

In Response

On the Relation Between Applied Behavior Analysis and Positive Behavioral Support

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Anderson and Freeman (2000) recently defined positive behavioral support (PBS) as a systematic approach to the delivery of clinical and educational services that is rooted in behavior analysis. However, the recent literature contains varied definitions of PBS as well as discrepant notions regarding the relation between applied behavior analysis and PBS. After summarizing common definitional characteristics of PBS from the literature, we conclude that PBS is comprised almost exclusively of techniques and values originating in applied behavior analysis. We then discuss the relations between applied behavior analysis and PBS that have been proposed in the literature. Finally, we discuss possible implications of considering PBS a field separate from applied behavior analysis.

Key words: applied behavior analysis, positive behavioral support, developmental disabilities, education

Anderson and Freeman (2000) recently published an article in *The Behavior Analyst* on the relation between applied behavior analysis and positive behavioral support (PBS). PBS is a service-delivery framework for individuals who exhibit aberrant behavior, typically children in educational settings and adults in residential settings. These individuals are frequently, but not always, diagnosed with developmental disabilities. Although PBS has guided some therapeutic practices for over a decade, its impact has recently expanded to the national level, as evidenced by the development of a peer-reviewed journal (*Journal of Positive Behavior Interventions; JPBI*), textbooks (e.g., Jackson & Panyan, 2001; Lucyshyn, Dunlap, & Albin, 2002), and a federally funded U.S. Office of Special Ed-

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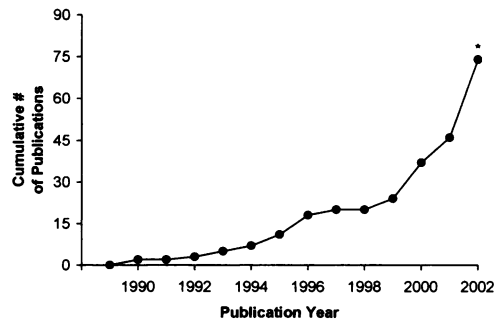


Figure 1. Cumulative number of publications whose title, key words, or abstract included the phrase *positive behavior(al) support* as indexed by the PsycINFO[®] database between 1989 and 2002. * Data are reported for only 24 weeks in 2002.

ucation Programs (OSEP) Technical Assistance Center on Positive Behavioral Interventions and Supports. Further, there has been a substantial increase in the number of articles published on PBS in recent years (Figure 1). Thus, Anderson and Freeman's comments on the definition of PBS and its relation to applied behavior analysis are timely and particularly relevant for the behavior-analytic audience.

Anderson and Freeman (2000) pro-

vide a three-part definition of PBS that includes the following features: (a) PBS operates from a person-centered value base, (b) PBS recognizes the individuality of each person, and (c) PBS works towards meaningful outcomes through comprehensive assessment and multifaceted interventions. We agree that these characteristics are generally representative of PBS. We also believe these characteristics to be generally indicative of good practice in applied behavior analysis. In addition to providing a definition of PBS, Anderson and Freeman implicitly present the approach as one that is compatible with applied behavior analysis. Although we believe that the authors provide a reasonable definition of PBS and agree with the relation between applied behavior analysis and PBS implied in their article, others have defined PBS in somewhat different ways and, perhaps more important, conceptualized the relation between applied behavior analysis and PBS in very different terms (e.g., Carr, 1997). Thus, the purpose of this article is (a) to summarize the common defining characteristics of PBS as reported in the literature, and (b) to discuss the implications of the various relations that applied behavior analysis and PBS ostensibly share.

Defining Positive Behavioral Support

We reviewed all of the publications listed in the PsycINFO[®] database that included discussion of the definition of PBS. Although PBS has been defined in somewhat different ways over the years (e.g., Carr et al., 2002; Sisson, 1992), our review of the literature revealed eight characteristics that were commonly described. Each of these characteristics is discussed below. In addition, we provide evidence from the applied behavior-analytic literature to document whether the characteristic is specific only to PBS or is shared by both applied behavior analysis and PBS.

Person-centered planning. Person-centered planning is a philosophy that

has recently emerged within the field of developmental disabilities (Kincaid, 1996). The core tenet of this philosophy is that the client should always remain the focus of the assessment and treatment enterprise. In other words, clinical and educational services should be guided by the individual characteristics of the client and his or her environment. This approach is in direct contrast to the provision of default nonindividualized services. Proponents of PBS, including Anderson and Freeman (2000), consider person-centered planning as one of the defining features of PBS. However, this philosophy is clearly compatible with applied behavior analysis, which has always been fundamentally interested in the behavior of individuals (Baer, Wolf, & Risley, 1968).

Functional assessment. A PBS intervention begins with a comprehensive functional assessment that involves the identification of functional relations between aberrant behaviors and the variables that maintain them (Horner, 2000; Sisson, 1992; Sugai et al., 1999). This is typically accomplished with interviews, descriptive assessment, and functional analysis, and is often a very detailed and lengthy process. Although functional assessment is a defining characteristic of PBS, it has also been central to applied behavior analysis for almost two decades (Iwata, Kahng, Wallace, & Lindberg, 2000). In fact, Pelios, Morren, Tesch, and Axelrod (1999) recently commented on the ubiquity of functional assessment within applied behavior analysis, which has resulted in an increase in the use of reinforcement-based interventions as treatment for aberrant behavior.

Positive intervention strategies. PBS promotes the use of procedures based on positive reinforcement as opposed to punishment (Horner, Dunlap, & Koegel, 1990; Sisson, 1992; Sugai et al., 1999). In fact, the importance of positive intervention strategies is one of the main factors that prompted the development of PBS (Sugai et al.). However, Van Houten et al. (1988)

have long asserted this emphasis to be important to applied behavior analysis. The authors stated, "consistent with the philosophy of least restrictive yet effective treatment, exposure of an individual to restrictive procedures is unacceptable unless it can be shown that such procedures are necessary to produce safe and clinically significant behavior change" (p. 113). A content analysis of research published in the *Journal of Applied Behavior Analysis (JABA)* by Northup, Vollmer, and Serrett (1993) supports this position. The authors stated, "the status of positive reinforcement as the most basic and essential feature of applied behavior analysis is reflected in this survey" (p. 534).

PBS proponents also value antecedent-based interventions that function to prevent the occurrence of aberrant behavior. This too is a valued practice within applied behavior analysis, as evidenced by recent research on modifying establishing operations as treatment for aberrant behavior (e.g., Iwata, Smith, & Michael, 2000).

Multifaceted interventions. Most PBS interventions are implemented as comprehensive treatment packages, instead of as a single procedure (Carr et al., 2002). These packages include not only specific treatments but also assessments and caregiver-training procedures. In other words, PBS conceptualizes its interventions as comprehensive packages (i.e., "wraparound" services) that include all of the necessary components required to produce meaningful change. Although many published contemporary applied behavior-analytic *research* studies may not include such a comprehensive focus, high-quality behavioral *practice* has long been multifaceted (e.g., Forehand & McMahon, 1981; Lovaas, 1981).

A focus on the environment. Procedures used in PBS programs to produce behavior change focus on manipulation of environmental variables. This has been characterized as "building environments with effective consequenc-

es" (Horner et al., 1990, p. 125), designing "effective environments" (Sugai et al., 1999, p. 6), and using "interventions that consider the contexts within which the behavior occurs" (Haring & De Vault, 1996, p. 116). This emphasis on environmental alteration is stressed instead of "changing the person." Such an emphasis on the environment is, of course, fundamental to behavior analysis, as shown by Skinner's (1977) assertion that "we need to change our behavior and we can do so only by changing our physical and social environments" (p. 10).

Meaningful outcomes. The measure of success of a PBS intervention is the extent to which it produces change that is broadly significant to the consumer and society. The PBS literature has described this goal in the following ways: "meaningful" (Anderson & Freeman, 2000, p. 88), "changes in lifestyle that permit an individual to be included in community-based activities from which he/she was formerly excluded" (Carr, 1997, p. 208), "socially important behavior change" (Sugai et al., 1999, p. 6), and "an increase in the social, personal, and professional quality of their lives" (Horner, 2000, p. 97). According to the PBS literature, these outcomes may be accomplished through interventions in areas such as relationships, employment, education, recreational activities, and community participation.

Similar goals are also apparent in Baer et al.'s (1968) dimensions of applied behavior analysis, which still serve "as the standard description of the discipline" (Cooper, Heron, & Howard, 1987, p. 5). Applied behavior analysis is truly "applied" because it works toward the goal of producing behavior change that is important to both the consumer and society. In addition, applied behavior analysis is effective because in its application, "the theoretical importance of a variable is usually not at issue. Its practical importance, specifically its power in altering behavior enough to be socially important, is the essential criterion"

(Baer et al., 1968, p. 96). Wolf (1978) asserted more specifically that applied behavior analysis would benefit from having consumers socially validate its goals, procedures, and outcomes to ensure that behavior change is interpreted as meaningful at these levels. Similarly, Van Houten et al. (1988) stated that "the ultimate goal of all services is to increase the ability of individuals to function effectively in both their immediate environment and the larger society" (p. 112).

A focus on ecological validity. PBS has been described as having a strong focus on ecological validity, as it relates primarily to stimulus generality and maintenance, which is accomplished with procedures that incorporate settings and individuals that are present in the consumer's natural environment (Carr, 1997; Marquis et al., 2000). This is an integral feature of PBS because it is not merely a side effect resulting from the intervention; it is accomplished through intentional and well-planned practices toward a primary goal of generalization.

One of Baer et al.'s (1968) defining dimensions of applied behavior analysis is "generality," which the authors describe as the occurrence of a behavior over time, in other environments, and in similar but varied forms. Northup et al. (1993) confirmed this goal in their review of research published in *JABA* by stating, "an increased concern with generalization is clearly reflected by an increase in the percentage of articles that included generalization data" (p. 534) and "the trend towards community and other naturalistic settings is clear and robust" (p. 535).

Systems-level intervention. PBS attempts to accomplish its goals through a systems-level perspective. This involves making decisions and using procedures derived from policy, problem solving in the context of a team, active participation of administrators and other stakeholders, and inclusion of various systems in the consumer's environment such as school, community, and family (Sugai et al., 1999).

This "macroanalytic" approach recognizes the consumer as a part of a larger and complex system. Because of this, relationship building is an essential part of a PBS intervention (Carr, 1997).

In 1987, Baer, Wolf, and Risley revisited the seven dimensions of applied behavior analysis they had previously defined to discuss them in relation to then-current issues in the field. The authors maintained that those characteristics were still appropriate and added that the "effectiveness for the future will probably be built primarily on system-wide interventions" (p. 325). The systems application of PBS seems to be an example of such an intervention. Further, systems-level interventions have long been a feature of applied behavior-analytic services delivered in classrooms (Martens & Witt, 1988) and human service settings (Reid & Parsons, 2000).

In evaluating the defining features of PBS as we have understood them from our review of the literature, we have concluded that each of them has been historically important and central to applied behavior analysis to various degrees. Further, each of these characteristic practices is firmly rooted in the applied behavior-analytic literature. Given this technological and theoretical overlap, we believe that PBS might best be described as an approach that emphasizes important features of applied behavior analysis.

The Relation Between Applied Behavior Analysis and PBS

Given the extensive overlap between applied behavior analysis and PBS, it is interesting to note the discrepancies with which the relations between the two have been described in the recent literature. Anderson and Freeman (2000) state, "behavioral analysis is the theoretical and technological foundation of PBS" (p. 92). This view of a compatible relation is certainly congruent with our analysis of the defining characteristics of PBS. However, PBS

has also been conceptualized as an evolutionary descendant of applied behavior analysis by well-regarded behavioral researchers (e.g., Carr, 1997; Carr et al., 2002), and it is our opinion that this might be troublesome for the discipline of applied behavior analysis and possibly for PBS as well.

We have categorized the reported relations between applied behavior analysis and PBS into the following two categories: incompatible and compatible or inclusive. Each of these relations is described below.

Applied behavior analysis and PBS as incompatible approaches. Although the defining features of PBS are clearly rooted in, or are at least well matched with, applied behavior analysis, some authors have conceptualized PBS as an approach that is incompatible with applied behavior analysis, giving it the status of a separate discipline. For example, PBS has been conceptualized as “a new approach to behavioral control” (Sisson, 1992, p. 364), “an emerging conceptual framework” (Bambara, Mitchell-Kvacky, & Iacobelli, 1994, p. 263), “an entity in its own right” (Bambara, 2002, p. 18), and “an evolving applied science” (Carr et al., 2002, p. 4). Further, proponents of PBS have been characterized as “reformed” behaviorists (Bambara, 2002). These statements may be interpreted to imply a separation of PBS from applied behavior analysis.

The arguments in favor of considering PBS as a distinct discipline apart from applied behavior analysis were first presented by Carr (1997) in an article entitled “The Evolution of Applied Behavior Analysis into Positive Behavior Support.” Carr referred to PBS as “a newer branch of applied behavior analysis . . . [that has] now evolved to the point of meriting a new name” (p. 208). He further stated that PBS has “both incorporated and moved beyond the parent discipline [i.e., applied behavior analysis] to assume its own identity” (p. 208). These assertions were based on three issues on which PBS and applied behavior

analysis are, according to Carr, fundamentally different. Applied behavior analysis was characterized as being overly concerned with internal validity (via the use of atypical intervention agents and settings and brief observation sessions) to the detriment of ecological validity. Applied behavior analysis was further characterized as being microanalytic in its (a) acceptance of reductions of problem behavior as a meaningful outcome and (b) focus on the individual instead of the social network (i.e., system). The author contrasted these characteristics of applied behavior analysis with three defining features of PBS: a focus on meaningful outcomes, ecological validity, and systems-level change. More recently, Carr et al. (2002) reiterated these arguments by stating that PBS

has evolved beyond the parent discipline to assume its own identity [that is] strongly influenced by the realities of conducting research and intervention in natural community settings that necessitate changes in assessment methods, intervention strategies, and the definition of what constitutes a successful outcome. (p. 5)

It is our opinion that, although these characterizations of applied behavior analysis may represent some instances of research or practice, the discipline is considerably broader in its science, application, and theoretical development than was portrayed. Based on our analysis of the defining characteristics of PBS, we believe that conceptualizing PBS apart from applied behavior analysis is unsupported by the evidence.

In addition to the above arguments, proponents of PBS support the incompatibility position by claiming that PBS has evolved not only from applied behavior analysis but also from the normalization and person-centered values movements (Carr et al., 2002). Thus, it appears that PBS is committed to the application of behavioral technology that is guided by normalization and person-centered philosophies. However, it can be argued that all scientific and applied endeavors are explicitly or implicitly guided by various philosophies of science. That PBS ex-

PLICITLY endorses the philosophies of normalization and person-centered values does not seem to warrant its classification as a discipline separate from applied behavior analysis.

It is possible that proponents of the incompatibility perspective are responding to perceived failures of applied behavior-analytic practice (or research) to consistently address the technological (e.g., systems-level change, a focus on ecological validity) and philosophical issues they value. However, the ultimate question is whether perceived failures in some instances of a discipline's practice are justification for claims of a new field.

Applied behavior analysis and PBS as compatible or inclusive approaches. In contrast to the incompatibility position, PBS has also been conceptualized as compatible with, and inclusive within, applied behavior analysis. In a recent technical document published by OSEP, Sugai et al. (1999) stated, "Positive Behavioral Support is not a new intervention package, nor a new theory of behavior, but an application of a behaviorally based systems approach" (p. 6). Similarly, Horner (2000) stated, "Positive behavior support is not a new approach. . . . [It is] the application of behavior analysis to the social problems created by such behaviors as self-injury" (p. 97). Horner further stated,

There is no difference in theory or science between positive behavior support and behavior modification. These are the same approach with different names. If any difference exists, it is in the acceptance of much larger outcomes [by PBS] and the need to deliver the global technology that will deliver these outcomes. (p. 99)

These positions are congruent with the definitions of PBS outlined above, and with the comments made by Anderson and Freeman (2000). In other words, there appears to be no fundamental difference between PBS and applied behavior analysis (see also Newman, 2002). Because the majority of PBS characteristics are also key practices of applied behavior analysis, we view PBS as a behavior-analytic service-de-

livery framework (see also Wacker & Berg, 2002). The applied behavior analysis specialty of organizational behavior management (OBM) is a related example. Practitioners of OBM apply the concepts and principles of behavior analysis to issues relevant to certain groups of individuals (e.g., private industry). However, these practitioners typically consider themselves as a part of the field of applied behavior analysis, although their methods are organized in a way to accomplish their specific goals. We view PBS in a similar manner. Proponents of PBS who work for improved clinical and educational outcomes are, in our opinion, applying the concepts and principles of behavior analysis in a way that meets their specific goals. In doing so, they value a technological scope and philosophies of science that may not be shared by all applied behavior analysts, but can still be considered a part of the discipline of applied behavior analysis.

Conclusion

We have attempted two main objectives in this article. First, it was our intention to explicate the definition of PBS presented by Anderson and Freeman (2000). After reviewing the PBS literature, we have determined that the primary defining features provided by its proponents are based on procedures and approaches developed within applied behavior analysis. However, despite this extensive compatibility, there are divergent views on the status of PBS with respect to applied behavior analysis. Some authors (e.g., Horner, 2000) implicitly argue that PBS is an approach within the larger field of applied behavior analysis. However, others (e.g., Carr, 1997) define PBS as a completely new discipline that is historically rooted in applied behavior analysis but has since moved beyond it. Thus, our second objective was to highlight this discrepancy.

Although some authors have conceptualized PBS as an approach that is compatible with applied behavior anal-

ysis (which is supported by the analysis presented in this article), language contained in some recent PBS publications could be interpreted as evidence of a new, separate discipline. For example, *JPBI*'s mission statement states that the journal "deals exclusively with principles of positive behavior support." We find it perplexing that the journal attributes the fundamental principles underlying this approach to PBS. In addition, two meta-analyses of the PBS empirical literature have recently been published (Carr et al., 1999; Marquis et al., 2000). However, the vast majority of studies reviewed in these analyses were published in the applied behavior-analytic literature, and the techniques were originally conceptualized as applied behavior analysis. As further evidence for PBS being considered a distinct field, Dunlap et al. (2000) recently stated that PBS "has been recommended by a growing number of professionals, advocates, policies, and laws" (p. 22). Finally, Turnbull, Wilcox, Stowe, and Turnbull (2001) stated that PBS "is the federal law's preferred strategy for dealing with challenging behaviors" (p. 11), referring to the Individuals with Disabilities Education Act (P.L. 105-17). However, this legislation actually uses the language "positive behavioral interventions," which of course describes much of the contemporary technology within, or at least compatible with, applied behavior analysis.

We hope it is clear from our arguments that PBS can easily be characterized as a service-delivery framework within the broader discipline of applied behavior analysis. However, although some professionals and researchers agree with this characterization, our personal experience is that it constitutes the minority perspective. Recent events, such as the development of a new journal, textbooks, meta-analyses of the PBS literature, a federally supported technical assistance center, as well as the increasing literature base depicted in Figure 1, may indicate a secession of PBS from

applied behavior analysis. Given the historical and practical relations between the approaches, such a schism seems nonparsimonious at best and divisive at worst (see also Holburn & Vietze, 2000).

Proponents of PBS are to be commended for their effective dissemination strategies. It is clear to us that their efforts have resulted in widespread implementation of thoughtful, positive, behavior-analytic interventions. Perhaps the use of the PBS moniker connotes our humane technology and even allows for better communication of our procedures (see Bailey, 1991). Nevertheless, we believe that now is the time to consider the ramifications of separating PBS from applied behavior analysis. Such consideration raises a number of questions. What will be the long-term consequences to PBS if their link to the conceptual foundations of behavior theory is compromised? What will be the impact on the clinical service-delivery areas (e.g., the behavioral treatment of autism) of applied behavior analysis with a potentially more popularized PBS counterpart in the same marketplace? Will graduate training programs in PBS be developed, and if so, what will their impact be on the relatively few behavior analysis training programs? We do not intend to portray PBS as a separatist or revisionist movement. However, there may be unintended consequences to both applied behavior analysis and PBS as a result of some of the aforementioned endeavors. We believe it is time that proponents of both applied behavior analysis and PBS seriously consider the long-term implications of conceptualizing PBS as a new, distinct field.

REFERENCES

- Anderson, C. M., & Freeman, K. A. (2000). Positive behavior support: Expanding the application of applied behavior analysis. *The Behavior Analyst, 23*, 85-94.
- Baer, D. M., Wolf, M. M., & Risley, T. R. (1968). Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis, 1*, 91-97.
- Baer, D. M., Wolf, M. M., & Risley, T. R.

- (1987). Some still-current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, 20, 313–327.
- Bailey, J. S. (1991). Marketing behavior analysis requires different talk. *Journal of Applied Behavior Analysis*, 24, 445–448.
- Bambara, L. M. (2002). Are you a behaviorist or a bonder? Smashing artificial dichotomies and entering into a dialogue of shared knowledge and multiple perspectives. *Journal of Positive Behavior Interventions*, 4, 17–20.
- Bambara, L. M., Mitchell-Kvacky, N. A., & Iacobelli, S. (1994). Positive behavioral support for students with severe disabilities: An emerging multicomponent approach for addressing challenging behaviors. *School Psychology Review*, 23, 263–278.
- Carr, E. G. (1997). The evolution of applied behavior analysis into positive behavior support. *Journal of the Association for Persons with Severe Handicaps*, 22, 208–209.
- Carr, E. G., Dunlap, G., Horner, R. H., Koegel, R. L., Turnbull, A. P., Sailor, W., et al. (2002). Positive behavior support: Evolution of an applied science. *Journal of Positive Behavior Interventions*, 4, 4–16, 20.
- Carr, E. G., Horner, R. H., Turnbull, A. P., Marquis, J. G., Magito-McLaughlin, D., McAttee, M. L., et al. (1999). *Positive behavior support as an approach for dealing with problem behavior in people with developmental disabilities: A research synthesis* (AAMR Monograph). Washington, DC: American Association on Mental Retardation.
- Cooper, J. O., Heron, T. E., & Heward, W. L. (1987). *Applied behavior analysis*. Columbus, OH: Merrill.
- Dunlap, G., Hieneman, M., Knoster, T., Fox, L., Anderson, J., & Albin, R. W. (2000). Essential elements of inservice training in positive behavior support. *Journal of Positive Behavior Interventions*, 2, 22–32.
- Forehand, R. L., & McMahon, R. J. (1981). *Helping the noncompliant child*. New York: Guilford.
- Haring, N. G., & De Vault, G. (1996). Family issues and family support: Discussion. In L. K. Koegel, R. L. Koegel, & G. Dunlap (Eds.), *Positive behavioral support: Including people with difficult behavior in the community* (pp. 116–120). Baltimore: Paul H. Brookes.
- Holburn, S., & Vietze, P. (2000). Person-centered planning and cultural inertia in applied behavior analysis. *Behavior and Social Issues*, 10, 39–70.
- Horner, R. H. (2000). Positive behavior supports. *Focus on Autism and Other Developmental Disabilities*, 15, 97–105.
- Horner, R. H., Dunlap, G., & Koegel, R. L. (1990). Toward a technology of “nonaversive” behavioral support. *Journal of the Association for Persons with Severe Handicaps*, 15, 125–132.
- Iwata, B. A., Kahng, S., Wallace, M. D., & Lindberg, J. S. (2000). The functional analysis model of behavioral assessment. In J. Austin & J. E. Carr (Eds.), *Handbook of applied behavior analysis* (pp. 61–89). Reno, NV: Context Press.
- Iwata, B. A., Smith, R. G., & Michael, J. L. (2000). Current research on the influence of establishing operations on behavior in applied settings. *Journal of Applied Behavior Analysis*, 33, 411–418.
- Jackson, L., & Panyan, M. V. (2001). *Positive behavioral support in the classroom: Principles and practices*. Baltimore: Paul H. Brookes.
- Kincaid, D. (1996). Person-centered planning. In L. K. Koegel, R. L. Koegel, & G. Dunlap (Eds.), *Positive behavioral support: Including people with difficult behavior in the community* (pp. 439–465). Baltimore: Paul H. Brookes.
- Lovaas, O. I. (1981). *Teaching developmentally disabled children: The ME book*. Austin, TX: Pro-Ed.
- Lucyshyn, J. M., Dunlap, G., & Albin, R. W. (Eds.). (2002). *Families and positive behavior support: Addressing problem behaviors in family contexts*. Baltimore: Paul H. Brookes.
- Marquis, J. G., Horner, R. H., Carr, E. G., Turnbull, A. P., Thompson, M., Behrens, G. A., et al. (2000). A meta-analysis of positive behavior support. In R. M. Monroe & E. P. Schiller (Eds.), *Contemporary special education research: Syntheses of the knowledge base on critical instruction issues* (pp. 137–178). Mahwah, NJ: Erlbaum.
- Martens, B. K., & Witt, J. C. (1988). Expanding the scope of behavioral consultation: A systems approach to classroom behavior change. *Professional School Psychology*, 3, 271–281.
- Newman, B. (2002). [Review of *Positive Behavioral Support in the Classroom: Principles and Practices*]. *Behavioral Interventions*, 17, 51–54.
- Northup, J., Vollmer, T. R., & Serrett, K. (1993). Publication trends in 25 years of the *Journal of Applied Behavior Analysis*. *Journal of Applied Behavior Analysis*, 26, 527–537.
- Pelios, L., Morren, J., Tesch, D., & Axelrod, S. (1999). The impact of functional analysis methodology on treatment choice for self-injurious and aggressive behavior. *Journal of Applied Behavior Analysis*, 32, 185–195.
- Reid, D. H., & Parsons, M. B. (2000). Organizational behavior management in human service settings. In J. Austin & J. E. Carr (Eds.), *Handbook of applied behavior analysis* (pp. 275–294). Reno, NV: Context Press.
- Sisson, L. A. (1992). Positive behavioral support: New foci in the management of challenging behaviors. *Journal of Visual Impairment & Blindness*, 86, 364–369.
- Skinner, B. F. (1977). Why I am not a cognitive psychologist. *Behaviorism*, 5, 1–10.
- Sugai, G., Horner, R. H., Dunlap, G., Hieneman, M., Lewis, T. J., Nelson, C. M., et al. (1999). *Applying positive behavioral support and functional behavioral assessment in schools*. (Technical Assistance Guide 1 Version 1.4.3). Eugene, OR: OSEP Technical Assistance Cen-

- ter on Positive Behavioral Interventions & Supports.
- Turnbull, H. R., III, Wilcox, B. L., Stowe, M., & Turnbull, A. P. (2001). IDEA Requirements for use of PBS: Guidelines for responsible agencies. *Journal of Positive Behavior Interventions*, 3, 11–18.
- Van Houten, R., Axelrod, S., Bailey, J. S., Favell, J. E., Foxx, R. M., Iwata, B. A., et al. (1988). The right to effective behavioral treatment. *The Behavior Analyst*, 11, 111–114.
- Wacker, D. P., & Berg, W. K. (2002). PBS as a service delivery system. *Journal of Positive Behavior Interventions*, 4, 25–28.
- Wolf, M. M. (1978). Social validity: The case for subjective measurement or how applied behavior analysis is finding its heart. *Journal of Applied Behavior Analysis*, 11, 203–214.