

MULTICULTURAL COMPETENCY IN ABA

A Preliminary Review of Research on Multicultural Competency in
Applied Behavior Analysis

by

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MULTICULTURAL COMPETENCY IN ABA

Thesis

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ABSTRACT

Applied behavior analysis (ABA) is the applications of principles of learning and operant conditioning to solve important social problems. ABA is commonly used as a treatment for autism spectrum disorder (ASD). As with any therapy, matters of cultural awareness and diversity are important to therapeutic rapport and acceptability. Recently, researchers in the field of ABA have started to describe and investigate the impact of cultural variables in ABA. To date, no summary or systematic review of these articles have occurred. Systematic reviews are important for bringing information on a similar topic together to inform practice and synthesize findings. The goal of this literature review is to do just that: bring together the most current research on cultural variables in ABA and synthesize their findings and suggestions. The goal of this review is to help the field better communicate to diverse cultures, increase its acceptability across cultures, and hopefully allow for ABA to be utilized more effectively. By gathering previous written articles and combining their findings, this literature review will help figure out what exactly individuals need to educate and facilitate speaking to one another with proper understanding and comfort.

Keywords: applied behavior analysis, ABA, multiculturalism, multicultural, cultural diversity, culture, cultural, ethnicity, identity

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A Preliminary Review of Research on Multicultural Competency in Applied Behavior Analysis

Applied behavior analysis (ABA) is a scientific and empirical approach to understanding and changing behavior that is based on the principles of operant conditioning to change socially significant behavior (Cooper et al; 2019). It is the applied form of behavior analysis. Principles such as chaining, shaping, prompting, and reinforcement are used in ABA to facilitate changes in clinically significant behaviors (Vallinger, 2021). ABA is an approach used, but not limited to mental health treatment, education, business, gerontology, sports, and music (Cooper et al., 2019).

The Use of ABA for Autism Spectrum Disorder

ABA is mostly used to treat neurodevelopment disorders like attention deficit hyperactivity disorder (ADHD), intellectual delays, and autism spectrum disorder (ASD). ASD is a developmental disorder in which individuals have deficits in social communication and display repetitive behaviors and/or restricted interests. Individuals may also have other symptoms such as problematic behavior, poor academic performance, and language delays (McClain et al., 2019; Vallinger 2021). Since 2015, the prevalence rate of ASD has increased from a prior estimate of one in eighty-nine children to one in fifty-nine children (McClain et al., 2019). Further, Simonof and colleagues report that “ASD is recognized as a major public health concern because of its early onset, long duration, and high levels of associated impairments” (Simonof et al., 2008). ABA has a long history of being used to treat ASD and continues to be one of the only empirically supported treatment for ASD symptoms (Cihon et al., 2016). Wolf, Risley, and Mees (1964) first demonstrated the efficacy of operant methods with an

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autistic child, “the popularity of behaviorally based interventions has markedly expanded and are now used to treat a wide range of core symptoms of ASD as well as challenging behaviors and psychopathology” (Matson et al., 2012, p.145).

Why do Children with ASD Deserve ABA?

As mentioned, ABA has a history of effectiveness for treating ABA and other neurodevelopmental disorders. Walsh (2011) gives 10 reasons why children with ASD deserve ABA. The 10th reason Walsh (2011) explained, “Children with autism deserve ABA because there is more scientific evidence demonstrating ABA “works” than there is for any other intervention or treatment.” This reason alone is enough to cause a parent to consider the benefits of ABA. However, one cannot agree more with Walsh’s (2011) reason number 1, ABA can prepare individuals with ASD to be their best advocate. ABA prepares children with ASD to enter and function independently in society. Walsh’s first reason pairs well with his second reason because someday the child with autism parents will die. However, startling this point may be, the point Walsh is trying to highlight is that children with ASD need to develop living skills so they can be optimally independent. ABA is a treatment which has the possibilities to open doors for not just children with ASD, but also for parents of children with ASD.

Multicultural Competency in Therapy

One variable that can impact any therapy are the cultural values that are held by the client or their family themselves. Understanding a clients’ cultural background, unique experiences, and values can help build rapport, help clients feel validated, and is ethically indicated by many professions (Tervalon & Murray-Garcia, 1998). In the Merriam-Webster Online dictionary, culture is defined as the pattern of human

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knowledge, belief, and behavior, but each social science discipline comments on this dictionary definition to mirror its personal priority, interest, and conceptual frameworks (Sugai et al., 2012). Individuals who act according to the beliefs of another culture because they understand and believe the other culture, are considered to be culturally competent (Sugai et al., 2012). The idea and mechanism of cultural humility is meant to substitute cultural competence due to the meaning of the word competence, which is part of a personal education skill that can be mastered, while cultural humility requires a path where one must continue forever (Wright, 2016). According to Tervalon and Murray-Garcia, (1998), cultural humility incorporates a lifelong commitment to self-evaluation and critique to address power imbalances and develop mutually beneficial and non-paternalistic partnerships with communities (p. 117).

Many (e.g., Me Too, Black Lives Matter, Stand Up) relatively new social movements are calling attention to inequality and facilitating open conversations about injustice for underserved communities at risk (Wright, 2019). Since ABA purports to be based on universal principles of learning, it can be applied in a variety of contexts and scenarios. Therefore, concepts such as cultural competency and cultural humility are important to all practicing behavior analysts. However, these competencies may be more important to ABA practitioners working in culturally diverse communities. For example, the Latinx population is increasing and therefore the number of individuals seeking behavioral health services is increasing as well. The Census Bureau (2018) has projected that self-identifying Latinx will compose 28% of the total U.S. population by 2060 (Vespa et al., 2020 & Greene-Moton 20). Behavior analysts, like other professionals in human services, are increasingly acknowledging the importance of diversity and equity in

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the field of applied behavior analysis (Conners et al., 2019; Wang et al., 2019; Zarcone et al., 2019). As behavior analysts learn more and become more aware of diversity and equity issues, there is an increased importance surrounding these areas in the field (Conners et al., 2019; Wang et al., 2019; Zarcone et al., 2019). Behavior analysts have an obligation to uphold; to provide services to consumers of all backgrounds including race, different cultures, ages and genders (Castro et al., 2021). This includes becoming aware of cultural variables such as customs, traditions, and taboos that can impact treatment acceptability.

Research on Cultural Competency in Other Human Service Fields

Concepts such as multicultural competency, social justice, decolonization, etc. have been researched in other human service fields. For instance, Singh et al (2020) described four specific multicultural and social justice concepts that can help clinicians adopt tenants of social justice in their practice. These are relational-cultural theory, critical race theory, intersectionality theory, and liberation psychology. Ridley and colleagues (2021) discussed the lack of operationalization of the concept of cultural competency and how this is a barrier to further research and training in counseling. In their article, Ridley and colleagues highlight that even the terms “competent” and “competence” have historically been used incorrectly and interchangeably. In one of the few articles that take a data-based approach to the issue, Gonzalez-Voller et al (2020) examined changes in self-perception of counselors over time using a longitudinal design. In this article, the authors’ defined multicultural competency as “counselor trainees’ self-perceptions of their multicultural knowledge, awareness, and skills when working with clients of diverse cultural groups” (p. 310). The authors examined the development of

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competence over time across clinical mental health counselors, school counselors, and marriage and family counselors. All 3 groups of clinicians showed increasing scores on self-report measures of cultural competence across time.

Multiculturalism and Cultural Competency in ABA

To move the field of ABA towards more cultural understanding, the Behavior Analyst Certification Board (BACB) added specific ethical guidelines on cultural competencies for behavior analysts. Since ABA reports to be based on universal principles of learning, it can be applied in a variety of contexts and scenarios. Therefore, concepts such as cultural competency and cultural humility are important to all practicing behavior analysts. However, these competencies may be more important to ABA practitioners working in neutrally diverse communities. Specifically, the BACB states on Item 1.07 (Cultural Responsiveness and Diversity) indicates that:

“Behavior analysts actively engage in professional development activities to acquire knowledge and skills related to cultural responsiveness and diversity. They evaluate their own biases and ability to address the needs of individuals with diverse needs/ backgrounds (e.g., age, disability, ethnicity, gender expression/identity, immigration status, marital/relationship status, national origin, race, religion, sexual orientation, socioeconomic status). Behavior analysts also evaluate biases of their supervisees and trainees, as well as their supervisees’ and trainees’ ability to address the needs of individuals with diverse needs/backgrounds.” (p. 9)

Training in Cultural Competencies

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Given the points above, Students in graduate classes entering the field of ABA should be provided classes on multiculturalism. The importance of cultural awareness and diversity should be incorporated into graduate programs (Wang et al., 2019). One should not express knowledge of a particular culture because they have friends from that culture or because they are part of a particular culture and yet have ten or more years without being around anyone from what they still call their culture. Due to the process of evolution, ABA companies should provide ongoing education for employees. Cultural competency is quickly becoming an absolute necessity instead of auxiliary in service careers (Fong, Ficklin, & Lee, 2017). With how Skinner (1953) defined culture as a “collection of the contingencies of reinforcement into which individuals are born and to which they are exposed throughout their lives”, It is evident that different cultures would produce a magnitude of unique environments that impact and structure individuals’ behaviors (Connors et al., 2019).

Statement of the Problem

ABA is the application of principles of operant conditioning to problems of social significance. However, culture is a variable that can impact the acceptability and course of treatment. Previous research from other fields has highlighted the importance of cultural awareness and competency. In our own field, recent ethical guidelines from the BACB have indicated that practitioners need to be competent when working with individuals from other cultures. However, there is not a significant amount of literature on the topic of cultural competence in ABA. Due to the field expanding and the ongoing increase in the multicultural population, a better understanding of how ABA practices intersect with these values would be important for practitioners. Therefore, the purpose of

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this paper was to locate and review existing articles on cultural competency in ABA and provide a summary of the findings and suggestions in each. Identifying the characteristics of the literature on cultural competency in ABA could be helpful for a number of reasons. For example, knowing how many articles demonstrate teaching competencies, what terms they use to discuss cultural competencies, and who the intended audience of the research (i.e., RBT or BCBA) would be important (see Table 1 for all questions).

Method

The literature review consisted of computer-based searches for relevant literature that were conducted using the PsycINFO database using the following keywords: multiculturalism, multicultural, cultural diversity, culture, cultural, ethnicity, identity, applied behavior analysis, and ABA. The database contains three search drop boxes. The author used all three boxes. In the first box the author entered "multiculturalism **or** multicultural **or** cultural diversity." In the second box the author entered "culture **or** cultural **or** ethnicity or identity." In the third box the author entered "aba **or** applied behavior analysis."

Inclusion Criteria

To be included in the current review, articles had to be written in English, published in the past 10 years, and have appeared in a peer reviewed journal. The articles must also discuss multiculturalism, cultural competence, or other related topics in the field of ABA.

Article Review's

After finding each article, each was reviewed by the author to evaluate its contents. The author went through each article and identified what information was

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contained in the article with respect to the question of interest. For example, to answer the question "How many articles suggested graduate training in multicultural competencies in ABA for students?", the author read and searched the article to find whether this suggestion was made. If it was, it was tallied as a "yes" with respect to that question. This process was repeated for all articles for each question to answer the questions. Data was presented in table form for ease of review and analysis.

Results

A total of 13 articles that met inclusion criteria were identified using the search terms specified in PsychINFO. Out of the 13 articles found, 7 (53.8%) suggested graduate training and 6 (46.2%) did not mention the need for graduate training. Of the 13 articles in the current review, only 2 (15.3%) contained a research design to evaluate the use of ethics and/or training on ethics. A total of 8 (61.5%) used the terms "cultural humility" and "cultural awareness", 3 (23.1%) used the term "cultural competency", 2 (15.39%) used the terms "cultural competency" and "multicultural", and 1 (7.7%) used the term "cultural competency" alone. None of the articles included in the current review mentioned cultural competency for RBT's, while 10 (76.9%) of articles mentioned cultural competency for BCBA's. Of the 13 articles, a total of 10 (76.9%) cited the BACB Ethics Code. Lastly, none of the articles included in the current review suggested ongoing training in cultural competencies on an organizational level. Each article had its own suggestions regarding future research (see Tables 2-10).

Discussion

The goal of this review was to highlight the importance of being culturally aware of cultures we do not know and examine the current state of the literature in the field of

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ABA. In the ABA field we need to practice cultural humility and cultural competence to gain acceptance from consumers who may benefit from our practice as well as to adhere to ethical guidelines. As a science of behavior, ABA may have a lot to offer as a treatment, but to utilize ABA across cultures practitioners must be aware of cultural biases (Fong, et al., 2016). ABA has been utilized in different cultures such as the Maori's, (an indigenous tribe in New Zealand; see Plessas et al., 2019), and groups with low socioeconomic status in the United States (Fong et al., 2017). For ABA to be applicable in more cultures, the field should include “the concept of humility into our practice if we are to solve the issue of those that overestimate their cultural competence,” (Wright, 2019).

Language and Communication

ABA uses specific terminology, which at times can be confusing and difficult to understand, especially to clients and their families (Fong et al., 2016). Findings for this review revealed the need for awareness in cultural competence that includes effective communication and teaching as well as valuing diversity and respecting cultural values, traditions, and communicative styles, which in turn can help cultural natives with communication barriers (Fong et al., 2017). Beaulieu et al., (2018) explained that the most relevant cultural variables related to development and maintenance of a therapeutic relationship with a client, or a stakeholder might be vocal and gestural communication. The way we communicate across cultures and are interpreted may be affected by our own cultural background. In the article by Deochand and Costello (2022) the authors discussed how the hand gesture, “okay” signals agreement in the U.S., but could be an aversive and obscene gesture in Brazil. Per the BACB guidelines, “Code 1.05(b) of the

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Professional and Ethical Compliance Code states that behavior analysts should use fully understandable language with the recipient of the service(s), (Deochand & Costello, 2022). Therefore, securing translation services might not be sufficient for overcoming communication barriers when working with clients from other cultures. Gaining information on cultural practices and methods of communicating from an individual with experience in a culture could help ensure that behavior analysts are communicating effectively with families who speak a different language than the behavior analyst does (Deochand & Costello, 2022). Fong has recommended that behavior analysts use self-assessments, which ask questions related to our ability to provide effective care.

Understanding the ethics code cannot be the only standard that governs ethical behaviors, including cultural competence. Other articles have suggested using tools like the Diversity Self-Assessment or the Multicultural Sensitivity Scale, (Arango & Lustig 2022; Fong et al., 2016) to identify cultural competency needs. These are tools which can help behavior analysts with understanding their own cultural values and biases, and becoming more aware of theirs and their client's culture (Arango & Lustig 2022). To become a BCBA, there are no coursework hours requirements on cultural competencies in a verified course sequence. Instead, a majority of “training” in cultural competence is provided in field experience supervision (Arango & Lustig 2022). As mentioned, the Ethics Code for Behavior Analyst by the BACB requires that certificants obtain training in cultural diversity (Beaulieu & Jimenez-Gomez 2022). However, for an aspiring behavior analyst obtaining the proper training in cultural competence will depend on the diversity of clients they receive. An aspiring behavior analyst may “request training for working with culturally and linguistically diverse (CLD) families” (Deochand &

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Costello, 2021, p.898) since supervision in the field is not guaranteed. Therefore, it is incumbent to bring these points into curricula, studies, publications, and other practices (Arago & Lustig 2022). It is also encouraged that training programs recruit from diverse communities (Dennison et al., 2019) and that individuals involved in research and practice engage in practice that foster cultural responsiveness (Beaulieu & Jimenez-Gomez 2022). Deochand & Costello (2021) mentioned incorporating up-to-date multicultural competency guidelines to the behavior analytic training programs (p.899).

University Training Needs

Slightly more than half of the articles in the current review suggested the need for graduate training. It would be beneficial for the ABA graduate program to incorporate training on diversity (Ortiz et al., 2022) and that future versions of the Task List would require cultural diversity training to be incorporated in the universities (Beaulieu et al., 2018). Ortiz et al., (2022) gave suggestions of organizations that offer opportunities for continuing education in the areas of diversity, organizations like Black Applied Behavior Analysts, Latino Association for Behavior Analysis, ABA Task Force, and the ABAI (p.7). Doing so can give aspiring behavior analysts an understanding of what to expect once they graduate and are out in the field. It will be a seed which will be planted in them, which then they will continue watering as they continue in the field of applied behavior analysis.

Research on Teaching Cultural Competency

Only 2 out of the 13 articles included in this literature review featured research design on the topic of cultural competency. Ortiz et al., (2022) conducted a pilot study with a pre/post design to evaluate the effects of providing ABA faculty members with a

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supplemental diversity/culturally responsive service delivery (CRSD) prior to a new semester. The supplemental curriculum contained diversity course objectives and resources tailored to the courses of the faculty members on the presence of diversity/CRSD content in course syllabi. Results from this study indicated that supplemental curriculum had the potential to increase diversity/CRSD content in graduate ABA coursework. Beaulieu et al., 2018 conducted a survey to assess the extent of time BCBA's spend working with individuals from diverse backgrounds, how much and what opportunities for such trainings they had, how important is cultural diversity training, and to what degree do practitioners feel comfortable and skilled in being culturally diverse. Related to the delivery of culturally competent care, Beaulieu and colleagues (2018) also assessed the implementation of various practices. Results for their survey indicated that BCBA's agreed that training on working with diverse populations is important, and they feel skilled working with diverse populations even though they had little to no training in this area.

None of the articles included in the current review mentioned competency for registered behavior technicians (RBT). However, there were articles that mentioned providing employees with trainings on cultural diversity (Arango & Lustig, 2022; Beaulieu et al., 2018; Fong et al., 2016) but did not directly mention, "competency for RBT's." Fong et al., (2016) recommended ways of how behavior analysts' can institutionalize cultural awareness within their professional and training system and the increase of cultural awareness within a clinical organization and cultural awareness training in graduate and professional development programs. Although the article does not directly mention RBT's, the article does mention, "within a clinical organization"

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(Fong et al., 2016). The authors based some of the recommendations on Broadhead and Highbee's (2012) recommendations for behavioral systems, which teaches and maintains ethical behavior in a human service organization (Fong et al., 2016).

Out of thirteen articles used in this literature review, 10 (76.9%) mentioned competency for BCBA's. Arango & Lustig (2022) pointed out the fact that there is a lot about diversity that we do not know about and are not aware that we do not know (p.14). Arango's & Lustig's (2022) urged the reader "to recognize our ignorance and incorporate an appreciation and willingness for self-examination" (p.14). Beaulieu et al. (2018) suggested that instead of basing our treatment selections on values or whether our treatment looks good or bad, we should instead base them on data and caregiver input (p.566). Behavior analysts should give full disclosure of the treatment including potential harm or risks of the treatment to caregivers so the caregivers can decide for themselves if they are willing to proceed with treatment instead of giving the treatment because the treatment is preferred by the clinician (with respect to their cultural background).

Our own predispositions have the potential to get in the way of or conflict with the client's cultural traditions. (Plessas et al., 2019). For example, "the Maori's from New Zealand believe when you first meet, you introduce yourself through conventional language demonstrating tribal and land connections; giving the essence of you" (p. 856). To be culturally competent in this culture, clinicians might be expected to self-disclose specific information about themselves that would otherwise be discouraged in a western culture such as the U.S. Therefore, behavior analysts must self-reflect and embrace the importance of cultural competence within the field and within their scope of practice.

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Wright (2019) suggested reviewing other professional fields to see how they adopt cultural practices then assessing these practices for behavior analysis.

Future Research Suggestions

Deochand & Costello (2022) and Wright (2019) who both suggested ways of conducting future research to further determine where racial disparities exist. Eight of the thirteen articles suggested additional graduate training: Arango & Lustig (2022); Beaulieu et al., (2018); Deochand & Costello (2022); Fong et al., (2016); Fong et al., (2017); Ortiz et al., (2022); Wang et al., (2019); & Wright (2019). All the articles, but one, Matsuda et al., (2020) referred to Fong et al., (2016), which was the starting point of developing cultural awareness skills for behavior analysts. However, Matsuda et al., (2020) did refer to Fong et al., (2017), when improving service delivery to diverse populations was mentioned. Arango & Lustig (2022); Beaulieu et al., (2018); Fong et al., (2016); Wang et al., (2019) mentioned conducting a functional assessment in different areas relevant to culture. Beaulieu & Jimenez-Gomez (2022) Fong et al., 2016 and Ortiz et al., (2022) suggested behavior analysts apply self-assessment or self-awareness regarding cultural awareness.

Ethical Code and Multicultural Competency

Ten out of the thirteen articles explored the 2017 Professional and Ethical Compliance Code for Behavior Analysts and/or the 2020 BACB Ethics Code for Behavior Analysts (BACB, 2017; 2020). Arango & Lustig (2022) mentioned the new release of the Ethics Code for Behavior Analysts in December 2020, which in a more extensive and deeper way than the 2014 Professional and Ethical Compliance Code for Behavior Analysts, engages explicitly with cultural diversity (p.2). Beaulieu et al., (2018)

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references the 2014 BACB's Professional and Ethical Compliance Code for Behavior Analysts on cultural diversity training, guidelines 1.05, Professional and Scientific Relationships:

“Where differences of age, gender, race, culture, ethnicity, national origin, religion, sexual orientation, disability, language, or socioeconomic status significantly affect behavior analysts' work concerning particular individuals or groups, behavior analysts obtain the training experience, consultation, and/or supervision necessary to ensure the competence of their services, or they make appropriate referrals” (BACB, 2014, p. 5)

Beaulieu et al., (2018) interpret this as behavior analysts should obtain the proper training if they are working with individuals from diverse backgrounds (p.559). Beaulieu et al., (2022) mentions how the new Ethics Code for Behavior Analysts by the Behavior Analyst Certification Board (BACB, 2020) supports addressing diversity in the field and certificants are required to obtain training in cultural diversity (p.338). Dennison et al., (2019) reference three codes, BACB Code 1.05c, BACB Code 4.02, and BACB Code 4.03 to explain how important it is that we account for the cultural and linguistic needs of the client and family to demonstrate the effective and ethical ABA service provision (p.888). Deochand & Costello (2021) pointed out in the previous Professional and Ethical Compliance Code for Behavior Analyst code 1.05(c), behavior analysts were to seek relevant “training, experience, consultation, and/or supervision” and in the new and updated Ethics Code, this topic is more explicitly addressed in 4.07 by asking supervisors to incorporate topics that address diversity. Fong et al., (2016) also pointed out that the ethical code requires behavior analytic knowledge when working with clients. Cultural

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competency, and how it affects treatment, is part of this knowledge.

Ortiz et al., (2022) also referenced the BACB's Ethics Code for Behavior Analysts (2020) to let the reader know that the integration of cultural variables into ABA training is in direct alignment with the Ethics Code: 1.07, 1.08, 1.10, 2.13, 2.14, and 4.07 (p.2). Plessas et al., (2019) explained that making certificants more aware of how culture can affect treatment might in turn make the BACB more likely to adopt more standards mandating cultural awareness and competency. Wang et al., (2019) also referenced the Professional and Ethical Compliance Code for Behavior Analysts item 1.05 reminding readers that the code explicitly dictated the need to consider cultural and linguistic diversity in the treatment process and that behavior analysts have an individual responsibility to do so.

None of the thirteen articles expressed ongoing competency learning by organizations. This is a concern because ABA is often implemented in organizations that service clients in schools, homes, clinics, and communities. Without guidance on how to facilitate cultural awareness and competency on an organizational scale, it is difficult to ensure that all treatment will be delivered in a culturally respectful manner. BCBA's can only ensure they design treatment to be culturally respectful, however RBTs are the individuals who do the bulk of service delivery work. Ensuring RBTs have a working knowledge of cultural variables and how they can affect treatment could also be a way to ensure that those delivering services are aware of differences in culture.

Limitations

Limitations to the findings of this article consisted of only searching in the PsycINFO database. Specific searches within mainstream ABA journals such as Journal

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of Applied Behavior Analysis, Behavior Analysis in Practice, and Behavior Analysis: Research and Practice could have yielded more results. Future research should also investigate other articles outside of the field of ABA for a broader perspective on multicultural competency when working with individuals with developmental delays. On a similar note, the keywords used in this study were limited to multiculturalism, multicultural, cultural diversity, culture, cultural, ethnicity, identity, aba, and applied behavior analysis. Future study may want to add cultural awareness and cultural competence as well and could also use different search combinations to locate articles. Only two articles included in the current review described the use of an actual research design. Future researchers could help the field along substantially by demonstrating the effectiveness of teaching strategies or other interventions to facilitate the development of aspects of cultural competency. Lastly, the current study was limited by the fact that interrater reliability was not obtained on article searches and reviews. The current study represents a preliminary investigation that can be used to inform more stringent meta-analyses on the broad topic of cultural competency in the field of ABA.

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Table 1***Questions in the Current Review***

Item	Question
1	What articles suggested additional graduate training?
2	What articles used a research design to evaluate an intervention?
3	What terms were used in the article? (i.e., multiculturalism, humility, etc.)
4	What articles mentioned cultural competency for RBTs?
5	What articles mentioned cultural competency for BCBA's?
6	What suggestions for future research were made?
7	What articles had similar suggestions?
8	What articles explored the BACB ethics code?
9	What articles suggested ongoing competency learning administered by companies?

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Table 2*Results for Question 1*

Citation	Yes/No	Location in Article
Arango & Lustig (2022)	Yes	Page 34
Beaulieu et al., (2018)	Yes	Page 564
Beaulieu & Jimenez-Gomez (2022)	No	
Dennison et al., (2019)	No	
Deochand & Costello (2022)	Yes	Page 899
Fong et al., (2016)	Yes	Page 90
Fong et al., (2017)	Yes	Page 108
Jimenez-Gomez & Bealieu (2022)	No	
Matsuda et al., (2020)	No	
Ortiz et al., (2022)	Yes	Page 1
Plessas et al., (2019)	No	
Wang et al., (2019)	Yes	Page 801
Wright (2019)	Yes	Page 806

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Table 3*Results for Question 2*

Citation	Yes/No	What Design?
Arango & Lustig (2022)	No	
Beaulieu et al., (2018)	Yes	Experimental Survey Design
Beaulieu & Jimenez-Gomez (2022)	No	
Dennison et al., (2019)	No	
Deochand & Costello (2022)	No	
Fong et al., (2016)	No	
Fong et al., (2017)	No	
Jimenez-Gomez & Bealieu (2022)	No	
Matsuda et al., (2020)	No	
Ortiz et al., (2022)	Yes	ABAB
Plessas et al., (2019)	No	
Wang et al., (2019)	No	
Wright (2019)	No	

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Table 4*Results for Question 3*

Citation	Terms Used
Arango & Lustig (2022)	Cultural humility, cultural awareness
Beaulieu et al., (2018)	Cultural competency
Beaulieu & Jimenez-Gomez (2022)	Cultural competency
Dennison et al., (2019)	Cultural humility, cultural awareness
Deochand & Costello (2022)	Cultural humility, cultural awareness
Fong et al., (2016)	Cultural competency, multicultural
Fong et al., (2017)	Cultural competency
Jimenez-Gomez & Bealieu (2022)	Cultural humility, cultural awareness
Matsuda et al., (2020)	Cultural humility, cultural awareness
Ortiz et al., (2022)	Cultural humility, cultural awareness
Plessas et al., (2019)	Cultural competency, multicultural
Wang et al., (2019)	Cultural humility, cultural awareness
Wright (2019)	Cultural humility, cultural awareness

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Table 5*Results for Question 4*

Citation	Yes/No	Location in Article
Arango & Lustig (2022)	No	
Beaulieu et al., (2018)	No	
Beaulieu & Jimenez-Gomez (2022)	No	
Dennison et al., (2019)	No	
Deochand & Costello (2022)	No	
Fong et al., (2016)	No	
Fong et al., (2017)	No	
Jimenez-Gomez & Bealieu (2022)	No	
Matsuda et al., (2020)	No	
Ortiz et al., (2022)	No	
Plessas et al., (2019)	No	
Wang et al., (2019)	No	
Wright (2019)	No	

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Table 6*Results for Question 5*

Citation	Yes/No	Location in Article
Arango & Lustig (2022)	Yes	Page 14
Beaulieu et al., (2018)	Yes	Page 565
Beaulieu & Jimenez-Gomez (2022)	Yes	Page 349
Dennison et al., (2019)	Yes	Page 896
Deochand & Costello (2022)	Yes	Page 899
Fong et al., (2016)	Yes	Page 91
Fong et al., (2017)	Yes	Page 110
Jimenez-Gomez & Bealieu (2022)	No	
Matsuda et al., (2020)	No	
Ortiz et al., (2022)	Yes	Page 7
Plessas et al., (2019)	Yes	Page 860
Wang et al., (2019)	No	
Wright (2019)	Yes	Page 806

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*Table 7**Results for Question 6*

Citation	Suggestions Made
Arango & Lustig (2022)	<ul style="list-style-type: none"> ● Conduct a functional assessment of the contingencies that impact parental adherence to culture. ● Evaluate the growth of the BA in cultural humility by the frequency of power imbalances identifying as the independent variable using multiple baselines across participants. ● To demonstrate improvement in compassionate care, a study could involve developing task analyses (TA) to train analysts using Behavioral Skills Training (BST) as the independent variable using a changing criterion design. ● It is incumbent upon the profession as a whole and its educators, researchers, and editors, to bring into curricula, studies, publications, and other practices what ABA is composed of as well as what it brings and does to the ethical traits that our communities practice and tries to improve.
Beaulieu et al., (2018)	<ul style="list-style-type: none"> ● Experimentally evaluate cultures part in delivering culturally competent behavior analytics services in behavior and best practices.
Beaulieu & Jimenez-Gomez (2022)	<ul style="list-style-type: none"> ● Behavior analysts are encouraged to consider collaborating with researchers who are already doing research in self-assessment in other fields. ● Other research questions on self-assessment could be explored.
Dennison et al., (2019)	<ul style="list-style-type: none"> ● Longitudinal and large-scale studies of diverse samples are needed to see if the bilingualism theory would be a relevant and effective

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component of treatment, as executive functioning is frequently impaired in students with ASD.

Deochand & Costello (2022)	<ul style="list-style-type: none"> ● Instead of using convenience sampling that could further lead to racial disparities, researchers must recruit purposefully and strive to report racial and linguistic variables in their participants.
Fong et al., (2016)	<ul style="list-style-type: none"> ● In order to provide practicing behavior analysts with a systematic framework for their work, future researchers may develop systematic guidelines for working with culturally diverse clients. ● “Encourage more research on topics of diversity, cross-cultural implementation, and international dissemination of ABA.” (p.91)
Fong et al., (2017)	<ul style="list-style-type: none"> ● Explore cultural issues in research. ● Future work should examine the consumers, culturally diverse consumers’ access to ABA services as well as satisfaction with ABA services, and ways in which ABA can connect with culturally diverse populations.
Jimenez-Gomez & Bealieu (2022)	<ul style="list-style-type: none"> ● The researchers advise to expand the first chapter of the book to thoroughly introduce the reader to the topic of diversity and to key terminology since the book can serve as an introductory text for behavior analysts and has the potential to be a central book in graduate courses. ● Since this will be the first reading encounter on this topic for many readers, a more thorough discussion of key diversity terms and the variations of definition across related disciplines should be added. ● A chapter dedicated to the topic of neurodiversity and ableism would be a valuable addition to future editions of this book because the majority of BA’s work with individuals with developmental disabilities.

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- More citations should be added to the book so additional resources can be provided for readers in the form of suggested readings.
-

Matsuda et al., (2020)

- The entire scientific community can research and implement behavioral methods to mitigate prejudiced behaviors.
 - “Conduct longitudinal studies of intervention outcomes.” (p.343)
-

Ortiz et al., (2022)

- Consider the use of single-subject experimental designs.
 - Use a multiple baseline design across courses, faculty, or institutions.
 - Include assessments of maintenance.
 - Incorporate measures to ensure participants are blind to study aims.
 - “Develop strategies for assessing correspondence between course syllabi and course activities.” (p.8)
 - Pursue questions like “What are the benefits to trainees of watching clinicians who are well-versed in CRSD provide intervention to clients who belong to marginalized communities?” or “ Do trainees who receive fieldwork experiences with families who belong to marginalized groups go on to provide services to similar clientele after certification?” (p.9)
 - Address areas in graduate training in ABA involving course work, clinical fieldwork, and supervision.
 - “Seek to identify the degree to which diversity content is currently included in ABA graduate coursework across institutions.” (p.9)
 - Seek to identify evidence-based strategies for establishing mutually beneficial, participatory research practices in new researchers.
 - To ensure that clients with marginalized identities are not harmed, future research in this area should be conducted in collaboration with supervisors with extensive experience in CRSD.
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- “Focus on identifying critical aspects of culturally responsive supervisory practices.” (p.9)
 - “Evaluate the effects of role playing clinical or professional scenarios related to CRSD on trainee behavior in clinical settings.” (p.9)
 - Research on the effects of culturally responsive supervisory practices on trainee outcomes and on clinical outcomes for families receiving therapeutic services from the trainee could be beneficial.
-

Plessas et al., (2019)

- “In order to encourage Māori researchers and students, clinical and research practices in ABA should align applied research with *kaupapa* (the Māori principles; also, agenda, program) Māori methodology.” (p.862)
 - “Skills for collaborating across disciplines could be incorporated into an extended version Task List with items associated with strategies to achieve positive outcomes in working with other professionals and broadening the concept of social validity.”(p.862)
 - To have better insight into the realities and barriers to accessing ABA services in New Zealand, it might work to set up relevant surveys.
 - “More work is needed for the development of operational definitions of the parameters measured and for the generation of health and ethnicity/cultural identity data, which will allow us to better understand the relationship between clients’ needs and preferences, service practices, and clinical outcomes.” (p.865)
-

Wang et al., (2019)

- “Research is needed that directly compares outcomes using bilingual to monolingual treatment.” (797)
 - “More research is needed to identify the behavioral principles and family factors that account for why instruction in one language would be more effective than another.” (p.798)
-

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- “Further research is needed on linguistic diversity in the context of FCT from the standpoint of treatment effectiveness, as well as parent preference and cultural contextual fit.” (p.799)
- Could replicate the study which evaluated the effects of language on functional analysis outcomes (Rispoli et al., 2011) by replicating “these procedures across additional participants of different ages and diagnoses, including ASD, to determine more clearly whether using heritage language can affect the frequency of problem behavior under different conditions.”(p.799)
- More research is needed in “how multilingualism might be studied in ABA treatment for autism.” (799)
- Much more controlled research should be conducted on the question: Should ABA therapy be conducted in only one language or two, particularly in the early stages of intervention, for children from multilingual families?
- “Future research might evaluate bilingual “instructive feedback” in which a word in the heritage language is embedded into praise.” (p.800)
- “Incorporate bilingual “transfer” trials, wherein a second language listener trial is followed immediately by a heritage language speaker trial and vice versa.” (p.800)

Wright (2019)

- “An analysis of ongoing institutional and individual assessment of those practicing ABA can be conducted to further determine where disparities (race, ethnicity, sexual orientation, and religion) exist.”(p.806)
-

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Table 9***Results for Question 8***

Citation	Yes/No	Location in Article
Arango & Lustig (2022)	Yes	Page 2
Beaulieu et al., (2018)	Yes	Page 559
Beaulieu & Jimenez-Gomez (2022)	Yes	Page 338
Dennison et al., (2019)	Yes	Page 888
Deochand & Costello (2022)	Yes	Page 899
Fong et al., (2016)	Yes	Page 87
Fong et al., (2017)	No	
Jimenez-Gomez & Bealieu (2022)	No	
Matsuda et al., (2020)	No	
Ortiz et al., (2022)	Yes	Page 2
Plessas et al., (2019)	Yes	Page 860
Wang et al., (2019)	Yes	Page 796
Wright (2019)	Yes	Page 806

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Table 10*Results for Question 9*

Citation	Yes/No	Location in Article
Arango & Lustig (2022)	No	
Beaulieu et al., (2018)	No	
Beaulieu & Jimenez-Gomez (2022)	No	
Dennison et al., (2019)	No	
Deochand & Costello (2022)	No	
Fong et al., (2016)	No	
Fong et al., (2017)	No	
Jimenez-Gomez & Bealieu (2022)	No	
Matsuda et al., (2020)	No	
Ortiz et al., (2022)	No	
Plessas et al., (2019)	No	
Wang et al., (2019)	No	
Wright (2019)	No	