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Personal Paradigm Shifts Among ABA and PBS Experts

Comparisons in Treatment Acceptability

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Applied behavior analysis (ABA) experts were surveyed to examine their perceptions of treatment acceptability of commonly used decelerative consequence-based behavioral procedures and the factors that have influenced shifts in these perceptions over time. These results were then compared with the perceptions of positive behavior supports (PBS) experts from an earlier study. Both similarities and disparities in perceptions across groups of experts are reported. Differences were noted in the overall acceptability and frequency of use of various consequence-based decelerative procedures, with ABA experts expressing greater willingness to consider their use than PBS experts. However, there were many similarities across both groups, including the decade in which shifts occurred in perceptions of treatment acceptability, the reasons these changes occurred, and the rationales used to justify the use or nonuse of certain consequence-based strategies. These data support earlier work that found that perceptions of treatment acceptability were not static but, rather, changed across time.

Keywords: *challenging behavior(s); professional practice/standards and ethics; positive behavior support(s); applied behavior analysis; treatment acceptability*

Ongoing dialogue continues among professionals with regard to the relationship between applied behavior analysis (ABA) and positive behavior supports (PBS) (Dunlap, Carr, Horner, Zarcone, & Schwartz, 2006; Johnston, Foxx, Jacobson, Green, & Mulick, 2006). Although it is commonly accepted that the origins of PBS are clearly grounded in ABA (e.g., Horner et al., 1990; Johnston et al., 2006), the commonalities and differences between the two approaches and between practitioners and researchers who align themselves with either approach are less clear. Two frequently cited and debated areas of perceived differences are adherence and commitment to the scientific approach (e.g., Mulick & Butter, 2005) and perceptions concerning treatment acceptability (e.g., Michaels, Brown, & Mirabella, 2005).

Although the PBS literature credits ABA as the foundation on which PBS is based and acknowledges the technical contributions of ABA and the reliance on good science (Dunlap et al., 2006; Horner, Albin, Sprague, & Todd, 2006; Scotti & Kennedy, 2000), the commitment of PBS to the scientific method has been questioned (Johnston et al., 2006; Mulick & Butter, 2005). For example, Johnston et al.

(2006) suggest that what some authors refer to as the body of PBS literature has numerous methodological flaws (e.g., interventions that are more descriptive than experimental; reliance on subjective personal impressions and indirect measures of behavior; ambiguity with regard to independent variables or in the measurement of key variables). These authors suggest that, in general, PBS leaders promote a model that “appears to be relatively nontechnical in nature” (p. 56). Dunlap et al. (2006), however, point to hundreds of journal articles, manuals, and textbooks that disseminate methodologically and technically sound PBS research and perspectives. It is clear that reliance on a research base is perceived as critical to the validity of both approaches by professionals irrespective of the approach with which they are aligned.

Debate has also centered on treatment acceptability issues. Hastings and Noone (2005), for example, identify “least restrictive treatment procedures” as an ethical principle guiding the work of behavior analysts. Yet, since the 1980s, and closely related to the emergence of PBS, there

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has been controversy concerning the use of aversive, consequence-based behavioral supports for individuals with disabilities (Berkman & Meyer, 1988; Evans & Meyer, 1985; Guess, Helmstetter, Turnbull, & Knowlton, 1987; Horner et al., 1990; Johnston et al., 2006; LaVigna & Donnellan, 1986; Singer, Gert, & Koegel, 1999). Some organizations have taken positions against the use of intrusive or aversive procedures (e.g., *AAMR Position Statement on Aversive Procedures*, 2005; *ARC Position Statement on Behavioral Support*, 2004; *National Down Syndrome Society*, n.d.; *TASH Resolution on Positive Behavior Supports*, 2000), whereas others have maintained that there are certain conditions under which the use of aversive strategies may be appropriate (e.g., Mudford, 1995). The Right to Effective Treatment (Van Houten et al., 1988) states that “in some cases, a client’s right to effective treatment may dictate the immediate use of quicker-acting, but temporarily more restrictive procedures” (p. 383). Those who ascribe to this point of view argue that when rapid reduction in a severe behavior problem is needed, it is ethical to use restrictive procedures (Hastings & Noone, 2005).

Kahng, Iwata, and Lewin (2002) found that although the use of reinforcement-based interventions for self-injury has increased during the past decade, the use of punishment-based interventions has decreased only slightly. In general, it would be assumed that the use of aversive strategies (i.e., those that cause pain or discomfort to an individual) would have low treatment acceptability in the PBS community—as evidenced, for example, by the lack of published research employing aversive strategies in the *Journal of Positive Behavior Interventions*. Michaels et al. (2005), however, report that there were differences in perceptions of treatment acceptability among professionals identified as PBS experts when asked about the appropriateness of aversive, consequence-based strategies for individuals with severe problem behaviors (i.e., individuals who engage in extremely dangerous behaviors likely to cause physical harm to self or others). They found that experts in PBS do not consistently agree on what types of interventions are considered acceptable. According to Michaels et al., some PBS experts, under certain conditions, report that they would consider using the full range of consequence-based decelerative procedures—including sensory punishment, physical punishment, and contingent electric shock. Although it is important to note that responses were limited to what respondents would consider using, not necessarily what they actually did use, it remains clear that the issue of treatment acceptability as a distinguishing variable between the two groups must be questioned.

Treatment acceptability research has focused largely on those variables that contribute to an individual’s determination that a particular treatment is acceptable or unacceptable. Smith and Linscheid (1994) suggested that treatment acceptability is inversely related to a treatment’s perceived aversiveness and restrictiveness, but acceptability increases when those decelerative or restrictive procedures are proposed for more severe or frequent behavior problems (see Michaels et al., 2005, for a more comprehensive review of treatment acceptability). Michaels et al. examined perceptions of treatment acceptability across time and found that perceptions are not static and fixed but, rather, changed across time. For example, almost one quarter of the surveyed PBS experts used sensory and physical punishment strategies in the 1970s, but by the 1990s, less than 3% of the surveyed experts indicated that they were still using these types of behavioral strategies. Furthermore, these experts suggested that there was a variety of reasons for changing their perceptions of treatment acceptability over time, including ethical reasons (e.g., “these procedures obviously were quite distressing to the individuals to whom they were applied, as well as to those who applied them”), because they were ineffective (e.g., these strategies were “ineffective for long-term change,” “too often these procedures led to problematic or dangerous physical interactions”), and there were more positive alternatives available (e.g., “alternative techniques provide quicker and more permanent changes in behavior with less risk to the individual and others”) (p. 105).

There have been recent appeals by both ABA and PBS leaders to synergize efforts between ABA and PBS. For instance, the creation of the PBS Special Interest Group within the Association for Behavior Analysis (see <http://www.abainternational.org/sub/membersvcs/sig/contactinfo/index.asp>), the keynote address delivered at the 2005 conference of the Association for Positive Behavior Supports (Favell, 2005), and recent journal articles (e.g., Dunlap et al., 2006) discuss the tensions between the two approaches. Dunlap et al. (2006) express concern “that the misunderstandings of PBS have engendered confusion and the potential for unnecessary, counterproductive polarization within the field” (p. 4).

Perhaps, some of these misunderstandings and perceptions of the disparity between the two approaches are merely perceptions and not true differences between the two approaches. To date, this issue has not received direct, formal exploration. This study is an initial attempt to gather empirical data on the perceptions of treatment acceptability of ABA experts and to compare those perceptions with experts in PBS. Building on our earlier

research with PBS experts (Michaels et al., 2005), this study investigates the perceptions of treatment acceptability among ABA experts and those factors that have contributed to changes in their ideology, or personal paradigm shifts. These perceptions of treatment acceptability and the factors that have contributed to changes in beliefs are then compared with the findings from our earlier study with PBS experts.

Three research questions guided this descriptive study:

1. What are the current practices and perceptions of decelerative consequence-based behavioral intervention strategies among ABA experts?
2. How have the practices and perceptions of ABA experts in relation to decelerative consequence-based behavioral interventions (i.e., treatment acceptability) shifted across time?
3. How do the perceptions of ABA leaders of decelerative consequence-based behavioral intervention strategies compare with those of PBS experts?

Method

Respondents

A nonrandom criterion sampling strategy was employed to select respondents who met our predetermined criteria of experts within the field of applied behavior analysis. The use of a criterion sampling approach, which has also been referred to as dimensional sampling (Johnson, 1990), was chosen for quality assurance purposes to select well-informed or highly knowledgeable informants (i.e., "people who are more knowledgeable, reliable, and accurate in reporting events that are usual, frequent, or patterned"; Miles & Huberman, 1994, p. 29). *Expert within the field of applied behavior analysis* was operationally defined based on two primary attributes: (a) leadership within the field of ABA (i.e., presentations at international conferences) and (b) scholarship within the field of ABA (i.e., publication record).

The total sample ($N = 198$) was drawn from three sources. First, individuals were selected who had published articles related to developmental disabilities in the *Journal of Applied Behavior Analysis (JABA)* during a 4-year period (2000–2003) and for whom addresses could be located through Internet search procedures ($n = 65$). Next, individuals who had published articles related to developmental disabilities in other journals frequently referenced in *JABA* during a 1-year period (2003) based on a journal name frequency count were selected ($n = 30$). Finally, a random subgroup

(approximately 33%) of lead authors/presenters from sessions that addressed the behavioral needs of individuals with developmental disabilities given at the Association of Applied Behavior Analysis Conferences during a 3-year period (2001–2003) were selected using SuperCool Random Number Generator (version 1.04, SuperCool, 2004), a computer generating random number sampling program ($n = 103$).

A similar nonrandom criterion sampling strategy was employed to identify the experts within the field of positive behavior supports in our previous study (Michaels et al., 2005). The total sample for this earlier study ($N = 134$) was drawn from four sources: (a) selected state contacts to the Rehabilitation Research and Training Center on Positive Behavior Supports ($n = 27$), (b) members of the editorial board of the *Journal of Positive Behavior Interventions* ($n = 59$), (c) members of TASH's subcommittee on positive behavior supports ($n = 21$), and (d) members of the editorial board of *Research and Practice for Persons With Severe Disabilities* who identified themselves as having expertise in PBS ($n = 27$).

Instrumentation

The Survey on Treatment Acceptability developed for our earlier research with PBS experts was modified slightly for the data collection purposes associated with this research. Information about the development and the technical merits of this instrument is reported in Michaels et al. (2005). After minor modifications (e.g., changing the term *PBS* to *ABA*) were made to the survey instrument for use in this study, two additional individuals, psychologists with expertise in ABA, reviewed the revised survey focusing on application of the survey instrument and the survey items to applied behavior analysts. Feedback from these reviewers was incorporated into the revised survey instrument. The revised instrument, along with the description of the research, was then forwarded to the researchers' Institutional Review Board and approval was granted.

In addition to gathering demographic information about survey respondents, the Survey on Treatment Acceptability asks respondents to reflect on their perceptions of treatment acceptability for each of nine categories of decelerative consequence-based behavioral strategies relative to their use with individuals who engage in dangerous behaviors, defined in the survey as "those behaviors likely to cause physical harm to self or others."

1. Differential reinforcement procedures (with extinction or redirection of disruptive behavior),
2. Differential reinforcement procedures (with mild reprimand or response cost for disruptive behavior),
3. Extinction (i.e., withholding reinforcement for a previously reinforced behavior),
4. Response cost (i.e., withdrawal of a reinforcer or reinforcing event contingent on the behavior's occurrence),
5. Overcorrection (i.e., forced engagement in behavior that more than corrects the effects of the inappropriate behavior),
6. Seclusion timeout (i.e., removing the individual from the setting to an area of total social isolation),
7. Application of sensory punishment (e.g., ammonia vapor, foul-tasting substances, loud or harsh sounds),
8. Application of physical punishment (e.g., spanking, pinches, restraint as punishment), and
9. Contingent electric shock (i.e., application of electrical stimulation for engagement in targeted behavior).

For each strategy, respondents checked either choice A, "I would not use this procedure now," or choice B, "I would use this procedure under certain circumstances or conditions." For each behavioral strategy, depending on whether respondents initially selected A or B, they then answered a series of forced-choice and open-ended follow-up probes. Respondents who selected A were directed to check all the reasons, from a list of nine choices with an additional option of "other," as to why they would not use the procedure now and then rank order the top three reasons. The nine reasons included the following: (a) ineffective in producing long-term behavior change, (b) literature or research provides alternative ideas, (c) influence of a mentor, (d) personal experiences with people with disabilities, (e) ethical reasons, (f) administrative or regulatory restrictions, (g) family or advocate preferences, (h) influences of an organization or group, and (i) knowledge or skills learned in conferences or presentations. These respondents were then asked if they had ever used the procedure during the course of their careers. If they used the procedure at some point during the course of their careers, they were requested to indicate all the decades during which they had used the procedure; describe the reasons they stopped; and provide any additional thoughts, comments, or information they might want to share with regard to the behavioral strategy. For two behavioral strategies, sensory punishment and physical punishment, respondents were requested to list the forms of these punishments that they had previously used.

Respondents who initially selected B (i.e., "I would use this procedure under certain circumstances or conditions") were asked to check all of the reasons from a list

of nine choices with an option of "other" as to why they would use the procedure and rank order their top three reasons. The nine reasons were the same as those listed for A, with the exception of the first reason—in this array, that item read "effective in producing behavior change" rather than "ineffective in producing long-term behavior change." Respondents who initially chose B then selected from a list of four circumstances the reasons they might use the procedure. Circumstances included the following: (a) frequency or intensity of behavior interferes with learning, (b) other procedures were ineffective, (c) person or others are at risk for harm, and (d) behavior is socially stigmatizing, preventing inclusion. Respondents were asked to share any additional thoughts, comments, or information concerning the use of the selected behavioral strategy.

Procedure

Similar to the procedure followed in our initial study of PBS experts, a survey packet was sent out to each ABA expert who met the sampling criteria ($N = 198$). The survey packet included a personalized cover letter, the survey, a description of the research, and a postage-paid return addressed envelope. The cover letter described the purpose of the study and assured potential respondents that all responses would be confidential and that data would be analyzed and reported in aggregate form only. The letter also requested that any potential respondent read the enclosed description of the research thoroughly before completing the survey. All return envelopes were coded to track returns; however, once returns were recorded, completed surveys were immediately separated from the envelopes and put anonymously into a file box for data entry.

Approximately 2 to 3 weeks after the return date specified in the cover letter, a second mailing was sent out to those who had not yet responded. This second mailing included a reminder letter, a second copy of the survey, another copy of the description of the research, and a second postage-paid envelope. Again, return envelopes were coded to track returns. Finally, about a month after the second mailing, a third letter was sent out to prompt nonresponders. This third letter urged nonrespondents to consider completing the survey and offered an option for completing an electronic version of the survey, which could be returned as an e-mail attachment.

Data Analysis

Quantitative analyses began by entering all returned surveys into an SPSS version 11.5 database (SPSS, Inc., 2001). Percentages were computed for all respondents

based on their initial response to each of the nine behavioral intervention strategies (i.e., whether respondents would or would not use the strategy). Additional item percentages were subsequently calculated for the remaining items within each behavioral strategy based on the N of the initial responses to that strategy. So, for example, all subsequent percentages calculated on responses to follow-up probes related to “I would not use this procedure now” were calculated on 100% equaling whatever subset of respondents initially checked “I would not use this procedure now” for that behavioral strategy. Nonparametric comparison procedures (cross-tabulations and Pearson chi-square tests) were computed to compare the perceived treatment acceptability of the nine behavioral strategy responses for this sample of ABA experts with those of the PBS experts from our earlier sample. Alpha level was set conservatively at $p < .01$ for these nonparametric comparisons to minimize the potential for any spurious significance (i.e., Type I error).

Qualitative data were sorted and categorized following Tesch's (1990) three-step process for qualitative analysis of text. We began by developing a coding system (i.e., an organization system) so that we could break down larger response statements into the smallest semantically meaningful units or chunks of information. A response might contain multiple discrete, although linguistically connected, ideas, which were first cut up into chunks or decontextualized into semantically meaningful segments. As part of the second phase, we explored potential similarities, differences, and connections among these decontextualized chunks. This phase concluded with the re-sorting of the discrete semantically meaningful chunks into themes or descriptive categories. Finally, themes that occurred with some regularity across respondents and sorters were named to capture the gestalt of that theme and subsume all the individual decontextualized chunks or responses within that theme.

Results

Respondents

Respondents to this study were solely ABA experts. For illustrative purposes and in support of between-group comparisons, however, demographic data about the PBS respondents from our earlier research are also reported.

ABA experts. Twenty-nine surveys were returned (a) for invalid addresses (e.g., “no longer at this university”), (b) for incomplete addresses (“cannot be delivered, not enough information”), or (c) because a potential respondent

excused himself or herself from completing the survey (e.g., “I do not consider myself an expert in this area”). This reduced the original sample of 198 potential respondents to 169 valid cases. In all, 57 completed surveys were returned from the ABA experts, representing an overall response rate of approximately 34% (33.77%).

PBS experts. The sample from our early research with PBS experts was made up of 134 potential respondents. Twenty-six of these experts were removed from the sample for invalid addresses, for medical reasons, or because they felt they should not be considered a PBS expert, leaving a final pool of 108 potential respondents. In all, 73 completed surveys were returned from this group of PBS experts, representing an overall response rate of approximately 68% (67.59%).

Complete demographic data for ABA and PBS survey respondents are presented in Table 1. Both groups appear to be similar in terms of most demographic variables. Respondents were fairly equally split on gender, with a slightly larger percentage of women responding in the ABA group (53.6%) than in the PBS group (42.5%). The majority of respondents identified themselves as White (86%, ABA experts; 94%, PBS experts), as not having disabilities (no disability = 95% for both groups), and as being highly educated, with a slightly higher percentage of doctoral-level respondents in the PBS group (89%) than in the ABA group (71%).

The experts differed in terms of field of study, with 66% of the ABA experts holding doctorates in psychology and 2% holding doctorates in special education, whereas approximately half of the PBS experts received their doctorates in special education (48%) and a quarter of the PBS respondents received their doctorates in psychology (24%). Independent sample t tests indicate that the two groups of experts also differed ($p < .01$) on age (t -value = 5.91), years in the current position (t -value = 4.80), and years in the field (t -value = 7.18). These results indicate that, on average, the PBS experts were significantly older than the ABA experts and that the PBS experts had been in their current positions and the field longer than the ABA experts.

Current Practices and Perceptions Among ABA Experts

The first research question focused on capturing data to build an understanding of current practices and perceptions of ABA experts with regard to treatment acceptability of decelerative consequence-based behavioral strategies. Table 2 presents perceptions of treatment

Table 1
Demographic Information About Applied Behavior Analysis (ABA) and Positive Behavior Supports (PBS) Survey Respondents

Demographic Variable	Variable Category	ABA Survey Respondents (N = 57)	PBS Survey Respondents (N = 73) ^a
Gender	male	46.4%	57.5%
	female	53.6%	42.5%
Ethnicity	White	85.7%	94.4%
	African American	1.8%	1.4%
	Asian	3.6%	1.4%
	Latino	5.4%	—
	Other	3.6%	2.8%
Age (in years)	<i>M</i>	41.16	50.38
	<i>SD</i>	10.11	7.49
Disability	yes	5.4%	5.4%
	no	94.6%	94.6%
Level of education	undergraduate	1.8%	2.8%
	master's	26.8%	8.3%
	doctorate	71.4%	88.9%
Field of study	master's—special ed	3.6%	2.8%
	doctorate—special ed	1.8%	47.9%
	master's—psychology	17.9%	1.4%
	doctorate—psychology	66.1%	23.9%
	master's—other	3.6%	2.8%
	doctorate—other	7.2%	5.6%
Areas of expertise	mild disabilities	59.3%	38.4%
	severe disabilities	83.3%	89.0%
	profound/multiple disabilities	59.3%	72.6%
	autism	92.5%	75.3%
	emotional disabilities	27.8%	38.4%
	young children	75.9%	54.8%
	children	90.7%	76.7%
Years in the field	adolescents	66.7%	71.2%
	adults	55.6%	54.8%
	<i>M</i>	17.09	26.70
Years in current position	<i>SD</i>	9.16	5.90
	<i>M</i>	6.91	13.58
	<i>SD</i>	5.81	8.91

a. PBS experts as reported in our earlier research: Michaels, Brown, and Mirabella (2005).

acceptability for each of the nine behavioral strategies at this point in time for the group of ABA experts. As shown in Table 2, there was a wide range in perceptions of treatment acceptability across the nine strategies. Differential reinforcement (DR) with extinction or redirection, DR with mild reprimand, extinction, and response cost were perceived to be the most acceptable to the ABA respondents (> 90% of ABA experts would use these procedures). Within-group differences in the perceived acceptability of treatment begin to emerge with seclusion timeout (72.5%) and overcorrection

Table 2
Perceptions of Treatment Acceptability Among Applied Behavior Analysis (ABA) Experts of Decelerative Consequence-Based Behavioral Strategies (in percentages)

Behavioral Strategy	Would Use the Procedure
Differential reinforcement procedures (with extinction or redirection of disruptive behavior)	100
Differential reinforcement procedures (with mild reprimand or response cost for disruptive behavior)	94.4
Extinction	90.7
Response cost	90.6
Overcorrection	62.3
Seclusion timeout	72.5
Application of sensory punishment	34.6
Application of physical punishment	43.1
Contingent electric shock	26.9

(62.3%), although these were also perceived to be acceptable treatment procedures by the majority of ABA experts. Approximately one third or more of the ABA respondents indicated that they would use sensory punishment (34.6%) and physical punishment (43.1%), whereas more than one quarter of the respondents would consider using contingent electric shock under certain circumstances or conditions (26.9%).

Table 3 presents the reasons that the ABA experts selected as to why they would or would not use each of the decelerative consequence-based behavioral strategies. Means, percentages, and standard deviations have been computed for each reason why and why not across the nine behavioral procedures. The three most frequently selected reasons as to why ABA experts would use the behavioral strategies were as follows: (a) effective in producing behavior change ($M = 95.18\%$, $SD = 4.28\%$), (b) literature or research supports this approach ($M = 87.89\%$, $SD = 7.99\%$), and (c) past success using the techniques ($M = 71.60\%$, $SD = 23.05\%$). The three most frequently selected reasons for why ABA experts would not use the decelerative consequence-based behavioral strategies were as follows: (a) ethical reasons ($M = 69.04\%$, $SD = 34.91\%$), (b) literature or research provides alternative ideas ($M = 63.39$, $SD = 27.11\%$), and (c) personal experiences with people with disabilities ($M = 45.67\%$, $SD = 20.97\%$).

ABA experts who indicated that they would consider using specific decelerative consequence-based behavioral procedures were asked to indicate the conditions or circumstances under which they might use these procedures

Table 3
Reasons Applied Behavior Analysis (ABA) Experts Would and Would Not Use Decelerative Consequence-Based Behavioral Intervention Strategies

Reason for Using Strategies ^a	M (SD)	Reason for Not Using Strategies ^b	M (SD)
Effective in producing behavior change	95.18% (4.28%)	Ineffective in producing long-term behavior change	38.74% (19.48%)
Literature or research supports this approach	87.89% (7.99%)	Literature or research provides alternative ideas	63.39% (27.11%)
Influence of a mentor	32.43% (8.60%)	Influence of a mentor	31.34% (18.93%)
Past success using this technique	71.60% (23.05%)	Personal experiences with people with disabilities	45.67% (20.97%)
Ethical reasons	45.81% (14.91%)	Ethical reasons	69.04% (34.91%)
Administrative or regulatory pressure	9.53% (7.37%)	Administrative or regulatory restrictions	26.63% (21.79%)
Family or advocate preferences	25.44% (9.98%)	Family or advocate preferences	27.80% (11.87%)
Influences of an organization or group	9.24% (4.99%)	Influences of an organization or group	16.81% (10.95%)
Knowledge or skills learned in conferences or presentations	21.67% (7.63%)	Knowledge or skills learned in conferences or presentations	19.29% (12.60%)

a. Reasons selected as to why ABA experts would use the behavioral strategies collapsed across the nine decelerative consequence-based intervention strategies.

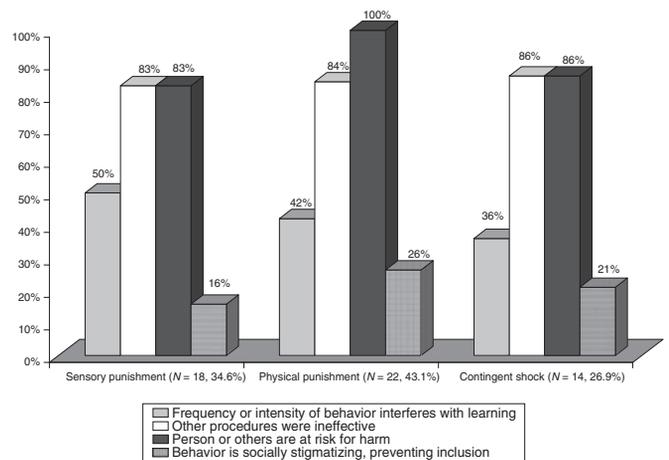
b. Reasons selected as to why ABA experts would not use the behavioral strategies collapsed across the nine decelerative consequence-based intervention strategies.

and were given four choices: (a) frequency or intensity of behavior interferes with learning, (b) other procedures were ineffective, (c) person or others are at risk for harm, and (d) behavior is socially stigmatizing, preventing inclusion. We were particularly interested in gathering data about the last three decelerative consequence-based behavioral procedures (i.e., sensory punishment, physical punishment, and contingent electric shock). Figure 1 graphically depicts the circumstances under which ABA experts might consider using sensory punishment, physical punishment, and contingent electric shock. Reviewing Figure 1, it can be seen that ABA experts are most likely to consider the use of sensory punishment (83%), physical punishment (100%), and contingent electric shock (86%) if the person or others were deemed to be at risk for harm or if other procedures were ineffective (sensory punishment, 83%; physical punishment, 84%; and contingent electric shock, 86%). These data also indicate that ABA experts are least likely to consider the use of sensory punishment (16%), physical punishment (26%), and contingent electric shock (21%) if the behavior is socially stigmatizing, preventing inclusion.

Shifts in Perceptions of Treatment Acceptability Across Time Among ABA Experts

The second research question focused on trying to understand the personal paradigm shifts among ABA experts, that is, how perceptions of treatment acceptability may have changed over the span of their careers. From those ABA experts who stated that they would not now use a given consequence-based behavioral procedure, but did so in the past, we gathered data on the decades during

Figure 1
Circumstances Under Which Applied Behavior Analysis (ABA) Experts Might Consider the Use of Sensory and Physical Punishment and Contingent Electric Shock as Acceptable Treatments



which they used the procedures and the reasons that they initially stopped using the procedures (i.e., what variables may have prompted a personal paradigm shift).

Table 4 presents percentage means for the decades during which ABA experts who indicated that they no longer use a decelerative consequence-based behavioral strategy reported that they might have used that strategy (across the span of their careers). Across four of the more intrusive behavioral strategies (i.e., overcorrection, sensory punishment, physical punishment, and contingent

Table 4
Decades During Which Applied Behavior Analysis (ABA) Experts No Longer
Using the Behavioral Strategies Might Have Used Them (in percentages)

Behavioral Strategy	Decades During Which Procedure Was Still Used				
	1960s	1970s	1980s	1990s	2000s
Strategy 1—differential reinforcement with extinction or redirection	8.3	16.7	41.7	83.3	83.3
Strategy 2—differential reinforcement with mild reprimand or response cost	14.3	28.6	42.9	71.4	71.4
Strategy 3—extinction	27.3	27.3	45.5	72.7	63.6
Strategy 4—response cost	12.5	25.0	62.5	62.5	62.5
Strategy 5—overcorrection	95.2	30.0	60.0	35.0	10.0
Strategy 6—seclusion timeout	7.7	23.1	53.8	53.8	30.8
Strategy 7—application of sensory punishment	10.0	40.0	50.0	30.0	0
Strategy 8—application of physical punishment	18.2	27.3	54.5	27.3	18.2
Strategy 9—contingent electric shock	25.0	50.0	25.0	0	25.0

electric shock), for those experts who once used these decelerative consequence-based strategies and now no longer use them, the largest drop-off in usage (i.e., shift in the perceived treatment acceptability) seemed to occur between the 1980s and 1990s. That is, whereas 60% of respondents indicated that they were using overcorrection in the 1980s, only 35% indicated that they were still using overcorrection in the 1990s, and then only 10% in the 2000s. Similarly, the use of sensory punishment, physical punishment, and contingent electric shock also declined from 50%, 55%, and 25%, respectively, in the 1980s to 30%, 27%, and 0% in the 1990s. The use of seclusion timeout seemed to remain steady across this time period. It should be noted that in the current decade (i.e., the 2000s), the potential use, and thus inferred acceptability, of contingent electric shock among ABA experts was back up to the 1980 level of 25%. Also of interest, during the same time period, the use of DR with extinction or redirection (42% usage in 1980s), DR with mild reprimand or response cost (43% usage in 1980s), and extinction (46% usage in 1980s) all increased in the 1990s (83%, 71%, and 73%, respectively) and maintained at about that level in the 2000s.

ABA experts who would no longer use a decelerative consequence-based behavioral strategy were asked to respond to an open-ended question about the reasons that contributed to their personal paradigm shift (i.e., why they initially stopped using the strategy). After reviewing the responses within each of the nine decelerative consequence-based behavioral strategies, the researchers agreed that it would be substantively more meaningful to collapse responses to this question across the nine behavioral strategies rather than analyzing these responses within each of the nine procedures, especially in light of the degree to which there was response redundancy across strategies.

To facilitate our intended comparison of the responses of the ABA experts with data from the earlier survey of PBS experts, we chose to categorize the responses into the three categories that emerged in the initial study (see Michaels et al., 2005). The three categories of reasons that PBS experts initially stopped using the procedures were as follows: (a) more positive alternatives were available (e.g., newer strategies were discovered or learned that are more responsive to the needs of the individual and the functions of problem behavior), (b) ethical reasons (e.g., the decelerative consequence-based behavioral procedures were perceived to be distressing to both the individual and to those applying them), and (c) ineffective (e.g., the problem behavior often returned following the procedure or the procedures led to an increase in the behavior of concern).

The three-category structure from our earlier study with PBS experts (i.e., more positive alternatives available, ethical reasons, and ineffective) worked well and we were able to reliably collapse all open-ended responses of our ABA experts into those categories (i.e., > 98% interrater reliability across researchers). Table 5 presents the percentages of reasons that ABA experts initially stopped using the decelerative consequence-based behavioral strategies (item $N = 126$) and examples of responses within each category. The largest category of reasons for stopping was ethical reasons (42.86%), followed by more positive alternatives (36.51%), and then that the strategies were seen as ineffective (20.63%).

Comparison of the Perceptions of ABA and PBS Experts

The final research question focused on comparing the perceptions of ABA experts with those of the PBS experts from our early study with regard to current practices and

Table 5
Reasons That Applied Behavior Analysis (ABA) Experts Initially Stopped Using Decelerative Consequence-Based Behavioral Procedures (N = 126)

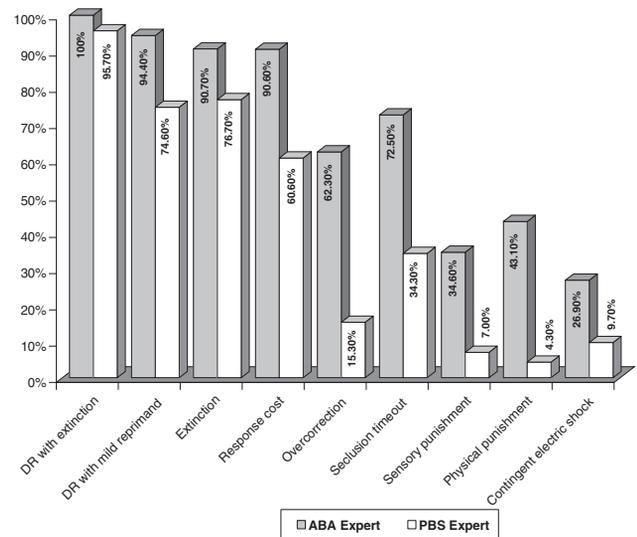
Category (% of Responses)	Exemplars
Ethical reasons (42.86%)	staff may misuse extinction to justify ignoring clients they dislike it is harder to teach staff when to draw the line can lead to clients and staff being injured it is very punitive and can lead to aggressive behavior (by the student and teacher) prolonged exposure to aversive stimulus, not practical, increases coercive interactions with staff
More positive alternatives (36.51%)	better understanding of the effective use of antecedent strategies found that other procedures were more effective and less aversive more use of function-based positive treatment approaches durable results of effective instruction of replacement skills that do not require a high response effort the literature provides us with alternatives
Ineffective (20.63%)	ineffective because after all reinforcers are withdrawn, there are no options left does not include a skill-teaching component did not teach appropriate alternative behavior difficulty in generalizing treatment effects ineffective over time

perceptions of treatment acceptability. Figure 2 graphically displays the differences in perceived treatment acceptability based on both ABA and PBS experts' willingness to consider use of the various behavioral strategies under certain circumstances or conditions. Upon visual inspection of Figure 2, it appears that the overall trends for perceived treatment acceptability are similar for both groups across the nine strategies. However, for all of the nine behavioral intervention strategies, ABA experts expressed a greater willingness to use the strategies than did the PBS experts.

Table 6 presents the results of nonparametric statistical comparisons (Pearson chi-square) that were conducted for each consequence-based behavioral procedure by expertise area (i.e., ABA experts versus PBS experts) with regard to treatment acceptability. The alpha level for statistical significance was conservatively set at $p < .01$ for these comparisons. As indicated in Table 6, the chi-square comparisons for six of the nine behavioral procedures were found to be statistically significant: DR procedures with mild reprimand or response cost (chi-square value = 8.60); response cost (chi-square value = 13.99); overcorrection (chi-square value = 29.55); seclusion timeout (chi-square value = 17.28); sensory punishment (chi-square value = 15.01); and physical punishment (chi-square value = 26.75). For each of these statistically significant comparisons, ABA experts were more likely to perceive the given behavioral strategy as acceptable (i.e., potentially use that strategy) than were the PBS experts.

Although the two groups of experts differed in the frequency with which they would employ the majority of

Figure 2
Comparison of Perceived Treatment Acceptability of Nine Decelerative Consequence-Based Behavioral Strategies Based on Applied Behavior Analysis (ABA) and Positive Behavior Supports (PBS) Experts' Indication That They Would Use the Procedure Under Certain Circumstances or Conditions



Note: DR = differential reinforcement.

the nine behavioral strategies, the rationales for using and not using the behavioral strategies were similar across ABA and PBS experts. Table 7 expands data presented earlier in Table 3 for ABA experts as to why they

Table 6
Chi-Square Comparisons of Treatment Acceptability Between Applied Behavior Analysis (ABA) and Positive Behavior Supports (PBS) Experts

Consequence-Based Behavioral Procedure	Perception of Procedure	ABA Experts	PBS Experts	Total N ^a	Pearson χ^2 Value
Differential reinforcement with extinction or redirection	would use	100%	95.7%	120	2.407
	would not use	0%	4.3%	3	
Differential reinforcement with mild reprimand or response cost	would use	94.4%	74.6%	104	8.600*
	would not use	5.6%	25.4%	21	
Extinction	would use	90.7%	76.7%	105	4.265
	would not use	9.3%	23.3%	22	
Response cost	would use	90.6%	60.6%	91	13.987*
	would not use	9.4%	39.4%	33	
Overcorrection	would use	62.3%	15.3%	44	29.548*
	would not use	37.7%	84.6%	81	
Seclusion timeout	would use	72.5%	34.3%	61	17.280*
	would not use	27.5%	65.7%	60	
Application of sensory punishment	would use	34.6%	7.0%	23	15.011*
	would not use	65.4%	93.0%	100	
Application of physical punishment	would use	43.1%	4.3%	25	26.752*
	would not use	56.9%	95.7%	95	
Contingent electric shock	would use	26.9%	9.7%	20	5.814
	would not use	73.1%	90.3%	94	

a. Total *N* for “would use” and “would not use” within each behavioral strategy based on the combined totals from both studies (i.e., ABA experts and PBS experts).

* $p < .01$.

would or would not consider using the decelerative consequence-based behavioral strategies by including similar data from our earlier study with PBS experts. Statistical comparisons between ABA and PBS experts' responses as shown in Table 7 were not deemed to be appropriate as means and standard deviations were computed across the nine decelerative consequence-based behavioral strategies primarily for descriptive purposes. However, Figures 3a and 3b visually compare the three most frequently selected reasons as to why ABA and PBS experts would and would not use the nine strategies.

Figure 3a shows the three most frequently selected reasons (across behavioral strategies) as to why ABA and PBS experts would use the behavioral strategies. Both groups of experts most frequently selected (a) effective in producing behavior change (ABA experts, $M = 95.2%$, $SD = 4.3%$; PBS experts, $M = 89.3%$, $SD = 10.0%$); (b) literature or research supports this approach (ABA experts, $M = 87.89%$, $SD = 7.99%$; PBS experts, $M = 77.8%$, $SD = 8.4%$); and (c) past success using the techniques (ABA experts, $M = 71.60%$, $SD = 23.05%$; PBS experts, $M = 62.5%$, $SD = 31.2%$). Figure 3b presents the three most frequently selected reasons as to why the two groups of experts would not use the various behavioral strategies. As illustrated in Figure 3b, the ordering of these top three reasons was somewhat different for the two groups

of experts. *Ethical reasons* was selected most frequently (i.e., the number one reason that the procedures would not be used) by the ABA experts ($M = 69.04%$, $SD = 34.91%$) and third most frequently by the PBS experts ($M = 71.5%$, $SD = 28.8%$). The ABA experts selected *literature or research provides alternative ideas* as their second most frequently selected reason ($M = 63.39$, $SD = 27.11%$), whereas the PBS experts selected this as their first reason ($M = 76.7%$, $SD = 5.8%$). Finally, the ABA experts selected *ineffective in producing long-term behavioral change* ($M = 38.74%$, $SD = 19.48%$) as their third most frequently selected reason as to why they would not use the various consequence-based behavioral strategies, whereas this was selected as the second reason for not using the procedures by the PBS experts ($M = 72.3%$, $SD = 7.1%$). However, regardless of rank order of reasons, PBS experts had higher percentages on each reason.

Figures 4a and 4b graphically depict the trends across time for the decades during which ABA and PBS respondents who indicated they no longer use the strategies used them. The first three behavioral strategies, DR with extinction or redirection, DR with mild reprimand or response cost, and extinction, were not included in Figures 4a and 4b as both groups of experts rated the treatment acceptability of these three behavioral strategies at greater than 60%. Figure 4a compares the mean

Table 7
Reasons That Applied Behavior Analysis (ABA) and Positive Behavior Supports (PBS) Experts Would and Would Not Use Decelerative Consequence-Based Behavioral Intervention Strategies

Reason for Using Strategies ^a	ABA <i>M (SD)</i>	PBS <i>M (SD)</i>	Reason for Not Using Strategies ^b	ABA <i>M (SD)</i>	PBS <i>M (SD)</i>
Effective in producing behavior change	95.2% (4.3%)	89.3% (10.0%)	Ineffective in producing long-term behavior change	38.7% (19.5%)	72.3% (7.1%)
Literature or research supports this approach	87.9% (8.0%)	77.8% (8.4%)	Literature or research provides alternative ideas	63.4% (27.1%)	76.7% (5.8%)
Influence of a mentor	32.4% (8.6%)	11.4% (9.7%)	Influence of a mentor	31.3% (18.9%)	18.9% (8.8%)
Past success using this technique	71.6% (23.1%)	62.5% (31.2%)	Personal experiences with people with disabilities	45.7% (21.0%)	51.6% (9.3%)
Ethical reasons	45.8% (14.9%)	38.8% (9.0%)	Ethical reasons	69.0% (34.9%)	71.5% (28.8%)
Administrative or regulatory pressure	9.5% (7.4%)	4.3% (4.7%)	Administrative or regulatory restrictions	26.6% (21.8%)	22.5% (12.7%)
Family or advocate preferences	25.4% (10.0%)	27.2% (8.7%)	Family or advocate preferences	27.8% (11.9%)	25.2% (6.4%)
Influences of an organization or group	9.2% (5.0%)	4.7% (4.3%)	Influences of an organization or group	16.8% (11.0%)	26.1% (11.6%)
Knowledge or skills learned in conferences or presentations	21.7% (7.6%)	10.2% (10.6%)	Knowledge or skills learned in conferences or presentations	19.3% (12.6%)	24.8% (11.4%)

a. Reasons selected as to why ABA and PBS experts would use the behavioral strategies collapsed across the nine decelerative consequence-based intervention strategies.
 b. Reasons selected as to why ABA and PBS experts would not use the behavioral strategies collapsed across the nine decelerative consequence-based intervention strategies.

Figure 3a
Comparison of the Top Three Reasons why Applied Behavior Analysis (ABA) and Positive Behavior Supports (PBS) Experts Would Use the Nine Decelerative Consequence-Based Behavioral Strategies

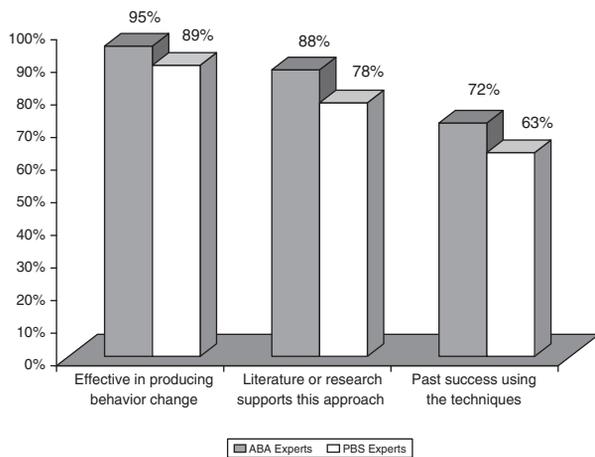


Figure 3b
Comparison of the Top Three Reasons why Applied Behavior Analysis (ABA) and Positive Behavior Supports (PBS) Experts Would Not Use the Nine Decelerative Consequence-Based Behavioral Strategies

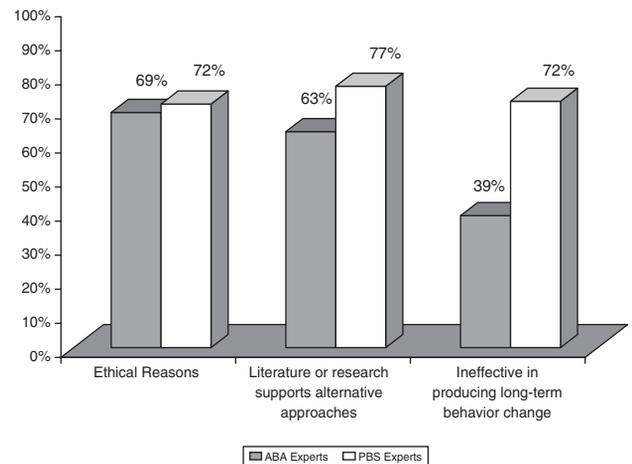


Figure 4a
Decades During Which Applied Behavior Analysis (ABA) and Positive Behavior Supports (PBS) Experts No Longer Using the Behavioral Strategies Used Response Cost (strategy 4), Overcorrection (strategy 5), and Seclusion Timeout (strategy 6)

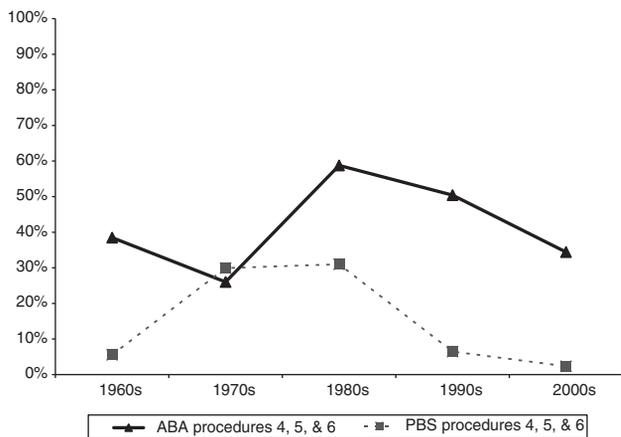
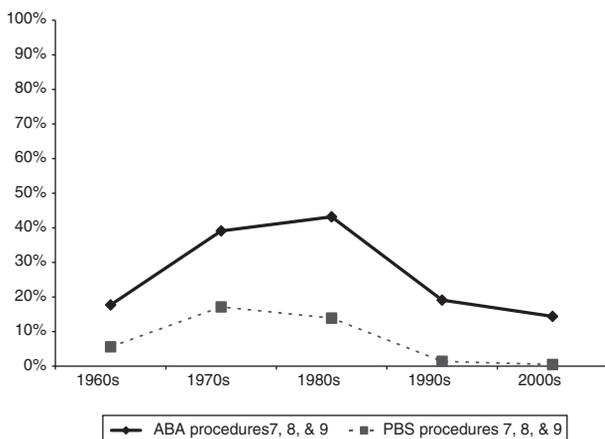


Figure 4b
Decades During Which Applied Behavior Analysis (ABA) and Positive Behavior Supports (PBS) Experts No Longer Using the Behavioral Strategies Used Sensory Punishment (Strategy 7), Physical Punishment (Strategy 8), and Contingent Electric Shock (Strategy 9)



usage trends by decades for the ABA and PBS experts across behavioral procedures 4 (response cost), 5 (overcorrection), and 6 (seclusion timeout). Figure 4b compares the mean usage trends across behavioral procedures 7 (sensory punishment), 8 (physical punishment), and 9 (contingent electric shock). Similar trends

are noted for those ABA and PBS experts who once used these decelerative consequence-based strategies and now no longer use them. Although the trends were somewhat similar, in general, ABA experts would use each consequence-based behavioral procedure more frequently than the PBS experts from our earlier study.

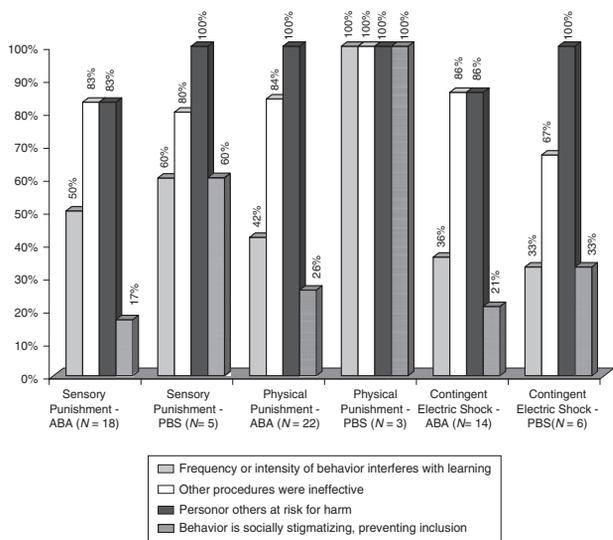
As part of this research on treatment acceptability, we were most interested in the perceptions of both groups of experts on the use of sensory punishment, physical punishment, and contingent electric shock. Figure 5 presents the circumstances under which the ABA and PBS experts who said they might consider using these three behavioral strategies would use them. There were similarities in the rationales used by experts of both groups for all three consequence-based strategies. Overall, the most commonly selected rationales for both groups of experts were *the person or others were at risk for harm* and *other procedures were ineffective*. For ABA experts, the rationale *person or others at risk for harm* was deemed more important (100%) than *other procedures were ineffective* (84%) when considering physical punishment strategies, whereas the PBS experts rated all four choices as rationales for potentially using physical punishment (100% each). For contingent electric shock, the PBS experts gave more weight to the rationale *person or others at risk for harm* (100%) than *other procedures were ineffective* (67%), whereas the ABA experts rated both of these rationales equally (86% each).

Both groups were also similar in their views of what was less significant in considering the use of these three decelerative procedures. Both groups listed frequency or intensity of behavior and the degree to which behavior was socially stigmatizing or interfered with learning or inclusion as their least likely justification for use of these procedures.

Discussion

This study explored perceptions of ABA experts with regard to the treatment acceptability of a variety of decelerative consequence-based strategies. Data from this research with ABA experts were compared with data from our earlier study (Michaels et al., 2005) that reported perceptions of PBS experts on the same variables. Our earlier study attempted to understand PBS experts' use of consequence-based strategies today, how their perceptions of treatment acceptability changed across time, and the variables that contributed to these changes in perceived acceptability (i.e., personal paradigm shifts). In our earlier study, we found that the full range of consequence-based strategies was considered

Figure 5
Comparison of the Circumstances Under Which Applied Behavior Analysis (ABA) and Positive Behavior Supports (PBS) Respondents Might Use Sensory Punishment, Physical Punishment, and Contingent Electric Shock



acceptable by at least some of the respondents. Our data also suggested that treatment acceptability was not static but, rather, changed across time, and among the PBS experts, most changes in perceptions occurred between the 1980s and 1990s. Variables that contributed to these changes were focused on the following: (a) ethical reasons, (b) aversive procedures were perceived as ineffective, and (c) the availability of more positive alternatives. The purpose of this study was to look at these factors as they relate to changes in perceptions of treatment acceptability among ABA experts across the span of their careers and to then compare these changes in perceptions (i.e., paradigm shifts) with those of the PBS experts from our earlier research. Overall, the data suggest that there are many similarities across the two groups of experts, including the decade in which shifts occurred in perceptions of treatment acceptability, the reasons that these changes occurred, and the rationales used to justify the use or nonuse of certain consequence-based strategies.

Many differences were noted between the two groups, including the overall acceptability of the various decelerative procedures, with ABA experts expressing greater willingness to use these strategies than PBS experts. Although both groups of experts had a decelerating trend as the intrusiveness of the strategy increased, ABA experts were more accepting of each of the consequence procedures. However, the differences between the two

groups with regard to treatment acceptability are greater as the intrusiveness of the procedure increases. It is interesting to reflect on what variables may contribute to these differences. Perhaps this trend is, in part, an artifact of the differences in professional training and orientation of the two groups of experts. Treatment acceptability literature does suggest that these factors may play a role in perceptions. Keyes, Creekmore, Karst, Crow, and Dayan (1988) found that psychologists were less likely to support the *AAMR Position Statement on Aversive Therapy* (1987), which called for the immediate elimination of aversive procedures. Sprent and Walsh (1994) found that members of the psychology division of AAMR tended to be more accepting of behavioral treatments than were members of other divisions of the organization. Miltenberger, Lennox, and Erfanian (1989), however, found no difference in treatment acceptability ratings between institutional and community-based staff. Our data reveal that the overwhelming majority of the ABA experts (66%) held doctorates in psychology and few in special education (1.8%), and the PBS experts who held doctorates, although more evenly distributed, were more likely to have received their degree in special education (47.9%) than in psychology (23.9%). An analysis of the programs preparing doctoral-level professionals in psychology and special education might be revealing, especially in the areas of clinical contact with individuals with disabilities (e.g., observations versus extended engagement to promote relationships), clinical settings (e.g., community versus institutions), and focus on ethical dispositions. Michaels et al. (2005) recommend that professional training programs be responsible not only for imparting the skills that are needed to work with individuals with severe problem behaviors (e.g., functional behavioral assessment) but also for the importance of self-reflection on ideological and ethical issues.

Another consideration with regard to the demographics of the two groups of experts is the mean age. On average, the ABA experts were about 9 years younger than the PBS experts. This age difference, at least for some of the population, may imply different professional experiences, both in the clinical settings where experiences occurred and in their initial training in behavioral technology. Respondents who were older were likely to have had their first exposure to individuals with severe behavior problems in institutional settings. Many of these older respondents saw firsthand how persons with severe behavior problems lived and were treated within those settings. Punishment procedures represented the most rapid behavior reduction procedures available at that time (i.e., 1960s–1970s). Behavior modification (e.g., punishment for inappropriate behavior and primary reinforcement for

appropriate behavior), often in combination with heavy doses of psychotropic medication, was the standard practice in many of these environments. Often, there was little oversight and little presence of human rights and behavior management committees (Evans, Scotti, & Hawkins, 1999). Since the early 1980s, behavioral technology has advanced and emerged with a focus on using our technology to achieve valued outcomes for individuals. Perhaps, veterans of these early days of behavior modification may be loath to repeat the past, that is, relying on decelerative consequence-based interventions, especially punishment, to reduce problem behavior. The effect of these early experiences on professional commitment, advocacy and continued growth in the field, and the likely absence of these experiences in our younger professionals remains to be seen (Michaels et al., 2005).

The results of this study indicate that ABA experts' perceptions of treatment acceptability have changed over time, just as those of the PBS experts from our earlier study (Michaels et al., 2005). Similar to the previous study, the biggest period of shift for the ABA experts was between the 1980s and the 1990s. Perhaps, this period of time marks significant social change; perhaps, gains in the field via national training and dissemination reached a critical mass of impact. For whatever reasons, ABA experts, like the PBS experts, reported decreased use of overcorrection, sensory and physical punishment, and contingent electric shock. It is noteworthy that use of seclusion timeout did not change between the 1980s and the 1990s for the ABA experts; however, it did drop in use in the 2000s. The overall decrease observed for overcorrection and both sensory and physical punishment held over time. However, this was not true with the use of contingent electric shock among ABA experts; its use increased in the 2000s to the rate reported in the 1980s (25%). Also noteworthy is that as some of these procedures decreased in use, DR procedures (both with extinction and with response cost) increased, as did the use of extinction. It is inferred from this finding that ABA experts continue to value the use of DR and extinction procedures. This was, in part, similarly noted for the PBS experts from our earlier study relative to the use of DR procedures.

Overall, both groups of experts display decreasing acceptance of the more intrusive consequence-based strategies across their careers, while also indicating an overall higher level of acceptance of ABA experts with regard to these strategies. This trend may illustrate overall shifts in the field or it may illustrate a point of demarcation between the groups. One could argue that because both groups come from the same early roots, they may both have been influenced by similar variables concerning

why they stopped using procedures they once used (i.e., ethical reasons, strategies perceived as ineffective, and alternatives available) and why they currently would consider using each of the strategies (i.e., effective in producing behavior change and literature or research supports the approach). Furthermore, study is needed to examine these trends relative to the field, overall, and each group's evolution over time.

Ethics influence both groups of experts in deciding whether or not to use the various consequence-based procedures. Of the three primary reasons cited as to why not to use these procedures (ethics, perceived ineffectiveness, and literature/research-based alternatives), ABA experts cited ethics as their most compelling influence, whereas the PBS experts ranked literature/research-based alternatives as their most compelling rationale, with ethics third in their ranking of the three rationales. It is noteworthy that the absolute value of the third ranking for PBS experts is higher than the overall percentage ranking of the ABA experts. Some might consider this an unexpected finding. Stereotypes in the field assign one approach as being more committed to the "science" of behavioral strategies and less focused on issues such as quality of life or ethics, and vice versa for the other approach. Perhaps these perceptions were true at one time, or perhaps they were never true. Or, it may be that ABA experts, in response to stereotyping, are more publicly acknowledging the importance of person-centered themes, whereas PBS experts are more publicly acknowledging the importance of data-based, empirical decision making. Perhaps, the data in this study can be interpreted as evidence that each group of experts, in acknowledgment of dialogue in the field and in response to (mis)perceptions, has either shifted practices or has shifted how practices are articulated in the literature and research. Regardless, both groups seem to articulate the importance of both ethical practice and empirical research.

As noted, experts from both groups who indicated that they would consider using physical and sensory punishment and contingent electric shock would do so if the person was perceived to be at risk for harm and if previous treatments were seen as ineffective. Whereas this finding is consistent with past research that demonstrated that acceptability increases when procedures are used for more severe or extreme situations (e.g., Smith & Linscheid, 1994), it is most noteworthy that this perception seems to be shared by both groups of experts.

An issue that repeatedly arises in the dialogue concerning the relationship between ABA and PBS is the question of scientific rigor. Our data suggest that both ABA and PBS, at least according to the experts' perceptions, rely on evidence-based procedures found in the

professional literature. But perhaps both approaches need to refocus some of their questions and concerns. Scientific rigor is an essential element in academia. The nuances of scientific rigor, however, may be of less concern to a clinician (regardless of philosophical orientation) attempting to address the needs of an individual with severe behavior problems in an applied setting. That is, the concern for scientific rigor may be secondary to the clinical imperative to address the problem behavior. This would then underscore the need for both groups of experts to promote strategies that are not only effective and evidence based but also contextually appropriate and powerful for clinicians to use in “nonacademically supported” environments. Perhaps, scientific proof is considered essential as the intrusiveness of the recommended procedures increases. Conversely, are we less apt to question the science behind a procedure when the procedure is less intrusive or controversial?

There are several limitations of this study that prevent confident conclusions from our data and point to the need for additional research. The demographic information we collected on our two groups of experts does not include the past or current settings within which the two groups of experts practice, so conclusions about the influence of this variable on treatment acceptability are impossible. Furthermore, although the respondents of this study are considered experts in their field, their perception may or may not reflect those of full-time clinicians who are directly supporting individuals with severe behavior problems. Academic debate of our experts with regard to questions of treatment acceptability and scientific rigor may be irrelevant to the needs of clinicians; their questions and concerns may indeed be very different. Finally, the 34% response rate of the ABA experts must also temper our conclusions. Reasons for the low return rate are unclear but may relate to reluctance on the part of some potential responders to engage in dialogue about this controversial issue. If this is, in fact, the case, then these data may not reflect the full range of ABA experts. It is also important to note that respondents in both surveys were asked whether they *would consider* using each of the decelerative consequence-based strategies, and not if they actually *are* using the strategy. Our data therefore provide, in a way, a theoretical judgment of acceptability. These data thus should be cautiously interpreted, as our experts’ attitudes may or may not reflect their actions.

This study is done at a time when there is great debate in the behavioral community. Questions concerning the relationship between ABA and PBS and the commonalities and differences between the two remain prominent in the field. Two areas that have been debated in the literature include commitment to the scientific process and treatment

acceptability. This study suggests that there are both differences and similarities between the two groups. The difference in treatment acceptability of the most intrusive consequence-based strategies is significant and remains a source of tension. As various states and monitoring agencies struggle to design regulations with regard to the use of aversive strategies, these tensions may become even more prominent. However, our data also suggest that experts in both groups are committed to strategies that are supported by research, and experts in both groups generally have similar reasons for using or not using particular strategies to address severe problem behaviors. Furthermore, the motivation to deliver effective interventions and a deep sense of ethics are obviously shared across both groups of experts. With the articulation of these similarities, we hope that this study contributes to the rapprochement of ABA and PBS; this could only strengthen each and, ultimately, strengthen our collective ability to support individuals with severe behavior problems to achieve lives of quality, dignity, and meaning.

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