

ABA and PBS: The Dangers in Creating Artificial Dichotomies in Behavioral Intervention

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Abstract

In recent years, there has been a great deal of controversy regarding the definition and independence of Positive Behavioral Supports (PBS) within the context of behavioral intervention. Specifically, behavior analysts have argued over whether PBS is subsumed within Applied Behavior Analysis (ABA) or whether it can be considered a separate discipline. Proponents of separatism have cited PBS's emphasis on quality of life, normalization and consumer choice. Proponents of integration have noted that the science of behavior underlies all of ABA and PBS, that PBS can be considered an evolution of the field of ABA, and that philosophical differences should not obscure science and history. In this article, the dangers of divergence beyond such philosophical debate are discussed. In addition, the ramifications of divergence for consumers and other stakeholders are reviewed. The authors note that goals are less likely to be achieved in the climate of divisiveness, and urge behavior analysts to consider the benefits of an expanded and unified definition of our science.

Keywords: applied behavior analysis; experimental analysis of behavior; positive behavior support;

Parents of children with autism, as well as numerous practitioners, are bombarded with potential treatment options for the individuals for whom they care. These treatments include biological interventions, such as psychotropic medications, specialized diets, and highly experimental procedures, such as chelation or hyperbaric oxygen therapy. In addition, several non-biological interventions have emerged that have little or no empirical support. Examples of these include Relationship Development Interventions and DIR/Floortime (Greenspan, 1992; Greenspan & Wieder, 1998; Wieder & Greenspan, 2001) and facilitated communication (e.g., Eberlin, McConnachie, Ibel, & Volpe, 1993; Simpson & Myles, 1994).

The majority of parents of children with autism pursue a combination of medical and educational treatments. Most individuals with autism receive some combination of empirically verified and experimental treatments. The intervention with the most support is Applied Behavior Analysis (ABA; e.g., Matson, Bernavidez, Compton, Paclawskyj, & Baglio, 1996; New York State Department of Health, 1999; Rosenwasser & Axelrod, 2001). ABA has been recognized by the Surgeon General of the United States as the treatment of choice for autism in the mental health report for children: "Thirty years of research demonstrated the efficacy of applied behavioral methods in reducing inappropriate behavior and in increasing communication, learning, and appropriate social behavior" (U.S. Department of Health and Human Services, 1999). However, even within the discipline of ABA, there is confusion about definitions of terms and about approaches to the intervention process.

This paper will explore the emergence of two disciplines within the field of behavioral intervention, both of which have considerable empirical support: Applied Behavior Analysis (ABA) and Positive Behavior Support (PBS). PBS is generally considered to be an extension of ABA. However, in recent years, practitioners have fought over the current status of PBS. While some people consider PBS to be an extension of ABA, others consider PBS to be a separate science. While theorists squabbling about the current status of PBS may not be of interest to most consumers or practitioners, there are potential dangerous consequences of having a fractured discipline. These include rampant consumer confusion, divisiveness within the professional community, and dilution of the strength of the field in advancing

broader goals. What follows is a brief discussion of ABA and PBS, a discussion about what these disciplines have in common, why the divergence of the science may be problematic, and suggestions for how to address these issues.

Applied Behavior Analysis

Behavior analysis is a field in psychology dedicated to the study of behavior and the natural events and causes of behavior. Behavior analysis differs from other areas of psychology in that behavior is the subject matter, rather than an index of some underlying cause or state (e.g., self esteem, perception). The three facets of behavior analysis are radical behaviorism (i.e., philosophical and conceptual understanding of behavior), experimental analysis of behavior (i.e., the study of behavior analytic principles in controlled, laboratory settings), and applied behavior analysis (i.e., the application of behavior analytic principles to socially significant behavior) (e.g., Pierce & Epling, 1999).

Behavior analysts believe behavior and the causes of behavior can be observed, measured, and controlled by a combination of genetics and environmental events. Both the experimental analysis of behavior (EAB) and applied behavior analysis (ABA) use this conceptualization to understand the behavior of organisms but differ in the types of behavior under evaluation. EAB is concerned with the study of behavior under controlled conditions. ABA is concerned with the study of socially significant behavior under natural conditions. Baer, Wolf, and Risley (1968) outlined several other fundamental characteristics of ABA and assert the approaches used must be (a) applied: focused on addressing problems to improve people's lives (b) behavioral: focused on observable, clearly defined, and measurable events rather than verbal reports or other measures (c) analytical: focused on reliably demonstrating cause and effect relationships between behavior and environmental events (d) technological: focused on the clear description of techniques to ensure reproducibility by others (e) conceptually systematic: focused on procedures described in terms of basic behavioral principles such as reinforcement and stimulus control (f) effective: focused on interventions judged not solely on the basis of behavioral change but on the magnitude and social importance of such change, and (g) generality: focused on generating behavioral change that endures across people, time and settings.

In summary, behavior analysts are interested in making significant changes with the understanding of causal variables. Significant changes are those that make a notable and real impact on the individual's quality of life and are acknowledged and embraced by their caregivers, family and friends. Understanding causal variables is important for the analysis and communication of the actual change responsible for the positive impact. Behavior analysts value efficiency and effectiveness, and seek to identify the specific variables responsible for change. ABA, behavioral assessment, and behavioral intervention are predicated on the idea of improving human performance, functioning, health, satisfaction, and quality of life.

Much of the research and clinical work in ABA has focused on behavioral difficulties of individuals with developmental disabilities including academic and vocational skill deficits (e.g., Graff, Gibson, & Galiatsatos, 2006; Williams, Carnerero, & Pérez-González, 2006), feeding disorders (e.g., Gulotta, Piazza, Patel, & Layer, 2005; Lyons, Rue, Luiselli, & DiGennaro, 2007), behavioral excesses such as stereotypy (e.g., Ahearn, Clark, MacDonald, & Chung, 2007; Shore, Iwata, DeLeon, Kahng, & Smith, 1997), aggression (e.g., Oliver, Oxener, Hearn, & Hall, 2001; Thompson, Fisher, Piazza, & Kuhn, 1998), and self-injurious behavior (e.g., Iwata, Pace, Cowdery, & Miltenberger, 1994; McCord, Thomson, & Iwata, 2001). In fact ABA remains one of the only empirically based approaches to autism and other developmental disabilities (e.g., Rosenwasser, & Axelrod, 2001; Smith, 1999).

Moreover, ABA approaches have been employed successfully in numerous areas for a wide variety of behavioral deficits and excesses. Specifically, ABA approaches have been used in the areas of

education (e.g., Gardner, Heward, & Grossi, 1994; Neef, Mace, Shea, & Shade, 1992; Witt, Noell, LaFleur, & Mortenson, 1997), business and industry (e.g., Carter, Kindstedt, & Melin, 1995; Fox, Hopkins, & Anger, 1987, Marholin, & Gray, 1976), psychological disorders (e.g., Kanter et al., 2006; Reisinger, 1972; Wilder, Masuda, O'Connor, & Baham, 2001), medicine (e.g., McComas, Lalli, & Benavides, 1999; Epstein, & Masek, 1978), gerontology (e.g., Gallagher, & Keenan, 2000; Hawley & Cherry, 2004; Shore, Lerman, Smith, Iwata, & DeLeon, 1995), drug addiction (e.g., Budney, Higgins, Delaney, Kent, & Bickel, 1991; Festinger, Lamb, Kirby, & Marlowe, 1996; Glenn & Dallery, 2007) community problems (e.g., Ludwig & Geller, 1991; Van Houten, Malenfant, Austin, & Lebbon 2005), and corrections (e.g., Milan, & McKee, 1976) to name a few. In addition, as the number of researchers and practitioners in ABA increases, the scope of the behavior analytic approach expands to new areas.

ABA has evolved considerably from its early roots, and the application of behavioral principles grows more complex and sophisticated each year. Within autism treatment for example, major changes have included the use of functional assessment and functional analysis procedures to understand the functions of challenging behaviors, the emphasis on matching behavioral treatment to behavioral function, the expanded focus on using reinforcement based procedures to address challenging behaviors, the use of naturalistic teaching strategies to teach a wide variety of skills, and the emphasis on the use of teaching technologies that enhance generalization, maintenance, spontaneity, fluency, responsibility, and independence within the context of family and community.

Positive Behavior Support

Positive Behavior Support (PBS) is a systems-based approach to decrease behavior problems on both an individual and community level. PBS is rooted in behavior analytic principles and emerged in the mid-1980s in response to (a) escalating concerns over the use of aversive procedures (Lavigna & Donnellan, 1986; Meyer & Evans, 1989; Will, 1999) and (b) the desire to produce more clinically significant and sustainable outcomes in community settings (Horner, Dunlap, Koegel, Carr, Sailor, Anderson, et al., 1990). PBS was established, in part, because of a perceived overuse of aversive procedures and focus on consequent-based interventions with individuals with developmental disabilities in ABA (Horner, et al., 1990). Thus, in the area of assessment and treatment of problem behavior, early conceptualizations of the approach focused on ABA derived antecedent-based strategies including environmental adaptations such as providing choice, varying instructional delivery, and altering routines rather than manipulating consequences for problem behavior. In addition, there was also a focus on evaluating relations between remote variables (e.g., medication, sleep patterns) and problem behavior.

In recent years, proponents of PBS have further defined the approach as a widely available service model that can be used at an organizational and individual level and which incorporates multidisciplinary input into prevention and treatment strategies. For example, the PBS approach has been adopted in several schools and involves a three-level system which targets (a) prevention of problem behavior on a school-wide level through environmental adaptation (b) prevention of problem behavior through specialized instruction at a group level for at-risk students and (c) assessment and treatment of problem behavior on the individual level. The approach involves a data-based assessment process, the use of empirically-supported intervention strategies, and responsiveness to consumers' preferences and community relevance. PBS initially evolved within the field of developmental disabilities and emerged from three major sources: applied behavior analysis, the normalization/inclusion movement, and person-centered values. In summary, PBS involves the use of both class-wide and individualized preventive and antecedent strategies to minimize behavioral disruptions and the broad assessment of stakeholders' preferences in identifying targets for intervention and in evaluating success of treatment.

Is PBS a separate entity from ABA?

Several theorists have debated the origins of PBS and its relationship to ABA. While most agree that PBS emerged from ABA, there is a heated debate about whether or not PBS is a science in its own right, independent of ABA.

Practitioners suggesting PBS is its own entity often cite that, while the basic building blocks of PBS are not unique, (Anderson & Freeman, 2000; Carr, Dunlap, Horner, Koegel, Turnbull, Sailor, Anderson, Albin, Koegel, & Fox, 2002; Horner et al., 1990), the integration of these components with other approaches is different and constitutes a unique discipline. They cite their emphasis on a constellation of factors including: comprehensive lifestyle change, a lifespan perspective, ecological validity, stakeholder participation, social validity, systems change and multicomponent interventions, an emphasis on prevention, flexibility in scientific practices, and multiple theoretical perspectives (Carr, et al., 2002). They argue the procedures used by PBS practitioners have evolved beyond ABA given that the current scientific methods used by behavior analysts are inadequate for meeting such challenges as inclusion and normalization.

Other practitioners have questioned the notion of viewing PBS as a distinct discipline (e.g., Carr & Sidener, 2002; Johnston, Foxx, Jacobson, Green, & Mulick, 2006; Wacker & Berg, 2002). Several authors have cited that the defining characteristics of PBS (e.g., proactive, minimization of the use of aversives) are features consistent with the sound practice of state-of-the-art ABA (Johnston, et al., 2006). In addition, the use of multi-component interventions, individualized support plans that are built on functional assessments, teaching socially desirable behaviors, and producing lasting outcomes are hallmarks of effective intervention using ABA as well. Rather than being a science in its own right, this school of thought views the emergence of PBS as the evolution of a service delivery model (Wacker & Berg, 2002) or a social movement (Mulick & Butter, 2005).

The Conflict

The tones of recent articles stating these positions have become somewhat argumentative in nature. Behavior analysts have expressed concerns about the way ABA is represented in PBS literature. Authors supporting PBS have referred to ABA in an unfavorable way, while PBS is referred to in a more appealing light. For instance Carr et al., 2002 refer to PBS as “comprehensive”, “proactive”, “flexible” and “pragmatic” (Carr et al., 2002), while ABA is referred to as “traditional.” The 2002 article “PBS: The evolution of an applied science” suggests that PBS has become something different and superior to ABA. The qualities of “positive”, “flexible” and “proactive” are viewed as strengths for PBS, thus implying that they are not a part of ABA.

In addition, ABA has been highly critical of PBS, implying that staff training is insufficiently focused on competence and that the adherence to science is weak (Johnston et al, 2005). There is some implication that PBS has drifted from ABA’s scientific roots and values, and has become a watered down and less powerful intervention as a result.

Dangers in Divergence

With all of this rhetoric and with the investment many have in the separate identity of PBS, we might ask whether divergence is truly a bad thing. What exactly is to fear in a divergence of ABA and PBS? In our view, a divergence would mean an artificial dichotomy has been created between PBS and ABA. One consequence could be widespread clinical and consumer confusion, as both clinicians and consumers try to decipher who is applying the discipline of behavioral science and who is adhering to sound clinical judgment while protecting consumer rights.

Of course, interventionists on both sides of the dichotomy would be valuing the dignity of each person served. Clinicians on both sides of the debate would be using empirical means to track progress in individuals served. But these collectively shared values and commonly used procedures would be lost in the message of difference. Divisiveness in the field would further separate clinicians from one another, distance clinical approaches, and fuel consumer confusion and misinterpretation.

What else could be jeopardized in such an outcome? Clarity in the understanding of how ABA and PBS have evolved over time could be lost. Misconceptions abound as it is, and clinicians work every day to help consumers understand the characteristics of ABA intervention. In addition, tremendous effort is exerted in helping consumers to understand evidence-based practice. Consumers need help in deciphering the claims of those outside of ABA, and in interpreting quality of evidence and demonstration of effect. A dichotomy between PBS and ABA would increase misinformation about the history of the field and might lead to more misunderstanding about which interventions have been shown to be effective.

ABA is an evolving science. All fields of study change as the understanding of phenomena deepen over time, and ABA has shifted immensely in its short history. The technology available to us has changed, and our understanding of how to impact upon behaviors while preserving the dignity of those served is quite different than it was in the infancy of our field. We owe a great deal of credit for that evolution to PBS. PBS has been the natural extension of the science of ABA, and has articulated the evolution of service provision eloquently and comprehensively. As a field, we need to recognize the contribution PBS has made to this evolution.

It may be helpful for us, as a field, to differentiate between the philosophical/service provision aspects of ABA and the scientific foundations of ABA. Both are core and essential elements of the field. PBS's frame of reference may match better with current service provision practices, and may more articulately convey current philosophical values.

Nevertheless, there is room –and need- for both in the broad field of ABA. We continue to need the science of ABA, and we must continue to accrue evidence for the effectiveness of our practices through research. We also, however, continue to need state-of-the-art clinical applications. In addition, we need to recognize the value of conceptually systematic applications where data may not yet be available to guide us. It may be that our scientific roots can aid us in improving these clinical efforts and ensuring maximal effect in their application. Efforts within that domain might include the continued quest to quantify outcome measures.

Practice Issues

Currently, there is tremendous interest in practice issues in behavior analysis. As the field has grown and demand for services has increased, new issues have grown in prominence and urgency. Certification in behavior analysis has set standards for minimal competency, and this has made it easier for potential consumers to evaluate the skills and abilities of potential service providers.

However, new challenges have arisen that are unprecedented within our field. Specifically, there has been interest in securing insurance reimbursement for ABA services for individuals with autism. This would be a tremendous advantage for families of children with autism, and many states have already passed legislation that entitles families to some level of reimbursement for services.

A related practice issue involves licensure for behavior analysts. There is movement in many states to pursue licensure of behavior analysts. This credentialing/licensure at the state level would provide additional safeguards currently unavailable with national certification, including the ability to provide investigations of and consequences for ethical violations. This would increase consumer

protection. While this is an area of some disagreement and a source of potential additional factitiousness, it is widely understood that some additional credentialing will be needed to provide more consumer protection (Dorsey, Weinberg, Zane, & Guidi, 2009; Green & Johnston, 2009a; Green & Johnston, 2009b).

The issue for the field is that we need to have a unified field and a singular voice. Any kind of divisiveness hurts our ability to ultimately succeed in our efforts. Legislators and other stakeholders become confused when approached by multiple organizations seeking similar goals. We run the risk of appearing to be weakened internally by factitiousness and divisiveness. We cannot afford to have our goals thwarted by such divisiveness. If ABA and PBS practitioners approach legislators, advocacy groups, and funders for assistance with the achievement of these goals separately, it will diminish the likelihood of success for both groups.

Furthermore, if one group succeeds, it may make it more difficult for the other to achieve the same goals. If PBS is written into legislation for insurance reimbursement, what about ABA intervention? Is it excluded unless described as PBS? Will grant funding become more difficult to obtain? The field can become mired in these issues, with little chance of clarity.

Perhaps the greatest risk is in the perception of our discipline. Does it undermine us if we appear to be unable to agree, unable to compromise on how we define and describe our science and the services we provide? If we do not listen to each other, how can we expect others outside of our discipline to listen to us?

Common Ground

The science on which our practices are based is the same. Our science has essential elements: pragmatism and empiricism. Our practice of that science changes to meet the needs of those we serve. It is the science and technology of behavior change that unites us. The way we practice, whether it is to serve different populations or in the integration of certain values, does not change the science that binds us together. We would not say that behavior analysts working with children with ADHD are practicing a different science from those serving adults with developmental disabilities. The same technology of behavioral science is used by both groups. In the same way, practitioners of PBA and ABA practice the same science. We are all outcome-oriented and employ empirically-validated interventions based on the principles of learning. And we all utilize common procedures. We all appreciate the role of functional assessment and analysis, and the rearranging of contingencies. We all use the principles of reinforcement and punishment, as well as contingency management, stimulus control, and prompting and fading strategies (Dunlap, Carr, Horner, Zarcone, & Schwartz, 2008). We all seek to change behavior and to have those changes generalize, be maintained, and be socially beneficial in support of a meaningful life. The conceptual core and values of PBS and ABA are the same (Dunlap et al., 2008).

Summary

Perhaps the most important distinction we can make is to differentiate philosophical/service provision aspects of service from our scientific foundations. PBS is a natural extension of ABA. It is important that we allow for both the perspectives of ABA and PBS to be heard within our broader discipline. We need to remain loyal to our commitment to evidence-based practice. We should endeavor to advance the scientific understanding of how to best meet the needs of individuals through PBS. State of the art intervention does include addressing quality of life indices that are harder to measure.

What is it that PBS can bring to ABA? PBS can remind us of our commitment to social significance. It can help us focus on variables such as quality of life. It can ensure that we examine the

social validity of our procedures and outcomes, so that our focus on behavioral change is broad and inclusive of others in the environment.

What is it that ABA brings to PBS? PBS clinicians have daringly addressed harder to quantify variables and broadened the scope of intervention. What would strengthen PBS is a return to the hard science of ABA. The use of experimental designs would greatly strengthen the quality of research available about PBS. The collection of data for all goals and in all settings would also ensure objective evaluation of the impact of PBS interventions.

What can everyone on both sides of the debate do? The most important behavior may be to refrain from criticizing the other point of view. While debate within a discipline is inevitable and can be healthy, divisiveness and factitiousness is dangerous. It undermines the ability of the field to achieve its goals. It is important for all clinicians and researchers to respectfully dialogue and to view the other perspective with some openness. The evolution of science is a continual process. Disagreements fuel the definition of a field, and are inevitable in a dynamic science with ever-evolving applications. The members of the field can alter the outcome of such debates by respectfully dialoging, by being open to new directions, and by integrating new directions while adhering to the tenets and foundations that define their science.

The goal we all need to share is the avoidance of an unnecessary polarization (Dunlap, et al., 2008). It is clear that adversarial relationship between the two fields hurts both disciplines and leads to massive confusion among consumers and other stakeholders. It may be possible to view the two as fulfilling different niches in the same science. What remains to be seen is whether we define ourselves as collegial yet different or as the same. That decision may have wide-ranging consequences, and the two possibilities may yield different and potentially dangerous outcomes in the public policy arena.

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