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DISCUSSION AND REVIEW PAPER

A Behavior-Analytic Perspective on Interprofessional Collaboration

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Abstract

Collaborative service delivery models have gained considerable popularity in health care, education, and clinical settings. Despite the unique opportunity that this new popularity provides for the dissemination of applied behavior analysis, the majority of practicing behavior analysts have received little or no formal professional development on how to participate in teams with nonbehavioral colleagues. The purpose of this article is to elucidate the larger movement toward collaborative service delivery with an emphasis on interprofessionalism. The four core competency domains presented by the Interprofessional Education Collaborative (IPEC) Framework are interpreted through a behavior-analytic lens. This article is an initial attempt to operationalize constructs commonly associated with interprofessional educational and collaborative practices including (but not limited to) cultural sensitivity and responsiveness, cultural humility and reciprocity, empathy, and compassion.

Keywords Collaboration · Interprofessionalism · Interprofessional education · Interprofessional practice · Interprofessional education collaborative · Interprofessional collaborative practice

Since the national credentialing of behavior analysts was established by the Behavior Analyst Certification Board (BACB) in 2000, the number of credentialed providers and the accessibility of important behavior-analytic services have dramatically increased. The benefits of applied behavior analysis are well recognized for individuals with autism spectrum disorder (BACB, 2020) and in other areas of social significance (LeBlanc et al., 2012). Consequently, practitioners of applied behavior analysis will likely find themselves working closely with nonbehavioral colleagues such as speech-language pathologists, occupational therapists, teachers, physicians, and so on in their clinical work.

Although there are many potential benefits to cross-disciplinary collaboration, practicing behavior analysts may experience barriers to working effectively among professionals with differing ideologies, professional ethics, and approaches to intervention (Brodhead, 2015; Cox, 2019; LeBlanc et al., 2012). As practitioners of applied behavior analysis, we need to be cognizant that ineffective professional collaboration can lead to interpersonal friction (i.e., hostile competition, communication breakdowns, strained professional relationships, etc.) that can damage our credibility with colleagues and clients. Most importantly, however, evidence suggests that poor collaboration may also negatively impact the treatment process and clinical outcomes for clients (Dillenburger et al., 2014; Gerenser & Koenig, 2019).

This concern over effective collaboration and relationship building should not be viewed as an abstract concept. Taylor et al. (2018) noted that behavior analysts "do not always establish and sustain collaborative and caring relationships" (p. 2). These observed deficits can negatively impact treatment delivery and client outcomes (Taylor et al., 2018) and attenuate opportunities for disseminating the applied science of behavior analysis.

Despite the ubiquity of cross-disciplinary teams and the high cost of ineffective interprofessional collaboration, behavior analysts report little to no professional development on how to successfully work with professionals from outside the field (Kelly & Tincani, 2013; Tincani, 2013). The purpose of this article is to elucidate the larger movement of collaborative service delivery by providing practitioners with a historical context and description of common collaborative models with an emphasis on interprofessionalism. A behavior-analytic

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interpretation of the leading guidelines on interprofessionalism by the Interprofessional Education Collaborative (IPEC) Framework and related terms is entertained.

Collaborative Service Delivery Models

Collaborative service delivery has been a topic of interest in medicine for several decades, with growing interest across habilitation and rehabilitation services such as speech-language pathology, social work, occupational therapy, physical therapy, and behavioral health (World Health Organization [WHO], 2010). A variety of organizations have investigated and sought to promote collaborative service delivery models, including the Institute of Medicine (IOM, now called the National Academy of Medicine and the Institute for Healthcare Improvement (IHI, 2008); IOM Committee on Quality of Health Care in America, 2001). Both organizations have done considerable work to create criteria to guide interprofessional collaborative service delivery.

To address the rising cost and global shortage of health care, the WHO built on these efforts with its *Framework for Action on Interprofessional Education and Collaborative Practice* (WHO, 2010). Although this framework focuses on modifications to education and health policies to foster integrated health and education and more effectively address fragmented and unmet health needs while improving outcomes, it also provides powerful language to discuss this topic and several suggestions for improved interprofessional education and greater adoption of interprofessional collaborative practices (IPCP/IPP).

Inspired by the WHO's framework and the work by the IOM, the IPEC, a collaborative of national organizations representing various health care professions (i.e., American Association of Colleges of Nursing), published its *Core Competencies for Interprofessional Collaborative Practice* (IPEC, 2016; IPEC Expert Panel, 2011). The IPEC Framework was developed specifically for health care professional schools to use as a guide in their curricular development. This framework is based on "a vision of interprofessional collaborative practice as key to the safe, high quality, accessible, patient-centered care desired by all" (IPEC Expert Panel, 2011, p. i) and a "catalyst for improving team-based patient care and enhancing population health outcome" (University of New Mexico Health Sciences Center, n.d.). In 2016, the IPEC revised the core competencies for IPCP/IPP to reflect changing health care needs. The IPEC focus was on implementing the Triple Aim, as well as "the Patient Protection and Affordable Care Act in 2010" (IPEC, 2016, p. 4). Whereas the IPEC work outlines competencies needed to build IPCP/IPP, there are several working models of collaboration, including multidisciplinary, interdisciplinary, transdisciplinary, and interprofessional. Before we go into a detailed discussion of how the competencies could be considered part of the professional development of behavior analysts, it is first important to understand the forms that collaboration might take. These models are best conceptualized on a continuum from static, independent silos to dynamic, interdependent, and interactive systems.

Multidisciplinary Model

The oldest teamwork model is the multidisciplinary approach that emerged following the team evaluation legislative mandates. Assessment and treatment are discipline oriented. Professionals are self-reliant and individually responsible for the therapeutic activities that pertain to their discipline. Providers act independently and make autonomous decisions for treatment programming. Collaboration occurs by sharing information regarding their plan with other team members (Boyer & Thompson, 2013). Group consensus is not required for treatment decisions, and families are not regarded as integral team members. Professionals may be colocated, but there is a minimal exchange of information or interaction between disciplines (Rossetti, 2001). Catlett and Harper (1992) suggested that this is the easiest model to implement as it maintains a high level of professional autonomy. Professional independence may expedite expert evaluation and decision making; however, the lack of information exchange and shared goal setting may lead to disjointed treatment plans and less productive treatment sessions that lack continuity. The multidisciplinary approach also creates treatment fragmentation that may cause an extra burden to families (Woodruff & McGonigel, 1988).

Interdisciplinary Model

An interdisciplinary approach represents a more cooperative framework. Independent, profession-specific roles are maintained during the assessment period, and a formal meeting is established to exchange assessment findings. Professionals work as a cohesive unit to make collaborative decisions on treatment plans and intervention targets. Each team member brings their discipline-related information and contributes to the overall "big picture" based on their own strengths and challenges (Foley, 1990).

The interdisciplinary intervention model represents the middle position on the collaboration continuum. There is a presupposition of interaction between the disciplines. Formal opportunities for information exchange are established, and role boundaries are more relaxed (Catlett & Harper, 1992; Fewell, 1983). Caregivers anecdotally report feeling more involved in therapy planning and attribute this to a stronger relationship with the service provider (Woodruff & McGonigel, 1988). However, this model also has the potential for misunderstandings, competition, and lack of coherence,

and different disciplines may generate opposing recommendations that lead to undesirable clinical outcomes (Dillenburger et al., 2014). Nevertheless, the interdisciplinary model strives to foster productive information exchanges and collaborative environments. This model requires a robust set of interpersonal skills to facilitate successful interactions and prevent boundary infringement and frustration.

Transdisciplinary Model

The transdisciplinary model (TD) is much more progressive than the multidisciplinary and interdisciplinary models and is well recognized and adopted in the area of early intervention. TD is a highly involved system that includes a liberalization of professional roles and scope of practice. The degree of service coordination at this level requires commitment from each team member at all stages of assessment and treatment to teach, learn, and work together (Foley, 1990). According to King et al. (2009), there are three essential features of TD: arena assessment, role release, and intensive ongoing interaction between group members:

1. Arena assessment is an alternative to discipline-specific assessment practices. In arena assessment, one provider facilitates the assessment process while other team members observe the interaction to obtain information (Boyer & Thompson, 2013). This approach has some critical advantages. First, as all professionals observe the same behavior, that shared sample of behavior creates a standardized baseline observation for ongoing progress monitoring. Second, arena assessment minimizes disconnects or disagreements that may occur with independent observations. Finally, this approach creates an opportunity for shared vocabulary and information exchange (Boyer & Thompson, 2013; Foley, 1990).
2. Role release is another characteristic of the TD model and occurs when members of the team release a component of their discipline-specific services to a single provider on the treatment team who will provide all direct services to the family. This professional is supported by the other team members through training, information exchange, and regular contact during treatment (Boyer & Thompson, 2013; King et al., 2009). This approach has substantial benefits for all TD team members. Professionals who release to the designated provider learn more about their own discipline and clinical skills by assigning rules to their contingency-shaped clinical repertoires in order to provide support. The designated provider experiences considerable professional development by learning about other professions and expanding their clinical skills.
3. As central TD features such as arena assessment and role release require regular, intensive communication among team members, TD requires a high degree of cooperation for successful implementation (King et al., 2009). Although there is consensus that a high degree of communication, collaboration, and support is necessary (Boyer & Thompson, 2013; Foley, 1990; King et al., 2009), the processes to plan effective implementation of TD collaborative practices are not in place. Technological descriptions and performance standards such as quality, quantity, and timeliness may enable replication and increased adoption of collaborative service delivery models.

Interprofessional/Interprofessionalism

Farrell (2016) noted that interprofessionalism is a process by which professionals from different disciplines effectively engage in collaborative practice that is fostered by establishing a foundation of shared ethical standards and values and by embracing a vision of an "inclusive" clinical culture (Farrell, 2016). An inclusive culture is one that is open to, respects, and welcomes a team approach by embracing the contributions of each member of the professional team. Légaré et al. (2011) offered key concepts for interprofessionalism and shared decision making that enhance IPCP/IPP, including exchange of information, clarification of values and preferences, openness to options, and preferred and actual choices. Légaré et al. (2011) stated that by effectively working together in a team-based and patient-centered manner, the team develops a comprehensive and integrated collaborative practice to meet the needs of their clients. Interprofessionalism has been associated with (a) an increased quality of health care delivery; (b) improved client health outcomes; (c) an enhanced work life of care providers, as well as strengthened partnerships with professionals, families, and stakeholders; and (d) an optimized cost of care (Berwick, 2019; Berwick et al., 2008; Bodenheimer & Sinsky, 2014). One critical component of interprofessionalism is a unified conceptual framework of shared ethical principles that members of an inter- or multidisciplinary team adhere to in interprofessional practice. These agreed-upon principles provide a code of conduct and constitute the basis for a shared language, motivation, and contingencies that guide practitioners in their interdisciplinary practices and aid in shared ethical decision making and conflict resolution (Cox, 2012).

Educational Framework for Building Interprofessional Practice

Although the notion of greatly enhanced collaboration among members of a treatment team may seem laudable and strong evidence exists to show the efficacy of that approach (Berwick, 2019; Berwick et al., 2008; Bodenheimer & Sinsky, 2014), as we have discussed, training in this area is

an ongoing challenge for all of the health disciplines, including behavior analysis. The IPEC provides a competency framework for moving toward interprofessionalism (IPEC, 2016; IPEC Expert Panel, 2011), which we will discuss regarding its practical adoption as part of a behavior analyst's professional development.

The IPEC Framework consists of four interprofessional core competency domains (hereafter referred to as "domain") that are already well aligned with the principles adopted by behavior analysis licensing bodies (i.e., client- and family-centered, community- and process-oriented, relationship-based, developmentally appropriate recommendations that are sensitive to practice differences and outcome driven; Spencer et al., 2021). The IPEC's domains emphasize "essential behavioral combinations of knowledge, skills, attitudes, and values that make up a collaborative, practice-ready [environment]" (IPEC Expert Panel, 2011, p. 12; see also IPEC, 2016).

The four core competency domains include

1. Values and Ethics (VE): Work with individuals of other professions to maintain a climate of mutual respect and shared values.
2. Roles and Responsibilities (RR): Share acknowledgment of team members' roles and abilities.
3. Interprofessional Communication (CC): Communicate in a responsive and responsible manner that supports a team approach to treatment.
4. Teams and Teamwork (TT): Apply relationship- and team-building values and principles (IPEC, 2016, p. 10).

Each of these domains includes a number of subcompetencies. These subcompetencies provide specific guidance on the specific skill repertoires and competencies that promote effective collaboration, enhance team-based practices, and strengthen partnerships between professionals and families. The IPEC Framework domains are consistent with the mission of the field of applied behavior analysis for large-scale dissemination of the science and efforts to achieve mainstream relevance and acceptance (e.g., Friman, 2010; 2014).

IPEC's Core Collaborative Competencies Through a Behavior-Analytic Lens

Although behavior analysts share an interest with other professionals in improved outcomes for their learners, they may experience barriers to effective collaboration. It is essential for behavior analysts to build the necessary collaborative skill repertoires and demonstrate both effective interpersonal skills and professional humility (Brodhead, 2015). Several common constructs associated with collaboration include effective communication, interpersonal skills such as empathy and compassion (Taylor et al., 2018), shared ethical principles and values (Cardon, 2017; Gerenser & Koenig, 2019; Koenig & Gerenser, 2006), and professional humility as demonstrated through cultural sensitivity and responsiveness (Brodhead, 2015).

Although recent literature shows a growing interest in addressing collaboration and interprofessionalism, this remains a primarily theoretical enterprise. Instead of rejecting professions with a preference for mentalistic constructs, it may benefit behavior analysts to operationalize these terms to keep a seat at the table with other disciplines. Behavior analysts are uniquely equipped to operationalize constructs as measurable behaviors. Operationalizing constructs is a useful starting place for shared understanding and empirical inquiry. Although an attempt is made to operationalize constructs associated with relationship building and effective collaboration, it is important to note that dyadic communication includes bidirectionality between the speaker and listener and role reversals, that functional descriptions are context dependent, and that preliminary operational descriptions are bound by the parameters included in the description. The following is an attempt to bring relevance of the IPEC Framework's Core competency domains to the practice of applied behavior analysis.

Values and Ethics (VE)

Work with individuals in other professions to maintain a climate of mutual respect and shared values. The VE domain may be relevant to the notion and construct of "culture" that embodies a shared understanding of interprofessional education and collaborative principles.

The VE domain includes 10 subcompetencies that address the need for practitioners to develop a culture that supports IPCP/IPPs by

- including the client at the center;
- adopting a shared understanding of values;
- holding high standards of ethical conduct and quality of care;
- behaving with honesty, dignity, and integrity;
- being respectful of others who differ in race, ethnicity, or culture;
- respecting differences and valuing the expertise of other health professionals;
- embracing cultural diversity and individual differences;
- working in cooperation by acknowledging differences in opinions while jointly finding common ground and shared goals;
- managing ethical dilemmas by reaching consensus and establishing common grounds and shared goals; and
- maintaining competence within your scope of practice.

The VE domain is aligned with the foundational principles in the BACB's new ethics code (BACB, 2020). The VE subcompetencies may be achieved by engaging in culturally aware practices, cultural humility, and reciprocity while building a culture that embraces and reinforces interprofessional collaboration among professionals from different disciplines.

Culture may reflect a collection of common verbal and overt behaviors that are learned and maintained by a set of similar social and environmental contingencies (i.e., learning history), and are occasioned (or not) by actions and objects (i.e., stimuli) that define a given setting or context. (Sugai et al., 2012, p. 204)

Additional constructs that play a critical role in building collaborative relationships but need clear operational definitions include the following:

1. Cultural sensitivity and responsiveness: One is aware of the contextual conditions within which each person/professional operates, and makes appropriate adaptations to establish reinforcing conditions that may foster behaviors in support of positive and effective relationships (Neely et al., 2019).
2. Cultural competence: This is achieved by mastering cultural competency skills in your educational and clinical training (Brodhead & Higbee, 2012; Fong & Tanaka, 2013). It would be foolish to assume that one can achieve mastery in cultural competence given that the words, knowledge, and training one receives do not necessarily translate into a complete understanding of the cultural norms and contingencies within which people of that culture behave. As such, Kalyanpur and Harry (2012) argued that to be culturally competent, one needs to engage in cultural humility and cultural reciprocity.
3. Cultural humility: One acknowledges their own limitations and seeks to increase awareness, understanding, and respect of others' cultures to overcome these limitations (Mosher et al., 2017). It is important to note that cultural humility is a challenging construct to demonstrate as "our behaviors, biases, assumptions, the ways in which we perceive the world, and the decisions we make are all conditioned and influenced by our learning histories and our experiences" (Slim & Celiberti, 2021, p. 2). Cultural humility requires one to exhibit self-awareness regarding their own cultural biases. Specifically, identifying and discriminating the presence of one's implicit biases require one to be aware of the influence that these biases may have on the listener's responses that may affect the quality of the reciprocal conversations and speaker–listener relationship. For example, a behavior analyst is collaborating with a speech-language pathologist to implement a feeding program for a child. The behavior analyst first tacts their private thoughts regarding assumptions they may have of the speech-language pathologist's skill competency and their own. The behavior analyst then states the following contribution to the treatment goals: "I may be able to help decrease negative mealtime behaviors [by applying behavioral principles such as differential reinforcement and extinction], assist with generalization by teaching parents [by implementing behavioral skills training], increase tolerance of novel textures [by using stimulus fading and counterconditioning], and create a way for us to monitor progress over time [using operational definitions and data collection]."

   The behavior analyst then seeks to understand how the speech-language pathologist's role and skill expertise may integrate with their own to further the treatment plan. The practitioner may start this discussion by asking clarifying questions. Questions need to be delivered authentically while maintaining psychological flexibility to entertain adaptations and modifications to the selection of goals and intervention. Instead of saying, "Let me show you what you can do" or "My intervention plan works best," consider alternatives such as "I am interested in learning about what you find in your assessment"; "I am interested in observing how you address this feeding issue, and I would love to share some strategies I find helpful [such as prompt and prompt-fading procedures and treatment fidelity]"; "Is there anything you recommend I do or avoid when I implement my strategy [such as exemplars and nonexemplars]?"; and "What is the best way to reach you to discuss our plan and share data [regarding data decision analysis and progress monitoring]?"
4. Cultural reciprocity: This represents an openness to embrace reciprocal learning opportunities by respectfully engaging in dialogue and information sharing (Harry, Rueda & Kalyanpur, 1999; Kalyanpur & Harry, 2012). Cultural reciprocity may be considered as cultural humility in action. According to Kalyanpur and Harry (2012), Harry et al. (1999), and Spencer (2020) cultural reciprocity is achieved by engaging in four steps:

   a. *Self-reflecting* by being aware of influences of personal biases, assumptions, and discipline-specific professional culture Addressed in the IPEC domainS VE within the construct of "culture";
   b. *Listening*, inviting, respecting, and acknowledging differences in others' theoretical and cultural assumptions, beliefs, definitions, and interpretations (Addressed in the IPEC domains RR and CC within the constructs of "competence and communication";
   c. *Validating* and engaging in reciprocal conversations to explain and understand each other's theoretical and cultural assumptions and beliefs and eliminate possible incorrect assumptions or misunderstandings (Addressed in the IPEC domains CC within the construct "communication"; and

d. *Collaborating* and compromising, reaching consensus, and establishing common grounds and shared goals (Addressed in the IPEC domains TT within the construct of "collaboration".

Roles and Responsibilities (RR)

Share acknowledgment of team members' roles and abilities. The RR domain may be relevant to the notion and construct of "competence," which embodies shared respectful recognition, valued contribution, and integration of discipline-specific skills and expertise within interprofessional education and collaborative practices.

The RR domain includes 10 subcompetencies that address the need for practitioners to ensure their competence and behaving with integrity in support of IPCP/IPPs by

- communicating to team members their roles and responsibilities, the skilled expertise they can offer, and the ways they can contribute to collaborative practice;
- engaging IN cultural humility and in self-reflection by recognizing one's own limitations in skill, knowledge, and abilities;
- understanding and explaining other team members' roles and responsibilities;
- providing ongoing clarification of roles and responsibilities for each component of the treatment plan;
- inviting and engaging professionals whose competence complements one's own skills;
- integrating the skill expertise and competence of team members to ensure safe, timely, efficient, effective, and equitable treatment;
- establishing synergistic and interdependent relationships between team members;
- incorporating the unique and complementary skills of other team members in one's treatment;
- engaging in continuous professional development; and
- describing collaboration and integration across professional disciplines.

The RR domain is aligned with the foundational principles in the BACB's new ethics code (BACB, 2021). The TT subcompetencies may be achieved by behaving with cultural humility and dignity; by ensuring your own competence while recognizing your limitations in skill, knowledge, and abilities; and by seeking to increase your understanding of other team members' roles and responsibilities to benefit others (LaFrance et al., 2019). Moreover, seeking to understand team members' discipline-specific theoretical and cultural assumptions, opinions, and values will strengthen the collaborative relationship by creating a shared understanding of the value that each team member's competence brings.

It is important to recognize that "knowledge of universally applicable principles does not translate to an unconstrained scope of practice or an unlimited scope of competence" (Spencer et al., 2021, p. 2). Given that scope of practice and scope of competence are constructs referred to across health and education professions, a shared understanding of what they refer to is warranted. Brodhead et al. (2018) referred to scope of practice as "the range of activities in which members of a profession are authorized to engage, by virtue of holding a credential or license (p. 426)." In other words, scope of practice mainly consists of the activities, procedures, and processes that a licensed or certified professional is authorized to engage in within the boundaries of professional practice as defined by law, regulation, and educational attainment.

According to Brodhead et al. (2018), scope of competence is referred to as "activities that the individual practitioner can perform at a certain criterion level (p. 424)." In other words, a professional practicing within their scope of competence is performing their activities and procedures at a level that meets a specified criterion and standard of excellence.

Interprofessional Communication (CC)

Communicate in a responsive and responsible manner that supports a team approach to treatment. The CC domain encompasses constructs such as communication, perspective taking, empathy, and compassion, which involve expressing oneself in a respectful and clear way while also demonstrating respect for the ideas and communication needs of the team, all in support of a larger goal of effective interprofessional teamwork.

The CC domain includes eight subcompetencies that address the need for behavior analysts to practice professional communication modalities—oral, written, and gestural—in a fashion that advances teamwork and interprofessional practice. The following subcompetencies are highlighted:

- selecting effective tools and technology;
- replacing discipline-specific jargon with language that is understood across the team;
- clearly expressing knowledge and thoughts and listening actively and empathically;
- encouraging other ideas and thoughts and participating in genuine and honest conversations that strengthen shared values and maintain mutual respect;
- behaving compassionately and communicating with consideration in ways that meet the needs of colleagues, the team, and clients;
- giving and soliciting feedback in a sensitive, instructive, and respectful manner; asking about preferred ways to deliver feedback; and tailoring delivery to meet those preferences;
- recognizing the value and impact of one's own and others' professional background and contributions to the team; and

- engaging in communication behaviors that foster conflict resolution (e.g., establish agreements and resolve disagreements), including oral, written, gestural, and body posturing.

The CC domain is aligned with the foundational principles in the BACB's new ethics code (BACB, 2021). Competence in the CC domain may be achieved by tactfully and respectfully communicating one's own expertise and contributions in clear and easily accessible terms, displaying appropriate empathy and compassion, and demonstrating responsiveness to a diversity of cultures and ideas. This is accomplished by respectfully understanding others' perspectives and resolving conflicts by reaching a shared consensus that places clients' best interests first.

Communication

Extensive work has already been accomplished in the operational analysis of communication beginning with B. F. Skinner's (1957, 2020) *Verbal Behavior*. His work provided a method to analyze socially mediated behaviors by classifying them into specific environment–behavior relationships called verbal operants. These functional units of behavior provide an alternative to a structuralist account of communication and have been the foundation for an important area of applied research and practice to improve language habilitation and rehabilitation.

Perspective Taking

Many of the most critical components of effective interprofessional collaboration—empathy, compassion, and collaboration—require perspective taking (Catagnus & Rock, 2020); however, the concept of perspective taking is, itself, very complex at a behavioral level. Specifically, to engage in effective perspective taking involves the following steps: the listener (a) tacting their own covert feelings, thoughts, and assumptions; (b) attending to the speaker's auditory and visual responses; (c) making inferences about the speaker's thoughts and feelings to interpret their behavior; (d) attempting to understand the speaker's point of view in a situation by trying to reflect back to a similar emotional response elicited by a personal experience; (e) predicting the behavioral response of the speaker; and (f) finally checking for accuracy (Catagnus & Rock, 2020; Gould et al., 2011; Taylor et al., 2018). In other words, perspective taking involves the process of prediction and control of the speaker–listener responses. Perspective taking is necessary when communicating and collaborating with others, particularly when others come from varied professional backgrounds. For example, to resolve conflict professionally and come to a consensus or to work toward shared goals requires the skill of perspective taking.

Empathy

Empathy is commonly described using metaphorical tact extensions such as "walking in another's shoes" and involves engaging in perspective taking. According to Taylor et al. (2018), empathy involves a cognitive component (i.e., covert verbal behavior), which consists of perceiving and tacting others' desires or emotional responses, and an affective response (i.e., overt verbal behavior). Typically, that response consists of reflecting on one's own experiences that may elicit similar emotional responses. For example, a parent explaining their concern over their child's self-injurious behaviors may squeeze their eyebrows together, tighten their facial muscles, and increase the pitch of their voice while decreasing volume. Signal detection occurs when this compound visual-auditory stimulus evokes the clinician's statement "I understand that this is very difficult to talk about." The clinician's statement may be a member of a functional response class maintained by negative reinforcement (i.e., the attenuation or removal of others' collateral behaviors associated with suffering) or positive reinforcement (i.e., a socially mediated response by the parent such as "Thank you for understanding").

Compassion

Compassion involves empathy plus action aimed at mitigating a person's suffering (Diller & Lattal, 2008; LeBlanc et al., 2020). Lown (2014) defined compassion as "the recognition and validation of the needs, concerns and distress of others, coupled with actions to ameliorate them" (p. 199). Although they are not stated explicitly, the definition alludes to a few important environment–behavior relationships that, if adequately defined, could become the target of a behavior-change program. Compassion may be more precisely understood in physical terms that minimize subjectivity and can be broken into public and private behaviors. Specifically, the signal detection of others' suffering is under the complex stimulus control of public verbal and nonverbal behaviors. Compassion may be understood by revisiting the previous example and providing an additional action-oriented statement to the clinician's empathic response. For example, "I understand that this is very difficult to talk about" becomes a compassionate statement with the addition "We will work together to teach him how to use his voice to get what he wants and needs."

Teams and Teamwork (TT)

Apply relationship- and team-building values and principles. The TT domain may be relevant to the notion of evidence-based practice and the construct of "collaboration," which embodies shared values, goals, and decision-making

processes based on team norms and principles including the client's values, preferences, and circumstances.

The TT domain includes 11 subcompetencies that seek involvement from all team members and by developing shared understanding of ethical practice guidelines. The following competencies are highlighted:

- describing the process and systems that promote team development;
- developing and implementing practices based on a shared understanding of ethical practice guidelines;
- engaging in shared problem solving;
- integrating knowledge and experience with client values and preferences;
- engaging in leadership practices by seeking the involvement of all team members;
- engaging in constructive conflict resolution by respectfully reaching consensus;
- engaging in shared accountability for outcomes with team members;
- reflecting and providing feedback on individual and team performance for improvement;
- using process performance feedback and improvement to increase effectiveness;
- using available evidence and data-driven processes to inform effective teamwork and practices; and
- performing ethically, competently, and effectively on teams and within different team roles.

Ethical guidelines have been cited as an important starting place for the creation of standards and expectations to guide professional behavior in practice (Cox, 2012; IPEC, 2016). Evidence-based practice is a framework and ethical principle adopted by health, social science, and medical professions that practitioners must abide by to ensure optimal and safe client health outcomes. A shared understanding of evidence-based practice is central to joint, effective, cohesive, and competent teamwork practices and aligns with principles of applied behavior analysis. Evidence-based practice is a collaborative decision-making approach where practitioners integrate the best available external scientific evidence (empirical evidence); internal evidence (informed by data and evaluation of client performance); clinical expertise and judgment; and client perspectives, values, and preferences (Higginbotham & Satchidanand, 2019; Slocum et al., 2014). Evidence-based practice involves processes that are fluid and dynamic, based on evidence that evolves with new scientific discoveries and client progress. The evidence-based practice framework is at the center of the TT domain of collaborative practices and is aligned with the foundational principles in the BACB's new ethics code (BACB, 2020). The BACB code requires practitioners to apply evidence-based practice with cultural humility and display sensitivity and responsiveness toward colleagues and the client. Evidence-based practice assumes both individual and shared accountability for the decision-making process. Acquiring the TT competency is contingent on successful performance as an individual practitioner and as a member of a team.

Collaboration

The term "collaboration" is commonly used in clinical practice, research, organizations, and health professional education. Collaboration is a process whereby two or more people, entities, or organizations work together to complete a task, achieve a shared goal, or engage in shared decision-making processes to solve complex issues (Green & Johnson, 2015). Engaging in perspective taking will enhance collaboration and cooperation, as it promotes self-reflection, active listening, understanding, and validation of colleagues' and other team members' points of view.

A conceptual definition of the term "collaboration" includes a set of behaviors that are observed as an extension of communication acts and involves the dynamic interaction of complex intraverbal behaviors between two or more individuals. Members of a collaborative relationship whose behaviors are reinforced by the culture and verbal community may be referred to as a "team." The quality of interactions and broader relationships is strengthened by the reinforcing effect of the ethical principles, values, and contextual and motivational variables of the individual members. Ethical principles, values, and respect are constructs derived from what the culture and verbal community accept or reject as their members' behavioral responses (e.g., reinforced or punished), the contingencies agreed upon by members of that community, and the conditioned reinforcement that is established and maintained within that verbal community.

Effective communication and collaboration are observed when the strength and quality of team members' communication are mediated by team membership reinforcement. However, it is critical to understand the complex controlling variables (i.e., audience, motivational variables, and contextual variables), as these will allow for the prediction and control of the behavioral responses of each member and the "team" as a unit. By effectively controlling for these factors, one can increase the likelihood that the collaborative-communication behavioral response will be effective. However, the analysis of all the controlling variables may be expansive given the complexity of each individual's learning history. Consequently, the verbal behavior of a specific community is not always based on the simple and pure interactions and learning histories of both speakers and listeners (i.e., professionals from different disciplines). The contingencies within which people interact and communicate are determined by the verbal community or culture that they belong to—in this case, theoretical, philosophical assumptions and conceptual frameworks that are implicitly or explicitly expressed in the code of ethics of each professional discipline (Cox, 2019).

Collaborative Practices

Effective collaborative practices require interdependence and the application of each team member's knowledge, skills, and contributions to execute a cohesive and integrated plan of care (Pawlenko, 2005). The collaborative relationship embodies the principle of practitioner equity and is neither hierarchical nor competitive.

Cooperation

Cooperation and collaboration are often used interchangeably in the workplace. Although not exclusive of one another, they do differ in some critical ways. The major differentiating factor is that in collaboration, practitioners work together toward a shared goal, engaging in joint decision-making processes and sharing accountability for outcomes. By contrast, cooperation involves working with other people to achieve one's own goals or to help others achieve their goals (*Oxford Learner's Dictionary*, English Language Desk, n.d.). Of course, team members often cooperate in support of one individual's specific responsibility; however, this cooperation is in the context of the larger team's goal.

Discussion

This conceptual article is a first attempt at operationalizing and highlighting the potential relevance of the IPEC Framework as a viable framework that behavior analysts may use to inform themselves regarding competency benchmarks that are indicators of cultural humility, cultural awareness, and responsive interprofessional collaboration.

The literature points to the general benefits of interprofessionalism, such as more effective and positive client outcomes and improved personal and professional growth. Research on the application of interprofessional, relationship-building skills and collaborative competencies, although emerging, offers opportunities for empirical validation to identify the variables that influence collaboration. Once identified, these variables could support the development of organizational systems to build cultural awareness and responsiveness and collaborative competencies in the field of applied behavior analysis.

Although skills associated with building relationships and strengthening collaboration require further empirical validation, it is the responsibility of professional behavior analysts to display responsiveness to the changing environmental factors and educational landscape of the helping professions. This may be achieved through interprofessionalism.

To date, research has not systematically evaluated the relative value of different interprofessional collaborative systems in education or practice. Until researchers conduct these evaluations, behavior analysts have the responsibility as practitioners to behave with professionalism by adopting evidence-based practices, seeking continuing professional development activities, and building an interprofessional collaborative culture. Beyond the prospect for professional and personal development, culturally responsive IPCP/IPPs may optimize client outcomes and enhance clinical care through team-based decision-making processes.

There are already established benefits of IPCP/IPPs for clients' overall health outcomes, as demonstrated by the IOM (IOM Committee on Quality of Health Care in America, 2001) and the health sciences and medical fields. Specifically, preventing unnecessary, redundant, inconsistent, or conflicting treatments can reduce the cost of care and optimize the quality of service delivery. Moreover, IPCP/IPP has been shown to promote professional development and foster positive personal and collegial relationships. Limited, or lacking, behavior-analytic empirical validation of the effects IPCP/IPP have on client outcomes should not lead behavior analysts to dismiss the documented positive benefits observed for personal and professional development, staff satisfaction, quality of service delivery, and overall client health outcomes (IHI, 2008; IOM Committee on Quality of Health Care in America, 2001).

Although scientific, empirical investigations must be undertaken, behaving with interprofessionalism is well aligned with the foundational principles in the BACB's new ethics code (BACB, 2020) and can enhance the public image of behavior analysis as a discipline that values interprofessional collaborative and culturally responsive practices. This will ultimately promote the mainstream relevance of behavior analysis and increase opportunities for impacting and benefiting society in meaningful, scalable, and long-lasting ways.

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Availability of Data and Materials The article includes the collection of original data.

Declarations

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