

# **BUILDING A CULTURALLY COMPETENT APPROACH TO SUPERVISION**

**THOMPSON CENTER FOR AUTISM CONFERENCE 2020**

**ROBERT PARRY-CRUWYS, MSED, BCBA  
DIANA PARRY-CRUWYS, PHD, BCBA-D  
JACKIE MACDONALD, PHD, BCBA-D**

**WHO WE  
ARE:  
ABA INSIDE  
TRACK**



We have no conflicts of interest to disclose.

# LEARNING GOALS

Define	Define cultural competence
Identify	Identify relevant points of cultural competence for a behavior analyst
Develop	Develop measurable, operationally defined objectives of cultural competence
Discuss	Discuss how those objectives could be introduced and practiced within supervision

# IDENTIFYING AND WORKING WITH CULTURE

## Culture

Contingencies of reinforcement in the environment experienced throughout an individual's life (Skinner, 1971)

Overt verbal behavior reflecting shared learning histories which differentiates one group from another (Sugai et al., 2012)

## Cultural Competence

Ability to adapt work with individuals based on client culture

Accepting responsibility to learn, accept, and respect differences in culture

Skill in facilitating ability of family to make decisions based on their needs and beliefs (Haas et al., 2010)

## Transcultural Communication

Make interventions culturally sensitive, linguistically appropriate

Understanding of culture's role in perception and definition of illness/disease/problem behavior (Munoz et al., 2009)

# IDENTIFYING AND WORKING WITH CULTURE

## Culture

Contingencies of reinforcement in the environment experienced throughout an individual's life (Skinner, 1971)

Overt verbal behavior reflecting shared learning histories which differentiates one group from another (Sugai et al., 2012)

## Cultural Competence

Ability to adapt work with individuals based on client culture

Accepting responsibility to learn, accept, and respect differences in culture

Skill in facilitating ability of family to make decisions based on their needs and beliefs (Haas et al., 2010)

## Transcultural Communication

Make interventions culturally sensitive, linguistically appropriate

Understanding of culture's role in perception and definition of illness/disease/problem behavior (Munoz et al., 2009)

# IDENTIFYING AND WORKING WITH CULTURE

## Culture

Contingencies of reinforcement in the environment experienced throughout an individual's life (Skinner, 1971)

Overt verbal behavior reflecting shared learning histories which differentiates one group from another (Sugai et al., 2012)

## Cultural Competence

Ability to adapt work with individuals based on client culture

Accepting responsibility to learn, accept, and respect differences in culture

Skill in facilitating ability of family to make decisions based on their needs and beliefs (Haas et al., 2010)

## Transcultural Communication

Make interventions culturally sensitive, linguistically appropriate

Understanding of culture's role in perception and definition of illness/disease/problem behavior (Munoz et al., 2009)

# WHY CULTURE MATTERS

- Direct relation between culture and preferences for language, interactions, services
  - Rapport building prerequisites
- Ignoring cultural variables associated with poorer outcomes of care (Munoz et al., 2009)
  - Lang et al., 2011
  - Rispoli et al., 2011
- May lead to unethical practice
- Could result in families seeking non-effective services
- Widen equity gap

# CULTURE AND ABA

**(BEAULIEU ET  
AL., 2019)**

## Majority of BCBA's

- Believed training in how to work with individuals from diverse backgrounds is important (85%)
- Felt moderately or extremely comfortable working with these individuals (92%)
- Described themselves as moderately or extremely skilled in working with these individuals (86%)

## Minority of BCBA's

- Felt moderately familiar with delivering culturally competent care (40%)
- Always asked if treatment goals aligned with family's values (39%)
- Received moderate training in working with individuals from diverse backgrounds (18%)
- Received moderate training from an employer (31%)
- Attended more robust training at a conference (22%)

# **EDUCATION IN CULTURALLY COMPETENT CARE**

Multidisciplinary, diverse instructors

University/College modeling value of diversity

Targeted instruction in skill fluency  
(Campinha-Bacote, 2003)

Measure behavior expressing  
intercultural sensitivity (Bennet, 1993)

**TAYLOR,  
LEBLANC, &  
NOSIK, 2018**

- Proposed curriculum of compassionate care
  - Core skills, Subskills to teach, Skills to monitor, Proposed Activities, Evaluation measures
    - Engages in positive social interaction
    - Demonstrates empathy
    - Demonstrates compassion
    - Demonstrates collaboration

# THE ETHICS OF CULTURAL COMPASSION

- Specific Guidelines
  - 10.06: Know the Code
  - 1.05 (b and c): Professional and Scientific Relationships
  - 3.04: Explaining Assessment Results
- Broadly Sweeping Guidelines
  - Guideline 2: Responsibility to the client
  - Guideline 4: Behavior Change Programs
  - Guideline 5: Supervision



BEHAVIOR ANALYST CERTIFICATION BOARD\*

Professional and Ethical  
Compliance Code for  
Behavior Analysts

# CARING COMMUNICATION

- How to Listen
- How to Observe
- How to Respond
  
- With respect to complex client and interprofessional interactions



# CARING COMMUNICATION

- Operationally analyze our interactions
  - What are the environmental variables at play?
  - What are the reinforcers?
  - What are the motivating operations?
- Life is messy – competing contingencies
- Communication is nuanced and meaning is dependent on verbal community
- Motivations and reinforcers are individualized and variable

# CARING COMMUNICATION CURRICULUM

- Incorporated into individual or group supervision
- How to Listen
- How to Observe
- How to Respond
- Competency-based model (Turner, Fischer & Luiselli, 2016)
  - Objectives
  - Literature
  - Methods for Role Play and Practice
  - 5<sup>th</sup> Ed. Task List connections

# HOW TO LISTEN: OBJECTIVES

- Objectives for the trainee:
  - Describe pairing and demonstrate **methods of pairing** with a parent/video sample
  - Identify the components of **active listening** and demonstrate in roleplay
  - Identify positively and negatively oriented **body language** and develop methods of **self-monitoring**

Measurable objectives  
Clear mastery criteria  
Generalization criteria

# Writing Behavioral Objectives for Trainees

# Teaching Behavioral Skills to Trainees

## Behavioral Skills Training and its Components

- Modeling
- Roleplay
- Feedback

## Opportunities for multi-modal practice

- Writing
- Verbal Fluency
- Roleplay

# HOW TO LISTEN: NONVERBAL COMMUNICATION

- What does your nonverbal language say about your approachability?
  - Gestures
  - Hand movements
  - Facial expressions
  - Body positioning
  - Posture
  - Breathing

- Objective:
  - Identify positively and negatively oriented **body language** and develop methods of **self-monitoring**
- Task List Connection:
  - G-10 Use self-management strategies

# EXERCISE: MONITOR THAT FACE

- *Read Petscher & Bailey (2006)*
- *Modify their procedures to create a program your RBTs or fellow BCBAAs could use to self-monitor their facial expressions during a conversation.*
- *Test out with a partner while videotaping your practice conversation.*
- *Did it “work?” Did you experience reactivity?*
- *Try the conversation again without using the self-monitoring program. What do you notice?*

# HOW TO LISTEN: VERBAL COMMUNICATION

- What does your verbal communication say about your approachability?
  - Inflection
  - Tone
  - Voice volume

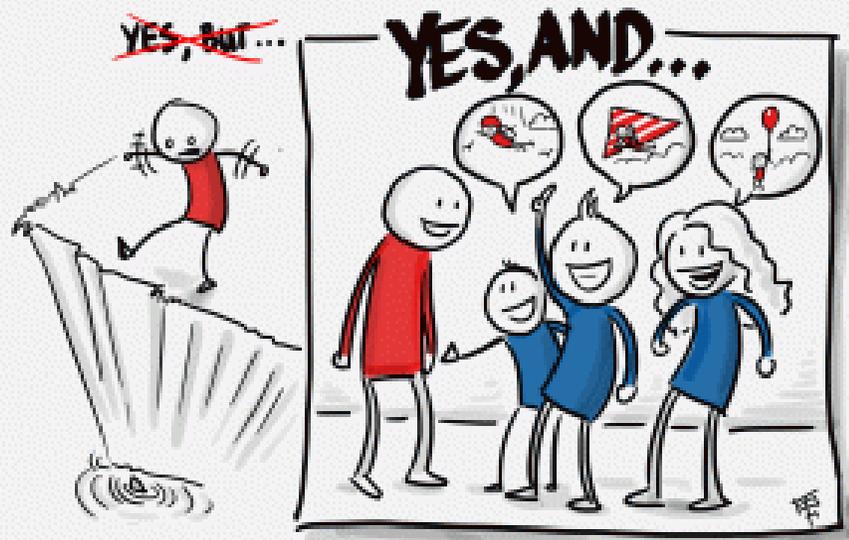
- Objective:
  - Identify how subtle components of communication may **alter EOs for engagement** through video sample
- Task List Connections:
  - B-14 Describe the verbal operants
  - B-12 Define and provide examples of motivating operations

# EXERCISE: TONE OF VOICE

- *Describe in what way your nonverbal language and/or vocal presentation can function as verbal language.*
- *Practice saying a phrase with varying inflection, tone, or vocal volume*
  - *“Do you think so?”*
  - *“That’s something we could try”*
  - *“Go on”*
- *How might you be sending mixed messages? How might your vocal presentation alter EO? How might it change the verbal operant?*

# HOW TO LISTEN: AFFIRMING

- Affirming and shaping
- “Yes, and...”



- Objective
  - Use shaping to move a conversation toward agreement during roleplay
- Task List Connections:
  - G-7 Use shaping

# EXERCISE: “YES, AND...”

- *Roleplay a scenario with a partner or supervisor in which a parent suggests:*
  - *That they don't believe in using rewards/bribery*
  - *That they want their child (who has a history of pica) to learn to play with magnetic marbles*
  - *That they've been using “sit and think” followed by a long conversation and hugs as a disciplinary tool*
- *What can you reinforce in each of these conversations? What can be shaped?*

# HOW TO OBSERVE: OBJECTIVES

- Objectives for the trainee:
  - Describe how **your own culture** may differ from others' experience
  - Describe how **culture impacts contingencies** and rule-governed behavior
  - Conduct/role-play a **culturally aware parent interview**
  - Identify the components of an indirect, direct, and functional **assessment and culturally competent considerations**
  - Identify potential constraints or **environmental variables that could impact treatment**
  - Demonstrate **modification of goals** based on parent need

# HOW TO OBSERVE: CULTURAL AWARENESS OF SELF

- Recognize bias may exist (Wilder et al., 2004)
- Online resources
  - [www.racialequitytools.org](http://www.racialequitytools.org)
  - <https://robindiangelo.com>
- Not limited to:
  - Race/ethnicity
  - Religion
  - Gender identity
  - Political affiliation
  - Sexual orientation
  - Disability
  - SES

- Objective:
  - Describe how **your own culture** may differ from others' experience
- Task list connections:
  - B-12 Define and provide examples of motivating operations
  - B-15 Define and provide examples of rule-governed and contingency-shaped behavior

# HOW TO OBSERVE: CULTURAL AWARENESS OF SELF

- Recognize bias may exist (Wilder et al., 2004)
- Online resources
  - [www.racialequitytools.org](http://www.racialequitytools.org)
  - [http://www.culturalawareness.com](#)

## Trainee Discussion Questions:

- How might people's MOs affect behavior with respect to "other"
- Were you taught "rules" (stereotypes) as part of your culture that might affect your interactions?

- Objective:
  - Describe how **your own culture** may differ from others' experience
- Task list connections:
  - B-12 Define and provide examples of motivating operations
  - B-15 Define and provide examples of rule-governed and contingency-shaped behavior

# EXERCISE: SELF-ASSESSMENT

- *Take the quiz, “How do you relate to various groups of people in society?” (Randall-David, 1989)*
- <http://cirrie-sphhp.webapps.buffalo.edu/culture/curriculum/activities/relate.php>
  - *Greet-Accept-Help-Background-Advocate*

- **Child abuser**
- **Neo-Nazi**
- **Native American**
- **Atheist**
- **Mexican American**
- **Person with CP**
- **Jew**
- **Elderly person**

- **IV drug user**
- **Teamster**
- **Unmarried pregnant teen**
- **Black American**
- **Alcoholic**
- **Person with cancer**
- **Sex worker**

# EXERCISE: SELF-ASSESSMENT

- Complete the “Miville-Guzman Universality-Diversity Scale”
  - [http://faculty.weber.edu/eamsel/Research%20Groups/Diversity/Diversity%20papers/Fuertes%20et%20al.%20\(2000\).pdf](http://faculty.weber.edu/eamsel/Research%20Groups/Diversity/Diversity%20papers/Fuertes%20et%20al.%20(2000).pdf)

- I am interested in learning about other cultures
- I feel a sense of connection with people from different countries
- Persons with disabilities can teach me things I could not learn elsewhere
- Knowing how a person differs from me enhances our friendship

- Knowing about experiences of people of different races increases my self-understanding
- I am only at ease with people of my own race
- It's hard to find things in common with someone from another generation
- I sometimes am annoyed at people to call attention to racism

# HOW TO OBSERVE: CULTURAL AWARENESS OF OTHERS

- Understanding cultural identity
  - Don't assume
  - Ask
- Learning about others to better serve our clients
  - Interview
  - Assessment
  - Goal selection
  - Treatment

- Objective:
  - Describe how **culture impacts contingencies** and rule-governed behavior
  - Identify the components of an indirect, direct, and functional **assessment and culturally competent considerations**
- Task list connections:
  - E-2 Behavior analysts' responsibility to clients
  - E-3 Assessing behavior
  - E-4 Behavior analysts and the behavior-change program

# HOW TO OBSERVE: INTERVIEW/ASSESSMENT

- Fong et al., 2016
  - Use readily available assessments (e.g., Tanaka-Matsumi et al., 1996)

- Objectives:
  - Identify the components of an indirect, direct, and functional **assessment and culturally competent considerations**
  - Conduct/role-play a **culturally aware parent interview**

- Task list connections:
  - F-3 Identify and prioritize socially significant behavior
  - F-4 Conduct assessment of relevant skill strengths and deficits
  - F-5 Conduct preference assessments
  - H-3 Recommend intervention goals and strategies based on client preferences, supporting environments, risks, constraints, and social validity
  - H-4 When a target behavior is to be decreased, select an acceptable alternative behavior to be increased

# HOW TO OBS: CULTURALLY COMPETENT INTERVIEW/ASSESSMENT

- What is the function of the interview/assessment?
  - Identification of parent priorities
  - Identification of goals for increase/decrease
  - Information on parent receptivity to treatment
- Vandenberghe (2008)
  - Focus on functional relations of behavior rather than topography
    - Listen to families to determine what is problematic
    - Lack of follow through may mean the proposed intervention was culturally inappropriate

# EXERCISE: INTERVIEW

- *Roleplay (both sides) of the parent interview provided by Rogers-Adkinson et al. 2003*

- How long has your family lived in this country?
- Does your family maintain contact with the country they emigrated from?
- What holidays are most important to your family? How are they celebrated?
- What were your favorite foods as a child/what are your child's favorite foods?

- How did your parents participate in your schooling?
- How are meals prepared? How do children participate in meals?
- How is extended family recognized in your culture?
- Are birthdays celebrated? How so?
- Did you have favorite toys or games/what are your child's favorite toys or games?

# SCENARIO: MAHIT

- During an intake interview, you ask your new client's mom about her 3-year-old son Mahit's sleep habits. She shared that Mahit sleeps in her bed with her and often wakes up during the night for a snack and/or bottle of milk. You make a detailed sleep treatment for Mahit. On your next visit mom doesn't make a lot of eye contact and when you ask about the sleep treatment, she quickly says it's going ok and changes the subject.
- What is going on here? Where did you go wrong? What could have been done differently?

# HOW TO OBSERVE: FUNCTIONAL ANALYSIS

- Identify behavior for decrease
- Conduct the assessment
  - Parent participation and input
  - Most appropriate assessment
  - Most efficient assessment

- Objective:
  - Identify the components of an indirect, direct, and functional **assessment and culturally competent considerations**
- Task list connections:
  - F-6 Describe the common functions of problem behavior
  - F-7 Conduct a descriptive assessment of problem behavior
  - F-8 Conduct a functional analysis of problem behavior
  - F-9 Interpret functional assessment data

# HOW TO OBSERVE: FUNCTIONAL ANALYSIS

- Salend & Taylor, 2002
- Functional Behavior Assessment
  - Create a diverse multidisciplinary team
  - Examine the behavior for decrease
    - Is the behavior related to the student's cultural or linguistic background?
  - Define the behavior
    - “Be sensitive to cross-cultural communication differences related to eye contact, wait time, word meanings, gestures, voice quality, and personal space.”
    - What purpose might the behavior serve in the student's culture?

# SCENARIO: MAI

- The classroom teacher you are consulting with is concerned about a new student, Mai, who allows other students to take her toys and materials. She wants you to address her “assertiveness skills.”
  - Role-play bringing up potential cultural considerations regarding assertiveness in the classroom with the teacher.
  - Role-play bringing up assertiveness as a potential target behavior to Mai’s parents.

# HOW TO OBSERVE: GOAL SELECTION

- Parent priority may differ from BCBA priority
  - Modify based on family need
- Evaluate the need for interpreter services
- Supporting environments, risks, constraints
- Social validity assessment

- Objective
  - Identify potential constraints or **environmental variables that could impact treatment**
  - Demonstrate **modification of goals** based on parent need
- Task list connections:
  - F-3 Identify and prioritize socially significant behavior
  - H-3 Recommend intervention goals and strategies based on client preferences, supporting environments, risks, constraints, and social validity

# SCENARIO: MARCUS

- Your client Marcus is a 14-year-old Black adolescent with limited verbal language. He can engage in loud vocal outbursts when upset. You suggest going into the community more to work on purchasing, leisure, and vocational skills. His mother is adamant that he should not practice these skills in the community. You realize that Marcus is almost never taken anywhere except home and school.
- What might be environmental factors at play for Marcus's mom? Role-play discussing and addressing these concerns.

# EXERCISE: ENVIRONMENTAL FACTORS

- *Activity: Play the “game” Spent to learn about income insecurity:  
[www.playspent.org](http://www.playspent.org)*
- *Describe environmental factors that could limit a family’s ability to implement a behavior plan with full fidelity.*
  - *Other children (sharing parent attention, resources, bedrooms, etc.)*
  - *Full time or 2<sup>nd</sup> jobs (parents are tired/stressed/guilty)*
  - *Lack of funding for community trips or toys/materials*
  - *Unsure how to navigate special education universe, gain respite services*
  - *Difficulty communicating in English*
  - *Extended family far away and/or doesn’t know about diagnosis*
- *Could the behavior plan be modified to account for these challenges? Brainstorm ways.*

# EXERCISE: SOCIAL VALIDITY

- *Design a social validity assessment for parent's regarding their child's treatment and their overall experience. Use Taylor et al. (2016)'s questions to assist you.*
- *Role-play administering the social validity assessment to a colleague.*
- *Problem solve what to do if social validity is low. How to address with the family? What changes in behavior/staff training could be made?*

# HOW TO RESPOND: OBJECTIVES

- Objectives for the trainees
  - **Interpret the basic theory** of radical behaviorism for a parent perspective
  - **Define behavior analytic terms** and processes in technical and “parent-friendly” ways
  - Identify and propose **supports for ESL** families
  - **Identify parent- and self-stressors**, role-play discussing end-goal reinforcers and stressor solutions
  - **Identify barriers to parental adherence** to treatment
  - Demonstrate through role-play **providing feedback to parents and addressing own mistakes**

# HOW TO RESPOND: REINFORCERS

- Reinforcers for effective communication
  - Identify short- and long-term reinforcers for clients/parents and BCBA's
  - Identify family stressors
    - Strauss et al., 2012
    - Gerswin Mueller & Buckley, 2014
    - Stoner et al., 2005

- Objective:
  - Identify parent- and self-stressors, role-play discussing end-goal reinforcers and stressor solutions
- Task list connections:
  - I-6 Use a functional assessment approach (e.g., performance diagnostics) to identify variables and personnel performance
  - F-5 Conduct preference assessments

# STONER ET AL., 2005 EXERCISE

Line edit a  
mock  
conversation  
like this one for  
potential  
stressors and  
reinforcers

**TABLE 2**  
Sample of Line-by-Line Coding Using NVivo

Transcription	Line-by-line coding	Category
Well, let me put it this way, when you are young, and when Pete was little, and he wasn't as good as he is now. And I always worry, I mean I am not the expert, as far as what is available to Pete.	inexperienced inexperience getting services child progress worry worry available services services	IEP
And I hope that they are (referring to the teachers and staff). And the school has budgets and all this other stuff. And you just feel like finances are the bottom line.	trust trust recognition of costs recognition of budget money finances bottom line	
Not Pete's needs. So you have to sit down. And you don't want to walk away feeling like you never accomplished what you wanted to accomplish.	obligation fighting for services worry	advocacy
Because you love Pete. And that is why I feel like that. I mean, you can never do enough. And that, I guess, that is why I hate them (referring to IEP meetings).	love for child love of child frustration helplessness helplessness	

# EXERCISE: STRESSORS AND EOs

- List ways a caregiver might be feeling regarding:
  - Receiving a new diagnosis
  - Child not making progress
  - Significant challenging behavior at home
  - Inability to access services
  - Disagreement on direction of treatment
- Explain how these stressors function as EOs to make behavior more or less likely to occur
- What are some probable reinforcers when a family is under extra stress? Can these reconcile with “end goal” reinforcers?
- Are there ways we as the BCBA can help? Ways we cannot?
- Discuss additional resources and how to connect caregivers to them

# EXERCISE: STRESSORS AND EOs

- Identify your own potential stressors. How can these affect EOs and therefore your own behavior negatively?
- List strategies for monitoring and mitigating your own stressors
- Role-play asking for help from your supervisor
- Practice making a prioritized list of “today,” “this week,” and “this month” responsibilities
- Define self-care. Identify ways you can incorporate preferred self-care activities into your daily routine.
  - Remember that sometimes, self-care is doing the hard thing you’ve been avoiding, as well as giving yourself time to relax

# HOW TO RESPOND: REINFORCERS

- Parental “non-adherence”
  - Allen & Warzak, 2000
- Problem-Solving Behavior
  - Azad et al., 2016
- Contingency Contracting
  - Parent and BCBA behavior
- Feedback
  - Reed, Parsons, & Green, 2012

- Objectives:
  - **Identify barriers to parental adherence** to treatment
  - **Modify response** to parents based on discriminative stimuli and perceived MOs
- Task list connections:
  - G-7 Use shaping
  - G-1 Use positive and negative reinforcement procedures to strengthen behavior
  - G-19 Use contingency contracting

# EXERCISE: PARENTAL ADHERENCE

- Define the adherence variables presented in Allen & Warzak, 2000 and how they can impact parental adherence to treatment

Table 1  
Adherence Variables

---

Establishing operations

Failure to establish intermediate outcomes as reinforcers

Failure to disestablish competing social approval as reinforcers

Stimulus generalization

Trained insufficient exemplars

Trained narrow range of setting stimuli

Weak rule following

Response acquisition

Excessive skill complexity

Weak instructional technology

Weak instructional environment

Consequent events

Competing punitive contingencies

Competing reinforcing contingencies

---

# SCENARIO: EMMIE

- Your 2-year-old client Emmie is receiving in-home ABA services. Her grandmother is the primary caregiver home during the day as her parents are at work. Emmie's grandma does not want her to cry, at all. Any time Emmie cries her grandma comes in to the room and picks Emmie up or gives her a cup of milk. Your RBTs are having difficulty running any of her learning objectives. Emmie's grandma speaks French.
- Role-play with your supervisor how to respond to this situation. What environmental variables and EOs could be at play?

# HOW TO RESPOND: REINFORCERS

- Larger goal: client progress
- How might we be working unwittingly against our own larger goals?
  - Witts et al., 2018: Behavior analysts accept gifts during practice: So now what?
  - Nonverbal communication
- What if you make a mistake?
  - Own it (Taylor et al., 2016)

- Objective
  - Demonstrate through role-play **providing feedback to parents and addressing own mistakes**
- Task list connections:
  - H-6 Monitor client progress and treatment integrity
  - H-7 Make data-based decisions about the effectiveness of the intervention and the need for treatment revision

# SCENARIO: DAMIEN

- Your client Damien's parents are concerned that he has made very little progress on tooth brushing and hand washing skills. In your last meeting you suggested they practice more at home. However, this week you've observed his daily living skills at school and realize your teachers are performing the TAs with low procedural integrity.
- Use Reid, Parsons, and Green (2012) Chapter 6 to talk about how you might address your mistake and move forward. Modify for Damien's parents rather than staff.

# HOW TO RESPOND: SUMMARY

- Don't let perfect be the enemy of good
- Take perspective on who your audience is
- We have options on what we say and how we say it. If a family is turned away from ABA because they perceive it as uncaring and inflexible, their child's care will be impacted



# ETHICS OF CULTURALLY COMPETENT SUPERVISION

- If we aren't **actively** and **purposively** engaged in providing supervision related to cultural competence- we are acting as unethical behavior analysts.
- If we aren't **actively** and **purposively** providing trainings on caring communication- we are acting as unethical behavior analysts.



Dreamstime.com

**Thank you!**

[abainsidetrack@gmail.com](mailto:abainsidetrack@gmail.com)

# REFERENCES

- Beaulieu, L., Addington, J., & Almeida, D. (2019). Behavior analysts' training and practices regarding cultural diversity: The case for culturally competent care. *Behavior Analysis in Practice*, 12, 557-575.
- 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, 84-94.
- Haas, B., Seckman, C., & Rea, G. (2010). Incorporating cultural diversity and caring through simulation in a baccalaureate nursing program. *International Journal for Human Caring*, 14(2), 51-52.
- Munoz, C.C., DoBroka, C.C., & Mohammad, S. (2009). Development of a multidisciplinary course in cultural competence for nursing and human service professions. *Journal of Nursing Education*, 48(9), 495-503.
- Turner, L.B., Fischer, A.J., & Luiselli, J.K. (2016). Towards a competency-based, ethical, and socially valid approach to the supervision of applied behavior analytic trainees. *Behavior Analysis in Practice*, 9, 287-298.