects of module development and implementation.

Table 1

Participant Demographics

	N	Percentage
Age		
Under 30	6	20
30–39	21	70
40–49	2	7
50–59	1	3
60–69	0	0
70–79	0	0
Total	30	100
Gender		
Female	28	93

Male	2	7
Nonbinary/third gender	0	0
Prefer not to say	0	0
Total	30	100
Race		
White	21	70
Black or African American	1	3.3
Asian	3	10
Native Hawaiian or other Pacific Islander	1	3.3
American Indian or Alaska Native	0	0
Other	4	13
Prefer not to say	0	0
Total	30	100
Ethnicity		
Hispanic	3	10
Non-Hispanic	27	90
Total	30	100
Current nationality		
U.S. citizen	27	90
Dual citizen	1	3
Other	2	7
Prefer not to say	0	0
Total	3	30
Field of master's degree		
Applied behavior analysis	10	33
Psychology	1	3.3
Education	18	60
Other	1	3.3
Total	30	100

Instrumentation

To operationalize primary study measures, the researcher used the following five instrumental measures: (a) case scenarios guided by the CMI cases design criteria (Snyder & McWilliam, 2003), the Lives in Progress: Case Stories in Early Intervention book (McWilliam, 2000), and Persona early childhood cases (Catlett, 2020- Reference) (b) adapted and modified survey assessing Training Board Certified Behavior Analysts, including Participants Demographics (Beaulieu et al., 2018), (c) Cultural Competence five constructs of cultural awareness, cultural knowledge, cultural skills, cultural encounters, cultural desire (Connors et al., 2019), (d) adapted and modified Individual Questions to assess Cultural Humility (Wright, 2019), and two main questions (i.e., identify the dilemma, identify the client) were adapted from the Ethical Decision-Making Model (Rosenberg & Schwartz, 2019).

Case scenarios design. Cases were designed to represent real-life dilemmas families with their children might encounter while receiving ABA services. Both cases were adapted from experiences curated by the researcher or other professionals and represented fictionalized accounts from real professional practice. Two cases were developed for pretest and posttest phases: (a) pretest case scenario was primarily adapted from early childhood case forms (Catlett, 2020), with adding more into the scenario details to demonstrate a sense of practice and cultural conflict, (b) posttest case scenario represented an incident occurred in the past from the researcher's perspective showing the complexity of potential practice and cultural dilemmas.

Additionally, the pretest case scenario was followed by eight open-ended questions. These questions are in the format of short answers. The researcher designed a scoring rubric to assess responses to the eight open-ended questions (see Appendix A, B for Cultural Humility Assessment scoring rubric). Each question's response is scored on a scale of 1-4 to assess participants' understanding before being exposed to the module content (described in procedures).

The pretest case scenario described a clash of practice and cultural conflict, in addition to difficulties that immigrant families encounter. The case scenario's main issue is centered on a conflict of culture and practice that BCBAs or RBTs might encounter with immigrant families to successfully improve children's skills. The case showed a lack of cooperation from the caregivers' perspective, which is influenced by cultural background.

Similarly, the posttest case scenario presented a practice and cultural conflict, which involved a diverse family and professionals working in the ABA field. Identical to the pretest questions, the posttest case scenario was followed by eight open-ended questions. These questions were formatted for short answers and scored on a rubric of 1-4, similar to the pretest

scoring system. The response to each question is scored on a scale of 1-4 to assess participants' understanding of the module content. The eight open-ended questions for the pretest and posttest case scenarios are:

Pretest	Posttest
(Step 1): - Identify the dilemma. - Identify the client(s). - What are your initial reactions to Jamil's parents as clients - How would your cultural identities (e.g., belief, family) shape your worldview? - How would your own background help or hinder your connection to Jamil and his family?	**(Step 1):** - Identify the dilemma. - Identify the client(s). - What are your initial reactions to Zain's parents as clients - How would your cultural identities (e.g., belief, family) shape your worldview? - How would your own background help or hinder your connection to Zain and his family?
(Step 2): - How would you show Jamil's family that you value their input as clients? - Would you make space in your practice for Jamil's family to name their identities? - What would you learn about yourself through listening to clients (e.g., Jamil's family) who are different than you?	**(Step 2):** - How would you show Zain's family that you value their input as clients? - Would you make space in your practice for Zain's family to name their identities? - What would you learn about yourself through listening to clients (e.g., Zain's family) who are different than you?

Finally, questions in both pretest and posttest cases are guided by the five predetermined constructs to measure culture awareness and responsiveness (Connors et al., 2019). These five constructs are cultural awareness (i.e., examining one's own culture), cultural knowledge (i.e., pursuing foundational education about diverse populations), cultural skills (i.e., collecting culturally influenced data and conducting culturally responsive assessments), cultural encounters (i.e., integrating a cross-cultural approach with clients), and finally cultural desire (i.e., understanding the professional's inclinations to learn about aforementioned constructs).

Survey Assessing BCBAs Training. The survey included in this project aimed to measure training received by Board Certified Behavior Analysts, including participant demographics. It was adapted from Beaulieu et al. (2018) study with some modifications. The survey includes various categories: participant demographics, participant employment, and education characteristics, the importance of training on culture diversity, comfort level working

with individuals from diverse backgrounds, culturally responsive practices, the familiarity of culturally responsive care (see Appendix C, D for participant demographics and Cultural Humility Survey Questions). The researcher eliminated questions related to doctoral participants or faculty members on whether they have had training or taught courses on cultural diversity in the past, through the ABA or psychology graduate programs. Participants were asked to rate their responses on a Likert-type percentage scale (0-100%). Ratings ranged from extremely uncomfortable to extremely comfortable, not at all to a great deal, none to extensively or every time to never and extremely knowledgeable to not knowledgeable at all.

Cultural Humility Assessment. Wright (2019) proposed a set of questions for individuals and organizations whose work is associated with the ABA practices and suggested these questions to implement as a way to engage professionals in the ABA field to practice culturally considerate, humble and self-reflective process (see Appendix E, F for Cultural Humility Assessment). Inspired by Wright's recommendations, the researcher adapted proposed questions for individuals with minor modifications to use as application questions in the two phases of the current study; pre- and posttest.

Five Cultural Constructs. To measure cultural awareness and humility, the researcher attempted to indirectly reflect on the suggested five cultural constructs by Connors et al. (i.e., cultural awareness, cultural knowledge, cultural skills, cultural encounters, cultural desire) in the design of the pre-and posttest cases scenario narratives (see Appendix G, H for complete case scenarios). To ensure consistent identification of the five cultural constructs, each of the five cultural constructs was linked to one question out of the eight open-ended questions. The researcher associated the five constructs with participants' responses to five of the eight open-ended questions that followed each case.

That is, cultural awareness was measured by linking it to the question "identify cultural identities to one's worldview." Cultural knowledge was measured by linking it to the question "valuing family's input." Similarly, cultural skills were measured by linking them to "make space in practice for the family." While cultural encounters were measured through the question "identify own background to highlight what hinders or helps." Furthermore, the cultural desire was measured through the question "learn about oneself by listening to clients." Participants met one or more constructs depending on their scored responses; participants who scored 2 to 4 on the scoring rubric would be identified as meeting one or more cultural constructs.

Procedures

The researcher used an online module as the primary tool for conducting this research project. All study's phases were designed as online content (e-commerce learning management system known as Learning Cart). After the recruitment and obtaining consent from participants, the researcher shared a link to the online module. At the beginning of the module, participants were introduced to the content's learning objectives and the importance of cultural diversity in the ABA field. Following the introduction, participants were guided through zoom recording (video, slides, audio, handouts) for five online segments of content.

The online module included three major parts: pretest, intervention, and posttest. The online module was designed as an asynchronous course and were self-paced with embedded activities. Participants approximately spent two hours to complete the entire online module. Participants were required to go into each content part before moving toward the following part. The online module began as follows: pretest, intervention, and posttest. The pretest measures included four major parts: (a) demographic information, (b) BCBA adapted and modified cultural humility and responsiveness survey, (c) Jamil's case scenario, (d) eight open-ended

application questions. Participants responded to the eight open-ended application questions related to Jamil's case scenario.

The intervention phase contained a variety of topics about cultural awareness and humility, diversity issues in ABA, definitions, the importance of cultural training in ABA, a brief history of the multiculturalism in ABA, professional ethics and culture in ABA, recommended applications of ABA practice with a diverse population community (i.e., Arab-Muslim community). The online module used various resources (e.g., Fong &Tanaka, 2013; Wright, 2019; Matsuda et al., 2020) but primarily utilized the currently published book Multiculturalism and Diversity in Applied Behavior Analysis (Connors & Capell, 2020). Throughout the module, participants came across opportunities (e.g., checkpoints, quick quizzes, case model) to reflect and practice recommendations proposed in the online module of culture and diversity in ABA. Toward the end of the module, participants watched a short video and listened to a podcast discussing cultural responsiveness, humility, and diversity in ABA. There were a total of seven slides and three learning activities.

Once the online content was completed, participants moved into the posttest phase. Participants in the posttest phase had the opportunity to respond to (a) BCBA adapted and modified cultural humility and responsiveness survey; only questions that are relevant to the posttest phase, (b) Zain's case scenario, (c) eight open-ended application questions. Participants individually responded to the eight open-ended application questions related to Zain's case scenario in short answers.

All activities took place on the Learning Cart software system. The Haring Center Professional Development Unit administered the module and provided administrative support with CEUs. Each participant created an account on Learning Cart and their progress through the

module was tracked. Upon submitting the post-test, they automatically received the CEU certificate.

All participant responses were exported from Learning Cart into a Microsoft Excel file. The researcher de-identified the responses prior to coding. All participant names were replaced with an identification code. The Haring Center retained the record of CEU completion.

The researcher trained a graduate assistant to apply the scoring rubric to open-ended responses from the pre-and posttest. The graduate assistant independently applied the rubric to (40%) of all pre-and posttest results. The graduate assistant was naïve to whether cases came from the pre-or posttest condition. The researcher ensured that the mean inter-rater agreement is above (70%) on all measures. Each assessment has a maximum score of 32 (eight questions on a 4-point rubric). Percent inter-rater agreement was calculated by dividing the smaller score by the larger score for each assessment and multiplying by 100.

The researcher trained the graduate assistant prior to independently coding assessments. The researcher coded a series of actual responses of varying quality. These scores represented the "gold standard." The researcher provided training on the scoring rubric and asked the research assistant to code the de-identified actual responses until achieving (75%) agreement with the researcher's score across three assessments (for three participants). In the first attempt, the graduate assistant achieved a score of (75%) agreement for two assessments and (65%) for the third assessment. Percent inter-rater agreement of these three assessments was (72%).

Feedback was provided following this attempt to reach consistency across the upcoming assessments with the researcher. The researcher adapted a lower percent inter-rater agreement from (75%) to (70%). At first, the graduate assistant coded only 16 out of 24 participants, which was (27%) of all pre-and posttest results. Percent inter-rater agreement was (70%).

After meeting training criteria, feedback continued to be provided on any assessments with inter-rater agreement below (70%). Another training was conducted while providing different examples with more detailed and coded responses by the researcher. Disagreements were settled through consensus discussion. The researcher explained and modeled coding the actual responses to the graduate assistant. Following this training, the graduate assistant coded another additional 8 participants to the 16 participants (i.e., 24 participants), which equals (40%) of the pre-and posttest results. Percent inter-rater agreement was (66%). Feedback continued to be provided on four pretest assessments with inter-rater agreement below (70%). The final percent inter-rater agreement increased from (66%) to (73%).

Data Analysis

All quantitative data were analyzed using formulas in the Excel spreadsheet. Participant responses were aggregated and descriptive statistics were calculated for all survey responses. This included mean, standard deviation, and range for each question and section. For sections on cultural responsiveness and cultural humility, a paired t-test was used to evaluate whether differences in mean responses from pre- to posttest were statistically significant. An online t-test calculator was used for analyses (https://www.graphpad.com/quickcalcs/ttest1.cfm).

All open-ended responses to the pre- and posttest case method questions were analyzed by two scorers. A four-point rubric was applied to each assessment. Each assessment had a minimum score of 8 and a maximum score of 32. Descriptive statistics of scores were calculated for pre- and posttest (mean, standard deviation, range). A paired t-test was used to determine whether differences in means between pre- and posttest responses were statistically significant. An online t-test calculator (https://www.graphpad.com/quickcalcs/ttest1.cfm) was used.

CHAPTER FOUR

RESULTS

Table 1 (p. 36) depicts the demographic information reported by the participants. Most participants were non-Hispanic (90%) White (70%) female (93%) or U.S. citizens (90%) between the ages of 30 and 39 (70%). Minoritized group made up (30%) of the participants, with no single minority exceeding 13%. Most participants had a master's degree in education (60%), followed by applied behavior analysis (33%), psychology (3.3%), and other (3.3%).

Table 2 demonstrates the employment characteristics of the participants with their educational backgrounds. Participants who reported that more than half their clients were from diverse backgrounds made up (30%). Most participants worked in centers or clinics (33%), public schools (30%), clients' homes (13%), colleges or universities (10%), communities (7%), private schools (3.3%), or residential facilities (3.3%). The participants' primary roles as BCBAs were as supervisors (43%) or practitioners (27%), while administrators made up (20%), and (10%) identified as other, which was not specified in the survey. Participants primarily worked with individuals diagnosed with autism spectrum disorder (70%), which was followed by those working in special education (13.3%); emotional and behavioral disorders and intellectual disability were (7%) each, and other (3.3%).

Table 2

Participants' Employment and Educational Backgrounds

	N	Percentage
Proportion of diverse clients		
Less than 10%	2	7
10%–19%	1	3.3
20%–29%	2	7
30%–39%	2	7
40%-49%	3	10
50%–59%	9	30
60%–69%	2	7
70%–79%	6	20
80%–89%	1	3.3

Greater than 90%	2	7
Primary work setting		
Public school	9	30
Private school	1	3.3
Client's home	4	13
Center/clinic	10	33
College/university	3	10
Residential facility	1	3.3
Hospital	0	0
Community	2	7
Other	0	0
Primary role as a BCBA		
Practitioner (direct services)	8	27
Supervisor	13	43
Administrator	6	20
Other	3	10
Population of primary work		
Autism spectrum disorder	21	70
Intellectual disability	2	7
Special education	4	13
Emotional or behavioral disorders	2	7
Other	1	3

Effects of Skills and Training

Tables 3 and 4 depict the participants' pre- and posttest comfort levels and skill levels respectively with regard to working with individuals and families from diverse backgrounds, the significance and importance of culturally influenced training, and the amount of training participants received with relation to cultural diversity.

Pretest. Each participants' responses to the four subscales were averaged to arrive at a pretest average score across participants. This is presented in (Table 3). The pretest survey results to the four subscales (i.e., comfort level, skill level, the importance of culturally influenced training, and the amount of training participants received) included for cultural diversity suggest the current mean *(M* = 23.91, *SD* = 3.26). The mean of the pretest survey results cannot be compared to the posttest survey results because of the difference in the posttest questions (described in the next paragraph). See the descriptive statistics:

Table 3

Descriptive Statistics

Pre-Test	N	Minimum	Maximum	Mean	Std. Deviation
Effects of Skills Training	30	17	32	23.91	3.26

Table 4 shows most participants' pretest responses about skills importance and training. Participants felt moderately comfortable (40%), fairly comfortable (27%), or very uncomfortable (27%) working with individuals from culturally diverse backgrounds. The majority of participants reported that they were moderately skilled (60%) or neither skilled nor unskilled (27%) when working with individuals from diverse backgrounds. In addition, they reported that training on working with individuals from culturally diverse backgrounds was very important (97%).

When asked whether their master's degree studies had included ABA coursework on individuals with diverse backgrounds, most participants reported that they had taken few (43.3%) or no (30%) courses on diversity; also, they reported that their master's degree included no (50%) or little (30%) hands-on training on diversity. With respect to receiving continued education training on diversity, most participants reported that they had some (43.3%) or little (30%); while the majority reported some (47%) or little (33.3) experience with CE offerings and opportunities on diversity. The last question of the pretest survey asked about whether their employers provided training on diversity, and most participants reported little (37%) or some (30%).

Table 4

Effects of skills and Training on Cultural Diversity (Pretest)

	N	**Percentage**
Comfort level working with diverse individuals		
Very uncomfortable	8	27
Uncomfortable	0	0
Fairly comfortable	8	27

Moderately comfortable	12	40
Very comfortable	2	7
Skill level working with diverse individuals		
Not skilled	0	0
Slightly skilled	4	13.3
Neither skilled nor unskilled	8	27
Moderately skilled	18	60
Extremely skilled	0	0
Importance of training on cultural diversity		
Not important	0	0
Somewhat important	0	0
Neutral	0	0
Moderately important	1	3.3
Very important	29	97
ABA master's coursework on diversity		
None	9	30
Little	13	43.3
Some	8	27
Moderate	0	0
Extensive	0	0
ABA master's hands-on training on diversity		
None	15	50
Little	9	30
Some	4	13.3
Moderate	0	0
Extensive	1	3.3
Continued education received on diversity		
None	2	7
Little	9	30
Some	13	43.3
Moderate	5	17
Extensive	1	3.3
Not applicable	0	0
Experiencing CE offerings on diversity		
None	3	10
Little	10	33.3
Some	14	47
Moderate	2	7
Extensive	0	0
Not applicable	1	3.3
Employer provided training on diversity		
None	3	10
Little	11	37
Some	9	30
Moderate	6	20
Extensive	1	3.3

Posttest. Each participants' responses to the three subscales were averaged to arrive at a posttest average score across participants. This is presented in (Table 5). Participants felt moderately comfortable (60%), fairly comfortable (20%), or very uncomfortable (0%) working

with individuals from culturally diverse backgrounds. The majority of participants reported that they were moderately skilled (77%) or neither skilled nor unskilled (13.3%) when working with individuals from diverse backgrounds. In addition, most participants in the posttest reported that training on working with individuals from culturally diverse backgrounds was very important (97%). The posttest survey results to the three subscales (i.e., comfort level, skill level, and the importance of culturally influenced training) included for cultural diversity suggest the current mean *(M* = 6.42, *SD* = 6.41).

Table 5

Descriptive Statistics

Post-Test	N	Minimum	Maximum	Mean	Std. Deviation
Effects of skills Training	30	0	14	6.42	6.41

Table 6 demonstrates only three questions from the pretest survey (i.e., comfort level, skill level, and the importance of training). These questions were asked in the posttest survey because they directly related to the participants' reflections after the intervention of the online module. The remaining questions used in the pretest survey were irrelevant to the participants' reflections in the posttest survey. Such a difference might affect the accuracy of the descriptive statistics scores (mean, standard deviation, and range) between the pre- and post-survey results.

Table 6

Effects of Skills and Training on Cultural Diversity (Post-test)

	N	**Percentage**
Comfort level working with diverse individuals		
Very uncomfortable	0	0
Uncomfortable	0	0
Fairly comfortable	6	20
Moderately comfortable	18	60
Very comfortable	6	20
Skill level working with diverse individuals		
Not skilled	0	0
Slightly skilled	3	10
Neither skilled nor unskilled	4	13.3

Moderately skilled	23	77
Extremely skilled	0	0
Importance of training on cultural diversity		
Not important	0	0
Somewhat important	0	0
Neutral	0	0
Moderately important	1	3.3
Very important	29	97

Cultural Responsiveness, Humility and Competence (Cultural Competemility) Practices

Tables 7 demonstrates the participants' responses related to delivering culturally humble and responsive practices. Results are presented together in (Table 7) for the pretest and then the posttest.

Pretest. Table 7 depicts the results of the participants' responses in relation to delivering culturally and responsive practices. Most participants reported some (53.3%) or moderate (27%) familiarity with culturally humble practices.

The most frequently reported practices were (a) self-education on immigrant culture; 40% of participants reported doing these practices, (b) asking clients about their dietary preferences; 43.3 % of participants reported doing these practices, (c) asking clients about whether the treatment procedures aligned with their values and beliefs; 43.3% of participants reported every time doing these practices, (d) with respect to knowledge of differences in parenting across cultures; 47% of participants reported they were not very knowledgeable, (e) 50% of participants reported that their own culture had a moderate impact on the treatment process, (f) asking clients about their beliefs regarding the clients' disorder; 40% of participants reported rarely doing these practices, (g) asking clients about their preference of male or female therapists, (which can differ depending on religious beliefs), 40% of participants reported never doing these practices.

The least reported practices were (a) asking clients about their spiritual beliefs; 27% of participants reported never doing these practices, (b) asking clients about natural nonmedical treatments; 33.3% of participants reported doing these practices, (c) asking clients about gestures and nonverbal communication preferences; 37% of participants reported sometimes doing these practices, (d) asking the participants whether they ensured that a translator was provided if English was the clients' second language; 33.3% reported every time doing these practices, (e) when asked about educating immigrant individuals on insurance policies; 30% of participants reported occasionally doing these practices.

Posttest. Table 7 depicts the results of the participants' responses to questions about delivering culturally responsive practices. Some participants reported some (40%), and the majority reported moderate (53.3%) familiarity with culturally humble practices.

The most frequently reported practices were (a) self-education on immigrant culture; 50% of participants reported every time doing these practices, (b) asking clients about their dietary preferences; 67% of participants reported every time doing these practices, (c) asking clients about gestures and nonverbal communication preferences; 50% of participants reported every time doing these practices, (d) asking clients about whether treatment procedures aligned with their values and beliefs; 60% of participants reported every time doing these practices, (e) asking whether participants ensured that a translator was provided if English was the clients' second language; 57% of participants reported every time doing these practices, (f) with respect to knowledge of differences in parenting across cultures; 53.3% of participants reported they were somewhat knowledgeable, (g) 57% of participants reported a moderate impact of their own culture on the treatment process, (h) 47% of participants reported every time when asked about educating immigrant individuals on insurance policies.

The least reported practices were (a) asking clients about their spiritual beliefs; 33.3% of participants reported every time doing these practices, (b) asking clients about natural nonmedical treatments; 40% of participants reported every time doing these practices, (c) asking clients about their beliefs regarding the clients' disorder; 33.3% of participants reported every time doing these practices, (d) asking clients about their preference for male or female therapists, (which can differ depending on religious beliefs), 27% of participants reported every time doing these practices.

Table 7

Cultural Humble and Responsive Practices	*(Pretest)*		*(Posttest)*	
	Percentage (N)		**Percentage (N)**	
Familiarity of culturally humble practices				
Not at all	0	0	0	0
Little	5	17	0	0
Some	16	53.3	12	40
Moderately	8	27	16	53.3
Extensively	1	3.3	2	7
Self-education on immigrants' culture				
Never	1	3.3	0	0
Rarely	1	3.3	0	0
Sometimes	11	37	3	10
Most times	12	40	12	40
Every time	5	17	15	50
Asking clients about spiritual beliefs				
Never	8	27	1	3.3
Rarely	7	23.3	2	7
Sometimes	4	13.3	9	30
Most times	7	23.3	8	27
Every time	4	13.3	10	33.3
Asking clients about natural nonmedical treatments				
Never	3	10	0	0
Rarely	10	33.3	4	13.3
Sometimes	5	17	6	20
Most times	7	23.3	8	27
Every time	5	17	12	40
Asking clients about dietary preference				
Never	1	3.3	0	0
Rarely	2	7	3	10
Sometimes	6	20	0	0
Most times	8	27	7	23.3
Every time	13	43.3	20	67
Asking clients about gestures nonverbal communication preference				
Never	4	13.3	1	3.3
Rarely	9	30	2	7
Sometimes	11	37	7	23.3

Most times	5	17	5	17
Every time	1	3.3	15	50
Total	30	100		
Asking clients about their beliefs of client's disorder				
Never	5	17	0	0
Rarely	12	40	3	10
Occasionally	5	17	8	27
Most of the time	6	20	9	30
Every time	2	7	10	33.3
Asking clients about preference for male or female therapists				
Never	12	40	3	10
Rarely	5	17	5	17
Occasionally	7	23.3	7	23.3
Most of the time	4	13.3	7	23.3
Every time	2	7	8	27
Asking clients whether treatment procedures align with values/beliefs				
Never	2	7	0	0
Rarely	2	7	0	0
Occasionally	7	23.3	1	3.3
Most of the time	6	20	11	37
Every time	13	43.3	18	60
Providing translator when English is the second language				
Never	3	10	2	7
Rarely	4	13.3	1	3.3
Sometimes	7	23.3	7	23.3
Most times	6	20	3	10
Every time	10	33.3	17	57
Total	30	100		
Knowledge of differences in parenting across cultures				
No knowledge	1	3.3	0	0
Not very knowledgeable	14	47	7	23.3
Somewhat knowledgeable	9	30	16	53.3
Moderately knowledgeable	6	20	5	17
Very knowledgeable	0	0	2	7
Reflection on impact of own culture on treatment process				
Not at all	0	0	0	0
Little	1	3.3	0	0
Some	10	33.3	0	0
Moderately	15	50	17	57
Extensively	4	13.3	13	43.3
Educating immigrant individuals/clients on insurance policy				
Never	6	20	1	3.3
Rarely	8	27	4	13.3
Occasionally	9	30	5	17
Most of the time	4	13.3	9	30
Every time	3	10	11	47

Individual Cultural Humility Questions, Self-Reflection, and Personal Accountability

The means of participants' responses to the individual cultural humility questions were calculated between the pre- and posttest scores. This is presented in (Table 8) and (Table 9).

To examine the effect of the online module interventions between the pretest and posttest, a paired t-test was conducted to determine whether differences in the means of the participants' responses between pre- and posttest were statistically significant.

Results from the paired t-test indicated that there was a significant difference in the scores for the pretest ($M = 26.37$, $SD = 3.52$) and post-test ($M = 29.27$, $SD = 2.79$), $t(29) = 3.73$, $P < .001$. The participants' mean scores in the posttest responses to the individual cultural humility questions were higher than the mean scores in the pretest. Specifically, these results suggest that behavior analysts who received training in cultural humility and awareness practices (i.e., case scenarios, course materials, and individual cultural humility questions) reported improved culturally humble, self-reflective, and personal accountability skills toward individuals and families from diverse backgrounds (see descriptive statistics and paired t-test results).

Table 8

Comparison of Average Total Cultural Humility & Awareness Scores at Pre-and Posttest

Group	**Pretest**	**Posttest**
Mean	26.37	29.27
SD	3.52	2.79
SEM	0.64	0.51
N	30	30

Table 9

Paired t-Test Results

Paired differences							
			95% Confidence Interval				
	Mean	Std.Error	Lower	Upper	t	df	Sig. (2-tailed)
Pair Pre-Post	-2.90	0.78	-4.49	-1.31	29	3.73	.000

Tables 10 and 11 depict examples of the participants' responses with respect to the individual cultural humility questions (a cultural humility assessment) for both pre- and posttests, respectively.

Table 10 contains samples of participant responses to the cultural humility assessment. These responses varied among participants reflecting either weak or strong perspectives. Weak responses were scored lower on the scoring rubric, while strong responses were scored higher.

Examples of participants' weak responses in the pretest included: "They are not comfortable to care and interact with Jamil in the ways suggested by the teacher and BCBA"; "This seems like a pretty typical scenario for a family from another culture"; and "I would likely fall into the same situation as the BCBA above as I consider parent participation in ABA services to be an expectation." It should be noted that these example responses represent weak answers to the request in the cultural humility assessment: "Identify the dilemma."

Examples of participants' strong responses in the pretest to the request in the cultural humility assessment "identify the dilemma" included: "Jamil's teacher and BCBA believe that the interventions that they are presenting to Jamil's family is ethically and soundly based in research. However, Jamil's parents believe that the BCBA should be the one to deliver the entirety of Jamil's interventions (based on their cultural norms and beliefs) while they focus on their jobs and providing for their family."; and "There is a cultural difference in beliefs and common home/parenting practices between the client and the providers (the teacher and BCBA) and the providers lack specific training on how to navigate these differences."

In contrast, pretest examples of strong responses by the participants included "They are hard workers and intelligent—fluent in two languages and taking classes in a third. They take good care of their child—taking him for his checkup and following the recommendations by finding a program with behavior analytic teaching."; "As a Black woman my background of being in a collective-valued group teaches me to listen to the family and respect that home life is separate from school. Secondly, I respect that trust between a family and school/therapy may

take time to develop."; and "Without placing too much undue stress I would like to know how they enjoy time with Jamil and what a typical weekend day would look like. I would ask if they would mind educating me more on their worldview and expectations for me with Jamil. I would also ask what language they are most comfortable communicating in and find a translator as necessary." It is important to note that these example responses represent strong answers to three requests in the cultural humility assessment: "Identify initial reactions to Jamil's parents as clients"; "Identify your own background to highlight what helps or hinders the connection to Jamil and his family"; and "Show Jamil's family that they value their input as clients."

Table 10

Participants' Responses to Cultural Humility Assessment (Pretest)

Questions	1 Weak	2	3	4 Strong
Identify initial reactions to Jamil's parents as clients		"This is pretty common in my experience." "This seems like a pretty typical scenario for a family from another culture." "What! Shock. Coldness." "They seem like parents who are new to home-based services and aren't sure what to expect or what is expected of them." "They are not comfortable to care and interact with Jamil in the ways suggested by the teacher and BCBA."	"They care deeply about their child's progress but don't necessarily have a complete understanding of expectations for parental involvement." "Their view of parenting is different than the standard American view."	"They are hard workers and intelligent—fluent in two languages and taking classes in a third. They take good care of their child—taking him for his checkup and following the recommendations by finding a program with behavior analytic teaching." "I want to learn more about their culture and how it influences their parenting"
Identify cultural identities to one's worldview		"I am not certain." "Everyday activities and interactions" "It could set up the expectation of the parent roles being the same as yours."	"I'm not sure that they do; my world view is mostly based on professional experiences working with families." "As an immigrant and racial minority, I am proud of my own culture and celebrate human differences."	"My culture shapes my worldview because in the Western education system there is a cultural expectation that school/home is a partnership and school expectations continue into the home." "Significantly, it impacts how I see the world and interact with others."
Identify your own background to highlight what helps or hinders the connection to Jamil and his family		"I'm admittedly not familiar with this approach to parenting, so I would probably be confused and unsure of how to proceed." "I would likely fall into the same situation as the BCBA above as I consider parent participation in ABA services to be an expectation."	"My personal background and beliefs would be similar to Jessica's in that I believe that parents should interact/play with their children to continuously encourage growth and teach appropriate social and play skills. This would have also made it difficult for me to initially create a culturally sensitive plan for Jamil and his family." "I am biased in that I believe the therapy team is incorrect in pushing their values on the family."	"As a Black woman, my background of being in a collective-valued group teaches me to listen to the family and respect that home life is separate from school. Secondly, I respect that trust between a family and school/ therapy may take time to develop." "Your background would hinder if you felt that everyone else (no matter what their values and biases were) should do the same thing as you vs. asking about their personal values and what they wanted for their child."

				"I may base my recommendations on assessments and resources that are in line with my values and/or background. I would prioritize building a relationship with the family and getting to know their values and goals as their background differs from mine and their values and goals may also differ." "My background would help my connection with Jamil and his family because I would be able to empathize with them. Being Asian and growing up in an Asian household, I feel I have a strong understanding of cultural differences. This would help me when determining how to present the treatment plan and ensure that their voices are heard."

Note. Pretest responses to cultural humility assessment ranged from (weak – strong).

Table 11 contains samples of responses from post-test. As in the pretest, such responses varied among participants by reflecting either weak or strong perspectives. Weak responses were scored lower on the scoring rubric, while strong responses were scored higher.

Examples of participants' weak responses in the posttest included: "I'm not sure"; "They seem very new to autism and ABA services and unsure of what to do or expect."; and "Empathetic." It should be noted that these example responses represent weak answers to the following two items in the cultural humility assessment: "How would cultural identities (e.g., belief, family) shape their worldview?" "Identify initial reactions to Zain's parents as clients."

In contrast, posttest examples of participants' strong responses included: "Since my ethnic/cultural background is Mexican-American I feel that since the culture is collectivistic it might help me in empathizing with certain familial behaviors; at the same time since I am not a part of Zain's particular culture, I would have to educate myself on common practices or those within his specific family first before being able to fully and competently work with him and his family"; "I was raised very differently than Zain and his family. I have the understanding that both experiences are valid and should be respected. I would work with Zain's family to find a way to work with them that we are both comfortable and takes them and Zain into consideration

in all we do"; and "Zain's parents are committed to making sure their child has the best life possible including one that allows him to participate in their cultural traditions and communicate with extended family. They are encountering a lot of obstacles to getting Zain the support he needs in a way that meets their needs and cultural priorities as well including lack of translation services and parent-friendly communication providers who are not demonstrating cultural humility etc."

It is important to note that these example responses represent strong answers to three items in the cultural humility assessment: "Identify your own background to highlight what helps or hinders connection to Zain and his family"; "How would cultural identities (e.g., belief, family) shape worldview?"; "Identify your initial reactions to Zain's parents as clients."

In contrast, examples of participants' weak responses in the posttest included: "My belief and values may be very different"; "I'm not sure"; "They seem very new to autism and ABA services and unsure of what to do or expect." These example responses represent weak answers to three items above in the cultural humility assessment: "Identify your own background to highlight what helps or hinders connection to Zain and his family"; "How would cultural identities (e.g., belief, family) shape worldview?"; "Identify your initial reactions to Zain's parents as clients."

Table 11

Participants' Responses to Cultural Humility Assessment (Posttest)

Questions	1 Weak	2	3	4 Strong
Identify initial reactions to Zain's parents as clients		"They seem very new to autism and ABA services and unsure of what to do or expect." "Empathetic"	"I know that as clients Zain and his parents will require extra preparation and more time in assessment as I familiarize myself with their culture goals and practices they are comfortable with in ABA. I am excited to learn about them and help support them but also nervous about being humble and appropriate." "My initial reaction as a parent myself is that I believe that I would feel similar to them in this instance. Add the fact that they are refugees and living in a completely different culture that makes things even more difficult to navigate." "They are a vital member of the team, and their input should be valued."	"That they have come from a tough situation and made it out on top. That they are hard workers and want the best for their child" "That they want what is best for their child (as they have sought medical support and behavioral support). I also think they are very patient as they have been consistently put in situations where professionals have not provided accommodations or adapted to value their needs."
Identify cultural identities to one's worldview		"I may have different perspectives (I always tend to side with science) but a lot of cultures value equally and sometimes more community traditions, religion, etc. over science."	"I understand and interpret experiences, information, etc. based on my cultural identity" "I would not immediately recognize the need for a culturally responsive service provider as it is not natural for me to consider cultural differences. However, I recognize how important it is to note the cultural differences and be responsive to those differences."	"My cultural identifies shape how I view the world tremendously. It is what will dictate what I value as important for what my children will learn." "My Eurocentric and nuclear family upbringing impact my understanding of family dynamics."
Identify own background to highlight what helps or hinders connection to Zain's and his family		"I am not sure."	"The history of resettlement and them being from another culture may make me anxious or cause a hesitancy to be assertive or ask questions. This may be a product of not wanting to offend or appear racist." "It is important to be self-aware and reflect on our own biases and how that might be impacting the clients we serve."	"It would hinder only in that I don't know about Zain's culture, but I would take the time to learn" "My background would help me empathize with Zain's family. I would be able to identify resources and possibly find a translator to help them be involved in the decision process. This would ensure that their voices are heard."

Note. Posttest responses to cultural humility assessment ranged from (weak – strong).

In summary, there was a statistically significant increase from pre- to post-test on BCBAs' cultural humility and awareness practices as a result of a brief training. Professionals who participated in this study reported increasing reflective and culturally aware understanding

of practices and applications with BIPOC clients after receiving continuing education materials designed to bring attention to diversity and cultural differences.

CHAPTER FIVE

DISCUSSION

The current study examined the effects of using an online module to train in-service BCBAs and practitioners on practicing cultural humility, responsiveness, awareness, and self-reflection within the ABA field. In the online module intervention, participants were exposed to case scenarios, course materials, and individual cultural humility questions, which highlighted cultural and practice-influenced dilemmas for BIPOC clients. The study attempted to understand whether training in culturally humble and aware practices can improve BCBAs and practitioners' reported skills and comfort while implementing ABA evidence-based practices, particularly for clients who may represent culturally diverse backgrounds. Perspectives related to disability and race were not discussed in this paper.

The results indicated that BCBAs and practitioners who had training in cultural humility and awareness practices (i.e., case scenarios, course materials, or individual cultural humility questions) reported better understanding of culturally humble, self-reflective, and personal accountability practices for individuals and families from diverse backgrounds. Professionals who participated in this study reported increasing reflective and culturally aware understanding of practices and applications with BIPOC clients after receiving continuing education materials designed to bring attention to diversity and cultural differences.

Participants' Responses Analysis in Pre- and Posttest

Cultural Training Importance. Most participants in pre- and posttests agreed (97%) on the importance of having training on working with individuals from culturally diverse backgrounds and that such training and experience was very important. It is not surprising that the percentage reported was high pre- and post-intervention, because most participants were

aware of the dire need to access knowledge and experience about cultural diversity and humble practices. All participants, except one, expressed the importance of having training on cultural matters. These data support previous research introduced by many scholars (e.g., Beaulieu et al., 2018; Fong et al., 2016; Wright, 2019) who have raised awareness about cultural diversity, responsiveness, and humble practices in the field of behavior analysis.

Graduate Coursework and CE About Cultural Diversity Within ABA. Related to receiving ABA coursework about individuals from diverse backgrounds during their master's degrees, most participants reported few (43.3%) or no (30%) materials on diversity. Responses to having hands-on training during master's degree studies with diverse individuals were either none (50%) or little (30%). Similarly, when asked about receiving continued education training on diversity, most participants reported they had some (43.3%) or little (30%). When asked about seeing CE offerings and opportunities for diversity, most participants reported some (47%) or few (33.3). Also, most participants reported few (37%) or some (30%) when asked about whether their employers provided training opportunities on diversity. These data are not surprising because they confirm and match the previous calls and data found in the literature. Connors et al. (2019) urged us to implement the New York model, which mandates behavior analysts to receive graduate coursework on multiculturalism to get licensed. Fong et al. (2017) and Miller et al. (2019) stress similar concepts, in which ABA programs should embed cultural knowledge and diversity training into coursework to meet recommended social justice practices. They emphasize that ABA institutions would be better equipped with vital outcomes if culturally responsive practices were applied. Incorporating cultural awareness and responsiveness philosophy into ABA training programs is fundamental. Also, Beaulieu et al., (2018) stated that "Graduate programs should ensure that education and training on working with individuals from

diverse backgrounds is weaved thoughtfully through the curriculum. Coursework on culturally responsive practices could include topics such as identifying one's own culture and how it may impact practice, content on the cultural biases implicit in applied behavior analysis, and practicum experiences on how to conduct culturally responsive functional behavioral assessments and home assessments" (para. 7).

Cultural Practice Comfort Levels. Nevertheless, given participants' reported lack of education and training around culture practices and working with diverse clients, it is perhaps unsurprising that they reported low levels of comfort at the pretest. Only 40% of participants reported feeling moderately comfortable with cultural practices. At the posttest this number increases to (60%) participants. Although the survey does not clearly explain the reasons behind some participants' selected answers (Beaulieu et al., 2018), the increase of this percentage after the intervention could be attributed to some participants' exposure to the content of culturally humble and aware perspectives when engaging in ABA service delivery for culturally diverse populations. The increase in the feeling of being moderately comfortable is a promising indicator of the outcomes of cultural humility, awareness, and responsiveness training. Even though the benefits resulting from this study's intervention are a promising sign, behavior analysts should know that learning about cultural practices is a never-ending process and should evolve and continue over time (e.g., Beaulieu et al., 2018; Fong et al., 2016; Wright, 2019). We know behavior analysts cannot be competent in and knowledgeable about every culture (Wright, 2019). Cultural competence should be thought of as cultural responsiveness, and is not the end goal of cultural knowledge and training; instead, it continues as a learning process (Levy et al., 2021). Thus, the purpose of having humble and cultural training is to cultivate an applied practice for behavior analysts to use and accept, in which cultural biases exist and can affect their behavior

and the delivery of treatment (Wright, 2019). Behavior analysts should always recognize others' cultures and see them as important as their own while practicing self-reflection and self-awareness along the way (e.g., Beaulieu et al., 2018; Fong et al., 2016; Wright, 2019).

Furthermore, survey responses about "very uncomfortable" and "feeling fairly comfortable" working with diverse clients might support the explanation mentioned earlier about why responses for "feeling moderately comfortable" improved in the posttest. First, responses to being very uncomfortable dropped from (27%) in the pretest to (0%) in the posttest. Second, participants' responses about being fairly comfortable decreased from (27%) in the pretest to (20%) in the posttest.

A decrease in being fairly comfortable—alongside the increase in being moderately comfortable—could be justified because it could indicate that participants had access to materials discussing culturally humble practices, which might help increase the level of being moderately comfortable. Perhaps participants realized it was an ongoing process that could not be mastered because none of them selected being very comfortable.

This explanation, of course, can be supported by and reflected in responses to being very uncomfortable, in which case the exposure to cultural training could have impacted the participants' familiarity with the scope of self-reflection and responsibility working with clients who represent diverse backgrounds. These mixed responses should be interpreted with caution in any case. The proposed analysis is not definitely apparent in the survey's results, and it will need further qualitative analysis to ensure its accuracy. Neither the study's design nor the sample allows enough information to confirm the reason for the participants' reported variations in their responses. Because data on cultural humility and possible cultural bias in ABA are still limited,

there is a need to continue collecting data on the influence of self-reflection and responsibility application within the field (Wright, 2019).

Cultural Practice Skill Levels. The responses to being skilled varied between the pre- and posttest. Sixty percent of participants reported being moderately skilled in the pretest, but this percentage increased to (77%) participants in the posttest. The percentage of the neither skilled nor unskilled response dropped from (27%) participants in the pretest to (13%) participants in the posttest. There is no one valid interpretation of the variation in responses for skill level. Although the responses to skill level were positive overall, confirming that skill levels increased because of the intervention is uncertain, especially considering what had been highlighted in the literature. Skills related to matters of cultural training require continuous learning to improve over time. This conclusion is in line with Beaulieu et al.'s (2018) argument that applied behavior analysis requires formal skills training, e.g., discrete-trial teaching, which in return should involve standards of mastery to be met and maintained. Skills should be always demonstrated and tested. Thus, it would be antithetical to ABA to affirm that one can be skilled at something or at cultural practices as a verbal behavior merely by experiencing it without rigorous training.

Training on Practices of Cultural Competemility, Social Justice, and Anti-Racism Through Case Scenarios

This study aimed to understand possible outcomes of training practices in cultural competemility and awareness by implementing case scenarios reflecting real-life dilemmas that BIPOC individuals might encounter. The researcher used the designed individual questions of cultural humility to train BCBAs and practitioners to implement self-reflection and personal

accountability practices for potential culturally inclined dilemmas. Participants were exposed to case scenarios that represented culture and practice real-life dilemmas.

The existing literature in ABA does not provide enough empirical data on the use of case scenarios and cultural humility practices or the most effective tools that could be used in cultural training practices. Nevertheless, the results from this study indicate that behavior analysts who received some training in cultural humility and awareness practices (i.e., case scenarios, cultural course materials, and individual cultural humility questions) reported increased understanding of culturally humble, self-reflective, and personal accountability perspectives when working with individuals and families from diverse backgrounds. It is important to emphasize that empirical studies concerning cultural perspectives in ABA are still limited. Thus, creating practical methods of cultural humility training in ABA was an essential goal of this project. As Beaulieu et al. (2018) point out, professionals in ABA should have skills that show reflective and empathetic practices toward other cultures, though there has been a disparity of empirical data in this regard.

Beaulieu et al. (2018) suggest that BACB would benefit from adopting the directive guidelines proposed by Fong and Tanaka (2013) regarding cultural training and should encourage professionals to learn by working with diverse individuals. Unfortunately, the BACB's current compliance code of ethics released in December 2020 has yet very little to say about tangible guidelines that professionals may apply to tackle cultural responsiveness and racism in the field (Levy et al., 2021). It is imperative to develop clear guidance for behavior analysts to responsibly interact with different cultures. Learning about the culture and diverse family beliefs is multifaceted, thus referring to models (e.g., McWilliam, 1992; Rosenberg & Schwartz, 2019; Stockall & Dnnis, 2015) that suggest different ethical lenses might help reach

ethically inclined decision-making. Additional guidance is also needed for the circumstances in which a providers' application of the ethical code is in conflict or tension with families' values and beliefs.

The fundamental tenant of cultural humility is to consistently challenge the power imbalance and inequality faced by individuals from nondominant cultures. Cultural humility focuses on highlighting the critical needs upon which professionals should always reflect, such as inequities that are inherent at the individual and institutional levels. Addressing these challenges would help diverse individuals reach intentional and beneficial outcomes (Levy et al., 2021). As the results in this study suggest, power imbalances might be addressed by practicing cultural humility in the form of individual questions with a wider range of professionals in the ABA field while delivering ABA treatment and related services to culturally diverse individuals. Recent work and intellectual debates have been discussing aspects and possible ways to move the field forward and dismantle such power imbalances.

Social Justice and Anti-Racist Approaches Within Cultural Humility. According to Pritchett, et al., (2021) "Social justice is not a special project, an auxiliary venture, or specialty area of the science of applied behavior analysis. It is the applied spirit of the science" (The radical Shifting of Paradigms). The science and practice of applied behavior analysis must embrace a shift to a socially just and anti-racist approach. ABA still suffers a Western hegemonic structure, which likely functions in the larger picture through a racist, sexist, and ableist formula (Pritchett et al., 2021). However, it is essential to acknowledge that ABA as a science holds strong values that are responsive, progressive, and reactive to change, which can achieve a greater good of social significance. These values aim to improve the human condition to a better version (Pritchett et al., 2021). Behavior analysts can show these values within their practice by

adhering to the principles of cultural humility, in which voices of marginalized members in the community are encouraged and empowered (Wright, 2019). Cultural humility is a practical means that can allow behavior analysts to terminate power imbalances or paternalistic relationships and establish a coherent mutual partnership between professionals and BIPOC individuals (Pritchett et al., 2021).

As previously stated, anti-racist and socially just practices should be intentionally addressed in the new BACB code of ethics. There should be rigorous guidelines upholding an anti-racist ethical culture within ABA. This begins with a critical examination of the socially important outcomes of clients and families: are the skill foci of ABA valued and meaningful for the client in their cultural context? Are the assessments that guide programming decisions based on normative assumptions about development? The existing codes of ethics remain less clear about what individual practitioners, who are mostly White, should do to assess their personal biases, implement self-reflective skills, and the extent to which humbly and responsive cultural practices are optimally addressed (Levy et al., 2021). In addition, within the same article, several actionable steps were highlighted so that anti-racist practices could be put in place. Some of these practices include displaying and intentionally supporting anti-racist values across different mediums (e.g., websites and social media); updating the ABAI-verified course sequence to include topics about cultural humility and cultural responsiveness; and making anti-racist research articles from other fields related to diversify, equity, and inclusion accessible on organizations' websites. Black clinicians who use the African American Vernacular are also encouraged to communicate with families who interact using the same language. Finally, behavior analysis graduate programs can promote anti-racist values by including multicultural

ideals into their curricula as well as recruiting and retaining BIPOC faculty, staff, and students (Najdowski et al., 2020).

Case-Based Learning Demonstrating Cultural Constructs. An important strategy this study applied was the use of case scenarios, in particular, culturally informed case scenarios. Using case scenarios to demonstrate culturally influenced real-life dilemmas appeared to assist practitioners in applied behavior analysis to conceptualize what could be encountered, in the future, with diverse individuals. Case-based learning or CMI has shown effectiveness in early childhood ABA training. Studies reported CMI increased professionals' knowledge and application skills, modified their personal attitudes, and developed their problem-solving skills (Snyder & McWilliam, 1999; Snyder & McWilliam, 2003). It is undeniable that each family represents its own culture and diverse values and beliefs, so it can be unrealistic and difficult to refer to one ethical or scientific practice that might meet all their needs and goals. Thus, implementing case scenario learning within ABA training programs may increase professionals' culturally humble and diverse practices (Conners et al., 2019).

Levy et al. (2021) argued that current case scenarios and examples used in the field of behavior analysis and in class discussions perpetuate systematic racism, in which "a predominantly Western and ethnocentric conceptualization" (p. 18) is consistently the central theme. Furthermore, ABA textbooks often provide exemplars and vignettes that highlight stimulus prompts prevalent in English-speaking and Western communities, which are overwhelmingly White. Such stimuli might not be relevant to marginalized and minoritized cultures or those who are from non-Western communities. In many instances, students in the ABA programs are most likely to be trained on behavior-analytic practices that help clients succeed in the practitioner's natural environment instead of a natural and culturally specific

environment. Therefore, the current practices—including training materials—in the ABA programs impose serious and conflicting issues to BIPOC individuals who represent the majority served in the ABA.

It was challenging to precisely and directly train participants on the suggested five cultural constructs by Connors et al. (i.e., cultural awareness, cultural knowledge, cultural skills, cultural encounters, and cultural desire). Neither was it seamless to include them in the design of the case scenarios narratives. Keeping that challenge in mind, the researcher indirectly measured those five cultural constructs by the participants' responses to the individual questions of cultural humility. As was reported earlier in this discussion, the participants' answers to the posttest case scenario appeared to imply beneficial outcomes and increased knowledge, awareness, and skills of culturally humble practices. Nevertheless, participants highlight the need to have more training materials to develop a lifelong self-reflective and accountable routine within ABA intervention services, which eventually could lead to socially significant and just practices.

The struggle to measure cultural constructs was inevitable in the current study. Our field of applied science stumbles over matters of culture, diversity, and social justice; it lacks inclusiveness and is still limited in its representation of one dominant hegemonic group (Beaulieu et al., 2018; Miller et al., 2018; Pritchett et al., 2021; Wright, 2019). For this reason, the goal was to take the first step to include the cultural constructs however indirectly to meet the extent to which a shift in the ABA research and practice should be considered (Pritchett et al., 202).

Study Limitations

Although the study results were significant, showing great promise for future culturally humble and reflective training practices, several limitations should be noted. These limitations

include adaptations and modifications of the survey questions, inconsistency between pretest-posttest case scenarios narratives, data analysis measures, and inter-rater agreement.

While the adapted survey questions helped the researcher establish a foundation for the participants' background and knowledge in cultural practices multiple skills, the elimination of some questions in the posttest could have impacted the data analysis. Only three questions from the pretest survey were asked in the posttest: (i.e., comfort level, skill level, and importance of training). These questions were related directly to the participants' reflections in the posttest after they accessed the intervention of the online module.

Information regarding participants who did not complete all phases of the study (i.e., pretest, intervention, and posttest) was not analyzed because it was considered incomplete. Even though 30 participants completed all phases of the study, the decision to exclude those (6 participants) who only completed the pretest and intervention may have had an indirect impact on the overall data analysis.

Another limitation was the unintentional difference in structuring the pre- and posttest narratives. The structure of the pretest narrative implied a negative scenario that some professionals may implement by mistake when working with culturally diverse clients. This scenario may have attracted negative responses to the cultural humility questions, resulting in lower scores in the pretest. Conversely, the posttest narrative seemed to imply an empathetic and reflective scenario within the professionals' practices. This scenario may have attracted positive responses to the cultural humility questions, resulting in higher posttest scores. In particular, the case scenario narrative in the posttest may have confounded the participants' responses, resulting in higher scores when compared to the pretest case scenario.

It was challenging to analyze the participants' responses systematically. The data collection tool used reflected qualitative responses of various lengths and depths, making it difficult to measure quantitatively. Also, the data analysis tool used to measure the qualitative and written responses to the cultural humility questions was not rigorously standardized even though the written responses were analyzed using a scoring rubric. Finally, it was not easy to embed and measure the suggested five cultural constructs within the case scenarios. This affected the inter-rater agreement score. The inter-rater agreement score with the second coder was low (73%), showing a possible inconsistency in the scoring rubric agreement between the researcher and graduate assistant.

Future Directions

While there is broad discussion of culturally influenced practices in the current ABA literature covering many topics, there remain significant gaps in our understanding of how to experimentally apply cultural practices into the ABA field. There are many forms of training to consider. These forms have been used in psychology programs and include lectures, discussions, case scenarios, self-reflection tasks about clients, journals, and practicum hours. Training professionals with a combination of these activities increased their skills of cultural competence, humility and knowledge about diverse populations and resulted in the application of culturally influenced practices (Conners et al., 2019). Thus, ABA programs should include training courses about multiculturalism and diversity. An example of this requirement is demonstrated in New York State, which mandates behavior analysts receive multiculturalism and diversity graduate coursework. The current study followed suggested forms and implemented online content containing discussions, case scenarios, and self-reflection to deliver multiculturalism awareness and humility within ABA practice.

Future behavior analysts should be exposed to previously mentioned five constructs of cultural awareness, cultural knowledge, cultural skills, cultural encounters, and finally cultural desire (Connors et al., 2019). After training with these five constructs, future behavior analysts might learn to vary their behaviors while interacting with clients from different backgrounds. That can be evaluated by their supervisors to see whether there may be some cultural reflection and development. Also, behavior analysts can be trained in ways of selecting course materials and behavior-analytic evaluations that are free of bias. Not only that, but they should also select tools to support the inclusion and incorporation of culture (Connors et al., 2019).

In addition to ABA practices that professionals should apply, faculty behavior analysts might assign coursework that involves working with clients from different backgrounds to reflect the importance of culture and its impact on behavioral treatment with diverse clients (e.g., parent training). Similarly, researchers in the ABA field should also dedicate their effort to understanding the lack of culturally humble practices while expanding on data collection concerning cultural humility and awareness training. Researchers should collect culturally influenced data to refine culturally evidence-based intervention practices. Also, researchers should consider designing and conducting different research methods to examine cultural training practices. It is crucial to develop and standardize data analysis tools with relation to ABA cultural training. Najdowski et al. (2020) emphasize that researchers need to establish practical steps that embrace diversity, multiculturalism, and inclusion values within universities' policies and missions.

While indirectly associated with the current research project, behavior analysts may be inspired by a decision-making framework that combines four intrinsic perspectives: justice, critique, care, and professionalism. A framework that helps a) deconstruct nuances and details

that result in professional dilemmas in specific contexts, b) enhance skills to predict actions and deal with coming dilemmas, c) examine ethical dilemmas using the model of four theoretical perspectives (i.e., justice, critique, care, professionalism), and d) guide educational teams that work with children with disabilities and their families to solve ethical situations that may not have been addressed by the ethical code (Stockall & Dnnis, 2015). Behavior analysts should learn that finding common ground with the client despite different beliefs can be a healthier practice (Witts et al., 2018). Although cultural responsiveness or humility and the ethical code are at a crossroads in the ABA field, it is optimal to study the problem experimentally so that competing issues of culture and ethics might be better addressed. Cultural responsiveness and humility training demonstrates adherence to cultural necessity from different aspects and raises awareness in the ABA field.

References

Abrams, L. S., & Moio, J. A. (2009). Critical race theory and the cultural competence dilemma in social work education. *Journal of Social Work Education*, *45*(2), 245-261.

Annamma, S. A., Connor, D., & Ferri, B. (2013). Dis/ability critical race studies (DisCrit): Theorizing at the intersections of race and dis/ability. *Race Ethnicity and Education, 16*(1), 1–31.

Artiles, A. J. (2013). Untangling the racialization of disabilities: An intersectionality critique across disability models. *Du Bois Review: Social Science Research on Race, 10*(2), 329–347.

Baer, D. M., Wolf, M. M., & Risley, T. R. (1968). Some current dimensions of applied behavior analysis. *Journal of applied behavior analysis*, *1*(1), 91.

Beaulieu, L., Addington, J., & Almeida, D. (2018). Behavior analysts' training and practices regarding cultural diversity: The case for culturally competent care. *Behavior Analysis in Practice*, *12*(3), 557–575.

Behavior Analyst Certification Board. (2017). BCBA/BCaBA task list (5th ed.). https://www.bacb.com/wp-content/uploads/2017/09/170113-BCBA-BCaBA-task-list-5th-ed-.pdf

Behavior Analyst Certification Board. (2019). Recent-Changes-to-International-Focus. https://www.bacb.com/wp-content/uploads/2020/06/Recent-Changes-to-International-Focus_200520.pdf

Bettini, E. A., Walraven, C., Billingsley, B., & Williams, T. O. (2018). Special educators of color are underrepresented across states: A challenge for leaders. *Journal of Special Education Leadership, 31*(1).

Campbell-Whatley, G. D. (2003). Recruiting and retaining of culturally and linguistically diverse groups in special education: Defining the problem. *Teacher Education and Special Education, 26*(4), 255–263.

Colby, S. L., & Ortman, J. M. (2017). *Projections of the size and composition of the US population: 2014 to 2060: Population estimates and projections* (P25-1143). Retrieved from U. S. Census Bureau website: https://census.gov/content/dam/Census/library/publications/2015/demo/p25-1143.pdf

Conners, Brian M., and Shawn T. Capell, eds. *Multiculturalism and Diversity in Applied Behavior Analysis: Bridging Theory and Application*. Routledge, 2020.

Conners, B., Johnson, A., Duarte, J., Murriky, R., & Marks, K. (2019). Future directions of training and fieldwork in diversity issues in applied behavior analysis. *Behavior Analysis in Practice*, *12*(4), 767–776.

Ennis-Cole, D., Durodoye, B. A., & Harris, H. L. (2013). The impact of culture on autism diagnosis and treatment: Considerations for counselors and other professionals. *The Family Journal, 21*(3), 279–287.

Ferri, B. A., & Connor, D. J. (2014). Talking (and not talking) about race, social class and dis/ability: Working margin to margin. *Race Ethnicity and Education, 17*(4), 471–493.

Fong, E. H., Catagnus, R. M., Brodhead, M. T., Quigley, S., & Field, S. (2016). Developing the cultural awareness skills of behavior analysts. *Behavior Analysis in Practice*, *9*(1), 84–94.

Fong, E. H., Ficklin, S., & Lee, H. Y. (2017). Increasing cultural understanding and diversity in applied behavior analysis. *Behavior Analysis: Research and Practice, 17*(2), 103.

Fong, E. H., & Tanaka, S. (2013). Multicultural alliance of behavior analysis standards for cultural competence in behavior analysis. *International Journal of Behavioral Consultation and Therapy*, *8*(2), 17.

Fong, E. H., & Lee, H. (2017). Sociocultural Perspective on Autism Intervention. *Autism: Paradigms, Recent Research and Clinical Applications. IntechOpen*, 291–300.

Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of teacher education*, *53*(2), 106-116.

Kidder, R. M. (2003). Chapter 1—overview: The ethics of right versus right. In *How good people make tough choices: Resolving the dilemmas of ethical living* (pp. 1–18). Simon & Schuster.

Kozleski, E. B., & Proffitt, W. A. (2020). A journey towards equity and diversity in the educator workforce. *Teacher Education and Special Education*, *43*(1), 63-84.

Ladson-Billings, Gloria, & William F. Tate IV. 1995. *Toward a Critical Race Theory of Education*. Teachers College Record 97 (1): 47-68.

Levy, Sonia, Amy Siebold, Janani Vaidya, Marie-Michèle Truchon, Jamine Dettmering, and Cameron Mittelman. "A Look in the Mirror: How the Field of Behavior Analysis Can Become Anti-Racist." (2021).

Matsuda, K., Garcia, Y., Catagnus, R., & Brandt, J. A. (2020). Can Behavior Analysis Help Us Understand and Reduce Racism? A review of the Current Literature. *Behavior Analysis in Practice*, 1-12.

McWilliam, P. J. (1992). The Case Method of Instruction: Teaching Application and Problem-Soloing Skills to Early Interventionists. *Journal of Early Intervention*, *16*(4), 360-373.

McWilliam, P. J. (2000). *Lives in progress: Case stories in early intervention*. Brookes

Publishing Company.

Miller, K. L., Cruz, A. R., & Ala'i-Rosales, S. (2019). Inherent tensions and possibilities: Behavior analysis and cultural responsiveness. *Behavior and Social Issues*, *28*(1), 16–36.

National Center for Cultural Competence. (2018). Definitions of cultural competence. https://nccc.georgetown.edu/curricula/culturalcompetence.html

Najdowski, A., Gharapetian, L., & Jewett, V. (2020). Towards the development of antiracist and multicultural graduate training programs in behavior analysis. Behavior Analysis. *Behavior Analysis in Practice*, 1-16.

Neely, L., Gann, C., Castro-Villarreal, F., & Villarreal, V. (2019). Preliminary findings of culturally responsive consultation with educators. *Behavior Analysis in Practice*, 1–12.

Nieto, S. (2000). Placing equity front and center: Some thoughts on transforming teacher education for a new century. *Journal of Teacher Education, 51*(3), 180–187.

Parsons, E. R. C., Rhodes, B., & Brown, C. (2011). Unpacking the CRT in negotiating white science. *Cultural Studies of Science Education, 6*(4), 951.

Parsons, M. B., Rollyson, J. H., & Reid, D. H. (2013). Teaching practitioners to conduct behavioral skills training: A pyramidal approach for training multiple human service staff. *Behavior Analysis in Practice*, *6*(2), 4-16.

Pugach, M. C., Gomez-Najarro, J., & Matewos, A. M. (2019). A review of identity in research on social justice in teacher education: What role for intersectionality? *Journal of Teacher Education, 70*(3), 206–218.

Pritchett, M., Ala'i-Rosales, S., Cruz, A. R., & Cihon, T. M. (2021). Social justice is the spirit and aim of an applied science of human behavior: Moving from colonial to participatory research practices. *Behavior Analysis in Practice*, 1-19.

Ridgeway, M. L. (2016). *A critical race theory consideration for the implementation of the Next Generation Science Standards*. Buffalo, NY: Research Gate.

Rosenberg, N. E., & Schwartz, I. S. (2019). Guidance or compliance: What makes an ethical behavior analyst? *Behavior Analysis in Practice*, *12*(2), 473–482.

Seponski, D. M., & Jordan, L. S. (2018). Cross-cultural supervision in international settings: Experiences of foreign supervisors and native supervisees in Cambodia. *Journal of Family Therapy, 40*(2), 247–264.

Seiverling, L., Williams, K., Sturmey, P., & Hart, S. (2012). Effects of behavioral skills training on parental treatment of children's food selectivity. *Journal of applied behavior analysis*, *45*(1), 197-203.

Snyder, P., & McWilliam, P. J. (2003). Using case method of instruction effectively in early intervention personnel preparation. *Infants & Young Children*, *16*(4), 284–295.

Stockall, N., & Dennis, L. R. (2015). Seven basic steps to solving ethical dilemmas in special education: A decision-making framework. *Education and Treatment of Children*, *38*(3), 329–344.

Sumari, M., & Jalal, F. H. (2008). Cultural issues in counseling: An international perspective. *Counseling, Psychotherapy and Health, 4*(1), 24–34.

Trainor, A. A., Bettini, E., & Scott, L. A. (2019). Introduction to the special issue—A necessary step in pursuit of equity: developing a racially/ethnically diverse special education teaching force. *Remedial and Special Education, 40*(4), 195–198.

Tyler, N., Yzquierdo, Z., Lopez-Reyna, N., & Flippin, S. (2002). *Diversifying the special education workforce* (COPSSE Document No. RS-3E). Gainesville, FL: University of

Florida, Center on Personnel Studies in Special Education (COPSSE). Retrieved from http://copsse.education.ufl.edu/copsse/docs/RS-3E/1/RS-3E.pdf

Tyler, N. C., Yzquierdo, Z., Lopez-Reyna, N., & Saunders Flippin, S. (2004). Cultural and linguistic diversity and the special education workforce: A critical overview. *The Journal of Special Education, 38*(1), 22–38.

Wald, J. L. (1996). *Culturally and linguistically diverse professionals in special education: A demographic analysis*. Reston, VA: National Clearinghouse for Professions in Special Education, Council for Exceptional Children.

Witts, B. N., Brodhead, M. T., Adlington, L. C., & Barron, D. K. (2018). Behavior analysts accept gifts during practice: So now what? Behavior Analysis: Research and Practice. Advance online publication. 10.1037/bar0000117.

Wright, P. I. (2019). Cultural humility in the practice of applied behavior analysis. *Behavior Analysis in Practice*, *12*(4), 805-809.

Appendix A

Cultural Constructs

Cultural Categories and Constructs	Cultural Awareness (i.e., examining one's own culture)	Cultural Knowledge (i.e., pursuing foundational education about diverse populations)	Cultural Skills (i.e., collecting culturally influenced data and conducting culturally responsive assessments)	Cultural Encounters (i.e., integrating a cross-cultural approach with clients)	Cultural Desire (i.e., understanding the professional's inclinations to learn about aforementioned constructs).
Evidence	(The answer is found in the question: "Identify cultural identities to one's worldview")	(The answer is found in the question: "Show Jamil's family that they value their input as clients…")	(The answer is found in the question: "Make space in practice for Jamil's family...")	(The answer is found in the question: "Identify own background to highlight what helps or hinders...")	(The answer is found in the question: "Learn about one's self through listening to clients…")

Cultural Humility Assessment Scoring Rubric (Pretest)

Applied Questions

	1	**2**	**3**	**4**
Step 1: • Identify the dilemma	The participant did not attempt to identify the dilemma	The participant attempted to identify the dilemma, but missed to represent Jamil's parents	The participant demonstrated partial understanding of the dilemma	The participant demonstrated a thorough understanding of the dilemma
• Identify the client(s)	The participant did not attempt to identify Jamil and his parents	The participant attempted to identify Jamil but missed to represent his parents	The participant attempted to identify both Jamil and his parents	The participant attempted to identify both Jamil and his parents, showing understanding of the family culture
• Identify initial reactions to Jamil's parents as client	The participant did not attempt to identify initial reactions to Jamil's parents as clients	The participant attempted to identify initial reactions to Jamil's parents as clients but missed to represent multiple humility possible concepts	The participant demonstrated understanding of own reaction to Jamil's parents as clients but missed to represent multiple humility possible concepts	The participant demonstrated a thorough reaction to Jamil's parents as clients, and represented multiple humility possible concepts
• Identify cultural identities to one's worldview	The participant did not attempt to identify one's cultural identities	The participant attempted to identify one's cultural identities but missed to represent multiple humility possible concepts	The participant demonstrated partial reflection on their cultural identities but missed to represent multiple humility possible concepts	The participant demonstrated a thorough reflection on their cultural identities, and represented multiple humility possible concepts

• Identify own background to highlight what helps or hinders connection to Jamil's and his family	The participant did not attempt to identify background to highlight what helps or hinders connection to Jamil's and his family	The participant attempted to identify own background to highlight what helps or hinders connection to Jamil's and his family, but missed to represent multiple humility possible concepts (e.g., Identify personal values or biases that may influence their opinion on this issue)	The participant demonstrated partial reflection on their background to highlight what helps or hinders connection to Jamil's and his family, but missed to represent multiple humility possible concepts (e.g., Identify personal values or biases that may influence their opinion on this issue)	The participant demonstrated a thorough reflection about their background to highlight what helps or hinders connection to Jamil's and his family, and represented multiple humility possible concepts (e.g., Identify personal values or biases that may influence their opinion on this issue)
Step 2: • Show Jamil's family that they value their input as clients (self-determination)	The participant did not attempt to show Jamil's family that they value their input as clients	The participant attempted to show Jamil's family that they value their input as clients, but missed to represent multiple humility possible concepts	The participant demonstrated a partial reflection to show Jamil's family that they value their input as clients, but missed to represent multiple humility possible concepts	The participant demonstrated a thorough reflection to show Jamil's family that they value their input as clients, and represented multiple humility possible concepts
• Make space in practice for Jamil's family to name their identities (family preferences, client outcomes)	The participant did not attempt to make space in practice for Jamil's family to name their identities	The participant attempted to make space in practice for Jamil's family to name their identities, but missed to represent multiple humility possible concepts	The participant demonstrated a partial reflection to make space in practice for Jamil's family to name their identities, but missed to represent multiple humility possible concepts	The participant demonstrated a thorough reflection to make space in practice for Jamil's family to name their identities, and represented multiple humility possible concepts
• Learn about one's self through listening to clients (self-reflection)	The participant did not attempt to learn about themselves through listening to clients	The participant attempted to learn about themselves through listening to clients, but missed to represent multiple humility possible concepts	The participant demonstrated partial reflection to learn about themselves through listening to clients, but missed to represent multiple humility possible concepts	The participant demonstrated a thorough reflection to learn about themselves through listening to clients, and represented multiple humility possible concepts

Appendix B

Cultural Constructs

Cultural Categories and Constructs	Cultural Awareness (i.e., examining one's own culture)	Cultural Knowledge (i.e., pursuing foundational education about diverse populations)	Cultural Skills (i.e., collecting culturally influenced data and conducting culturally responsive assessments)	Cultural Encounters (i.e., integrating a cross-cultural approach with clients)	Cultural Desire (i.e., understanding the professional's inclinations to learn about aforementioned constructs).
Evidence	(The answer is found in the question: "Identify cultural identities to one's worldview")	(The answer is found in the question: "Show Zain's family that they value their input as clients…")	(The answer is found in the question: "Make space in practice for Zain's family...")	(The answer is found in the question: "Identify own background to highlight what helps or hinders...")	(The answer is found in the question: "Learn about one's self through listening to clients...")

Cultural Humility Assessment Scoring Rubric (Posttest)

Applied Questions

	1	**2**	**3**	**4**
Step 1: • Identify the dilemma	The participant did not attempt to identify the dilemma	The participant attempted to identify the dilemma, but missed to represent Zain's parents	The participant demonstrated partial understanding of the dilemma	The participant demonstrated a thorough understanding of the dilemma
• Identify the client(s)	The participant did not attempt to identify Zain and his parents	The participant attempted to identify Zain but missed to represent his parents	The participant attempted to identify both Zain and his parents	The participant attempted to identify both Zain and his parents, showing understanding of the family culture
• Identify initial reactions to Zain's parents as clients	The participant did not attempt to identify initial reactions to Zain's parents as clients	The participant attempted to identify initial reactions to Zain's parents as clients but missed to represent multiple humility possible concepts	The participant demonstrated understanding of own reaction to Zain's parents as clients but missed to represent multiple humility possible concepts	The participant demonstrated a thorough reaction to Zain's parents as clients, and represented multiple humility possible concepts
• Identify cultural identities to one's worldview	The participant did not attempt to identify one's cultural identities	The participant attempted to identify one's cultural identities but missed to represent multiple humility possible concepts	The participant demonstrated partial reflection on their cultural identities but missed to represent multiple humility possible concepts	The participant demonstrated a thorough reflection on their cultural identities, and represented multiple humility possible concepts

• Identify own background to highlight what helps or hinders connection to Zain's and his family	The participant did not attempt to identify background to highlight what helps or hinders connection to Zain's and his family	The participant attempted to identify own background to highlight what helps or hinders connection to Zain's and his family, but missed to represent multiple humility possible concepts (e.g., Identify personal values or biases that may influence their opinion on this issue)	The participant demonstrated partial reflection on their background to highlight what helps or hinders connection to Zain's and his family, but missed to represent multiple humility possible concepts (e.g., Identify personal values or biases that may influence their opinion on this issue)	The participant demonstrated a thorough reflection about their background to highlight what helps or hinders connection to Zain's and his family, and represented multiple humility possible concepts (e.g., Identify personal values or biases that may influence their opinion on this issue)
Step 2: • Show Zain's family that they value their input as clients (self-determination)	The participant did not attempt to show Zain's family that they value their input as clients	The participant attempted to show Zain's family that they value their input as clients, but missed to represent multiple humility possible concepts	The participant demonstrated a partial reflection to show Zain's family that they value their input as clients, but missed to represent multiple humility possible concepts	The participant demonstrated a thorough reflection to show Zain's family that they value their input as clients, and represented multiple humility possible concepts
• Make space in practice for Zain's family to name their identities (family preferences, client outcomes)	The participant did not attempt to make space in practice for Zain's family to name their identities	The participant attempted to make space in practice for Zain's family to name their identities, but missed to represent multiple humility possible concepts	The participant demonstrated a partial reflection to make space in practice for Zain's family to name their identities, but missed to represent multiple humility possible concepts	The participant demonstrated a thorough reflection to make space in practice for Zain's family to name their identities, and represented multiple humility possible concepts
• Learn about one's self through listening to clients (self-reflection)	The participant did not attempt to learn about themselves through listening to clients	The participant attempted to learn about themselves through listening to clients, but missed to represent multiple humility possible concepts	The participant demonstrated partial reflection to learn about themselves through listening to clients, but missed to represent multiple humility possible concepts	The participant demonstrated a thorough reflection to learn about themselves through listening to clients, and represented multiple humility possible concepts

Appendix C

Pretest

Participant Demographics

Age	**N**	**Percentage**
Under 30		
30–39		
40–49		
50–59		
60–69		
70–79		
Total		
Gender		
Female		
Male		
Nonbinary/third gender		
Prefer not to say		
Total		
Race	**N**	**Percentage**
White		
Black or African American		
Asian		
Native Hawaiian or other Pacific Islander		
American Indian or Alaska Native		
Other		
Prefer not to say		
Total		
Ethnicity		
Hispanic		
Non-Hispanic		
Total		
Current nationality	**N**	**Percentage**
U.S. citizen		
Dual citizen		
Other		
Prefer not to say		
Total		
Field of Master's Degree		
Applied behavior analysis		
Psychology		
Education		
Other		
Total		

Beaulieu, Addington, & Almeida, 2018)

Culture Humility Survey (Pretest)

1. Are you now a BCBA or seeking to be a Board-Certified Behavior Analyst (BCBA)?
Yes
No
2. Which proportion of your clients have/had diverse backgrounds (e.g., different cultures, races, ethnicities, nationalities, religions)?
Less than 10%
10% to 19%
20% to 29%
30% to 39%
40% to 49%
50% to 59%
60% to 69%
70% to 79%
80% to 89%
Greater than 90%
3. How comfortable do you feel working with people with diverse backgrounds (e.g., different cultures, races, ethnicities, nationalities, religions)?
Very uncomfortable
Uncomfortable
Fairly comfortable
Moderately comfortable
Very comfortable
4. How skilled do you feel working with people with diverse backgrounds (e.g., different cultures, races, ethnicities, nationalities, religions)?
Not skilled
Slightly skilled
Neither skilled nor unskilled
Moderately skilled
Extremely skilled
5. How important is it to receive training and education on working with individuals with diverse backgrounds?
Not important
Somewhat important
Neutral
Moderately important
Very important
6. During your master's degree education, how much material in your behavior-analytic coursework was dedicated to teaching you how to work with people with diverse backgrounds (e.g., different cultures, races, ethnicities, nationalities, religions)?
None
Little
Some
Moderate
Extensive
7. During your master's degree education, how much hands-on training (e.g., fieldwork, practicum) was dedicated to teaching you how to work with people with diverse backgrounds (e.g., different cultures, races, ethnicities, nationalities, religions)?
None
Little
Some
Moderate
Extensive
8. How much continuing education have you received teaching you how to work with people with diverse backgrounds (e.g., different cultures, races, ethnicities, nationalities, religions)?
None
Little
Some
Moderate
Extensive
Not applicable
9. How many continuing education (CE) opportunities have you seen offered at behavior-analytic conferences or online teaching you how to work with people with diverse backgrounds (e.g., different cultures, races, ethnicities, nationalities, religions)?
None
Little
Some
Moderate
Extensive
Not applicable

10. How much training does your employer provide you on working with individuals with diverse backgrounds (e.g., different cultures, races, ethnicities, nationalities, religions)?
None
Little
Some
Moderate
Extensive
11. How familiar are you with the process of delivering culturally competent care/service?
Not at all
Little
Some
Moderately
Extensively
12. When working with clients who have immigrated from another country, how likely are you to educate yourself on their countries' customs, values, beliefs, and behaviors?
Never
Rarely
Sometimes
Most times
Every time
13. How likely are you to ask your clients about their spiritual beliefs?
Never
Rarely
Sometimes
Most times
Every time
14. How likely are you to ask your clients about their use of natural (nonmedical) treatments?
Never
Rarely
Sometimes
Most times
Every time
15. How likely are you to ask your clients about their dietary preferences?
Never
Rarely
Sometimes
Most times
Every time
16. How likely are you to ask your clients about gestures or nonverbal communication that is important (e.g., specific greetings) to them or offensive to them?
Never
Rarely
Sometimes
Most times
Every time
17. How likely are you to ask the caregivers or clients about their beliefs of the client's disorder or diagnosis?
Never
Rarely
Occasionally
Most of the time
Every time
18. How likely are you to ask the caregivers or clients their preferences for male versus female therapists or BCBAs?
Never
Rarely
Occasionally
Most of the time
Every time
19. How likely are you to ask whether the treatment goals and procedures align with the families' values and beliefs?
Never
Rarely
Occasionally
Most of the time
Every time
20. How likely are you to work with a translator if English is a second language?
Never
Rarely

Sometimes
Most times
Every time
21. How knowledgeable are you with differences in parenting across cultures?
No knowledge
Not very knowledgeable
Somewhat knowledgeable
Moderately knowledgeable
Very knowledgeable
22. How likely are you to reflect on your own culture and how that may impact your assessment and treatment process?
Not at all
Little
Some
Moderately
Extensively
23. When working with families or individuals who have immigrated to your country, how likely are you to educate them on insurance policy?
Never
Rarely
Occasionally
Most of the time
Every time
Employment
24. What is your primary role as a BCBA?
Student
Practitioner (direct services)
Supervisor
Administrator
Other
25. What population do you primarily work with?
Autism spectrum disorder
Intellectual disability
Special education
Emotional or behavioral disorders
Mental health
General education
Brain injury
Typically developing
Gerontology
Employees
Child welfare
Other
26. What is your primary work setting?
Public school
Private school
Client's home
Center or clinic
College or university
Residential facility
Hospital
Community

(Beaulieu, Addington, & Almeida, 2018)

Appendix D

Posttest

Culture Humility Survey

1. How comfortable do you feel working with people with diverse backgrounds (e.g., different cultures, races, ethnicities, nationalities, religions)?
Very uncomfortable
Uncomfortable
Fairly comfortable
Moderately comfortable
Very comfortable
2. How skilled do you feel working with people with diverse backgrounds (e.g., different cultures, races, ethnicities, nationalities, religions)?
Not skilled
Slightly skilled
Neither skilled nor unskilled
Moderately skilled
Extremely skilled
3. How important is it to receive training and education on working with individuals with diverse backgrounds?
Not important
Somewhat important
Neutral
Moderately important
Very important
4. How familiar are you with the process of delivering culturally sensitive care/service?
Not at all
Little
Some
Moderately
Extensively
5. When working with clients who have immigrated from another country, how likely are you to educate yourself on their countries' customs, values, beliefs, and behaviors?
Never
Rarely
Sometimes
Most times
Every time
6. How likely are you to ask your clients about their spiritual beliefs?
Never
Rarely
Sometimes
Most times
Every time
7. How likely are to ask your clients about their use of natural (nonmedical) treatments?
Never
Rarely
Sometimes
Most times
Every time
8. How likely are you to ask your clients about their dietary preferences?
Never
Rarely
Sometimes
Most times
Every time
9. How likely are you to ask your clients about gestures or nonverbal communication that is important (e.g., specific greetings) to them or offensive to them?
Never
Rarely
Sometimes
Most times
Every time
10. How likely are you to ask the caregivers or clients about their beliefs of the client's disorder or diagnosis?
Never

Rarely
Occasionally
Most of the time
Every time
11. How likely are you to ask the caregivers or clients their preferences for male versus female therapists or BCBAs?
Never
Rarely
Occasionally
Most of the time
Every time
12. How likely are you to ask whether the treatment goals and procedures align with the families' values and beliefs?
Never
Rarely
Occasionally
Most of the time
Every time
13. How likely are you to work with a translator if English is a second language?
Never
Rarely
Sometimes
Most times
Every time
14. How knowledgeable are you with differences in parenting across cultures?
No knowledge
Not very knowledgeable
Somewhat knowledgeable
Moderately knowledgeable
Very knowledgeable
15. How likely are to reflect on your own culture and how that may impact your assessment and treatment process?
Not at all
Little
Some
Moderately
Extensively
16. When working with families or individuals who have immigrated to your country, how likely are you to educate them on insurance policy?
Never
Rarely
Occasionally
Most of the time
Every time

Beaulieu, Addington, & Almeida, 2018)

Appendix E

Cultural Humility Assessment (Pretest)

Step 1:

- Identify the dilemma.
- Identify the client(s).
- What are your initial reactions to Jamil's parents as clients?
- How would your cultural identities (e.g., belief, family) shape your worldview?
- How would your own background help or hinder your connection to Jamil and his family? (Identify personal values or biases that may influence your opinion on Jamil's case).

Step 2:

- How would you show Jamil's family that you value their input as clients? (client self-determination)
- How would you make space in your practice for Jamil's family to name their identities? (family preferences, client outcomes)
- What would you learn about yourself through listening to clients (e.g., Jamil's family) who are different than you? (self-reflection)

Wright, P. I. (2019). Cultural humility in the practice of applied behavior analysis. *Behavior Analysis in Practice*, *12*(4), 805-809.(p. 807) & Rosenberg, N. E., & Schwartz, I. S. (2019). Guidance or Compliance: What Makes an Ethical Behavior Analyst?. *Behavior Analysis in Practice*, *12*(2), 473-482.

Appendix F

Cultural Humility Assessment (Posttest)

Step 1:

- Identify the dilemma.
- Identify the client(s).
- What are your initial reactions to Zain's parents as clients?
- How would your cultural identities (e.g., belief, family) shape your worldview?
- How would your own background help or hinder your connection to Zain and his family? (Identify personal values or biases that may influence your opinion on Zain's case).

Step 2:

- How would you show Zain's family that you value their input as clients? (client self-determination)
- How would you make space in your practice for Zain's family to name their identities? (family preferences, client outcomes)
- What would you learn about yourself through listening to clients (e.g., Zain's family) who are different than you? (self-reflection)

Wright, P. I. (2019). Cultural humility in the practice of applied behavior analysis. *Behavior Analysis in Practice*, *12*(4), 805-809.(p. 807) & Rosenberg, N. E., & Schwartz, I. S. (2019). Guidance or Compliance: What Makes an Ethical Behavior Analyst?. *Behavior Analysis in Practice*, *12*(2), 473-482.

Appendix G

Case Scenario (Pretest)

Jamil is a 4-year-old young boy who lives with his family, who just arrived in the United States 1 year ago from Syria. His family consists of his mother, father, and older sister. His mother and father are fluent in both Aramaic and Arabic but are currently taking English classes to better their fluency and help their children who are currently learning English in school as they also speak Aramaic and Arabic. When Jamil underwent his yearly check-up with his pediatrician, they suggested that his language and social-emotional development would benefit significantly from a behavior-analytic program after completing several assessments. After listening to the doctor's recommendations, Jamil was enrolled in a local preschool that offers a behavior-analytic program. Jamil quickly adapted to his classmates and his teacher. Jamil loved to build tall elaborate structures with blocks during free time. It became very apparent to his teacher that when she introduced concepts of sequence (e.g., puzzle activity), it improved his receptive and expressive language skills. She decided in order for him to continue growing that she would share these successes with his parents so he could practice at home. The next day his teacher called a meeting with his parents to discuss some games and routine activities that would be great to continue at home. She felt confident that these would increase his evolving language skills if provided with these additional opportunities to practice. The response from his parents bothered the teacher. In their culture, Jamil's parents expressed their reluctance to do the games or routines suggested because it is not customary to play with their children based on structured play or recommendations that involve designed school plans. The resistance the teacher ran into was the same for Jamil's BCBA, Jessica. Jessica provided weekly home-based ABA services for Jamil. She expressed frustration and a lack of motivation to continue working with Jamil's family due to their lack of collaboration in implementing the practices presented. Jessica even considered consulting with her agency's providers to require Jamil's parents to implement language and social skills throughout his daily routines. She assumes it is unethical to continue providing Jamil's ABA home services without parents' full compliance with ABA evidence-based practices. Taking courses in her ABA graduate program, Jessica learned that involving parents in their children's ABA services is necessary for children to generalize their acquired skills. However, Jessica never introduced ABA services to families whose background is different from hers, nor did she take professional development courses on diverse cultures and immigrants. When Jessica reflects on her traditional interactions with her kids, she believes that parents should play with their kids daily so they can develop typically. Jamil's parents see their roles as parents more to provide and work on other adult obligations such as work and continued education. They think that their BCBA should reduce their daily tasks while meeting Jamil's needed skills.

Appendix H

Case Scenario (Posttest)

Zain's family immigrated to the United States due to war circumstances that led to instability in his home country in the Middle East. His family chose to relocate to California through a resettlement program coordinated by the United Nations. At the time, Zain was a year old. His parents were excited about their new life and Zain's future. Their dream was to provide the best life and education for their child. At first, Zain was developing and learning like other children his age. However, two years later, Zain began displaying troubling behaviors, such as tantrums and aggressive and repetitive patterns. His parents were worried about his behavior, so they consulted with his pediatrician to learn what might have caused this shift in his behavior. After multiple screenings, Zain was diagnosed with autism spectrum disorder (ASD). As a recent immigrant family with different social, racial, and economic identities, they found it difficult to interpret the doctor's explanation of ASD and the next steps regarding early intervention services. Zain's parents could not access a culturally sensitive program with early intervention services in California. In addition to the need for early childhood special education (ECSE) and applied behavior analysis (ABA) services, they did not have the support of a large community of family members. Zain's grandparents were not able to help during ABA therapy sessions while his parents worked various shifts. Zain was not assigned to a culturally responsive behavior analyst familiar with the family's cultural perspectives and values. Miss Tahni was a board-certified behavior analyst (BCBA). She never worked with immigrant families. Although she shared the same cultural background as Zain's family, she does not have the experience to meet their cultural needs successfully. Although she was bilingual, she lacked communicating ABA terms with Zain's parents in their native language. She did not know how to involve Zain's parents in his behavior plans, integrate cultural ways of developing communication skills or techniques for requesting food, and model asking for help during mealtimes. Zain's family emphasized their interest in teaching cultural perspectives to communicate with others, including Zain's grandparents. Miss Tahni is like many behavior analysts who might not know how to reflect on other children's and families' culture and language diversity aspects. Part of a school team, Ms. Hebah, a first-year preschool teacher, is rigorously trained to create individualized education plans (IEPs) and apply various educational strategies based on children's needs. Although she is passionate about supporting minority families and their children with ASD, she admits to struggling to meaningfully embed families' cultural identity and racial and ethnic needs. Ms. Hebah likes to assist families from diverse populations, especially newly relocated immigrants and refugees. She has learned many words from different languages, such as Somali and Arabic. She is determined to learn and incorporate families' cultures, beliefs, and traditions into her teaching plans. Most importantly, she believes that interaction and communication with parents can help achieve socially meaningful intervention and teaching goals. Ms. Hebah and Miss Tahni think that reliance on families' input in their children's plans is not of much importance as long as IEPs and behavior plans are designed professionally and scientifically. Ms. Hebah and Miss Tahni feel it is challenging to include families in their children's plans with a real sense of responsibility. They believe that asking families about their values and preferences will not facilitate ethical obligations or lead to behavior changes and development for children with ASD.