The Expanding Vision of Positive Behavior Support:

Research Perspectives on Happiness, Helpfulness, Hopefulness

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Abstract: Positive behavior support (PBS) represents an empirically driven concern with quality of life (QOL), support through systems change, and linkage to multiple behavioral, social, and biomedical sciences. The major impediments to QOL are problem behavior, skill deficits, and dysfunctional systems. A model for addressing dysfunctional systems is presented, and its relationship to issues of behavior maintenance and sustainability of intervention efforts is described. The expansion of PBS to new populations and venues will likely be facilitated by linking this field to other disciplines, including organizational management, community/ecological psychology, cultural psychology, biomedical science, and positive psychology. Such linkage will enhance the development of PBS conceptually, methodologically, and empirically, culminating in a more effective and unique applied science.

In the history of every civilization, ideas have proven to be more durable than data (Randall, 1926). A case in point is the Bible. The Bible has no graphs, yet the ideas it contains have for centuries had a profound impact on civilization. On a less theological note, consider that B. F. Skinner's two most famous works, *Science and Human Behavior* (1953) and *Verbal Behavior* (1957), include numerous speculative chapters that do not contain a single graph, data point, or reference to published research. Yet, the ideas expressed have endured and have given meaning to the flood of data that followed their publication. It may be true that without great ideas, there are no great data (Butterfield, 1968), because ideas are what make data meaningful.

Positive behavior support (PBS) is a great and worthy idea predicated on the notion that creating a life of quality and purpose, embedded in and made possible by a supportive environment, should be the focus of our efforts as professionals. Our chief concern is not with problem behavior, and certainly not with problem people, but rather with problem contexts. To illustrate how many of us would trade our lives for the life of an adult assigned involuntarily to a group home or for the life of a child with disabilities who is attending a segregated school away from neighborhood friends? Our job is to redesign the counterproductive and unfair environmental contexts that so many people, with and without disabilities, have to contend with every day of their lives. Our job is to give people the skills, the coping strategies, and the desire to deal with the frustration that is an inevitable part of life, particularly the lives of people with disabilities. We must give them and their loved ones the support they need to challenge and reconstruct systems that serve bureaucratic needs rather than human needs. All of these goals reflect the great ideas that are at the heart of PBS, ideas so great that they are worthy of scientific study.

To meet these goals, we have, in a few short years, produced an impressive record of achievement. We have established a journal, the *Journal of Positive Behavior Interventions* (JPBI), to promote evidence-based practices, and founded an organization, the Association for Positive Behavior Support (APBS), to encourage collegial exchange of ideas and information. An annual international conference, overseen by APBS, has been organized to promote networking and discussion of the latest scientific findings. A Web site (www.apbs.org) exists to enhance communication and accessibility of information. There are links to cognate organizations, for example, the Special Interest Group in Positive Behavior Support, which is now part of the Association for Behavior Analysis. Our thinking has affected government priorities as seen in the funding of var-

ious PBS initiatives on schoolwide positive behavior support, early intervention, home-school collaboration, and many other projects. Perhaps most important, the PBS approach has been codified within the law, specifically, the Individuals with Disabilities Education Act (IDEA) that mandates PBS for all children with disabilities.

It is also true that there are many things that we have not done or have not yet done well enough. Specifically, we need to develop a conceptual framework, grounded in relevant theory and data from multiple sciences, to guide our efforts in a systematic, prescriptive fashion. We need to build an infrastructure to ensure the future viability of the PBS approach by focusing on preservice issues (e.g., university-based courses in PBS), inservice development (e.g., cadres of knowledgeable professionals who can function effectively in the community), and organizational change. This change would involve the redistribution of resources to those settings compatible with PBS approaches; after all, PBS is not, by definition, relevant to the sort of problem contexts represented by segregated schools and residences that minimize opportunities for community integration. We need to disseminate the PBS approach to new venues and to new populations by developing relevant strategies. Finally, we need to articulate and promulgate a set of standards that accurately and concretely defines the nature of PBS to ensure procedural integrity and quality control.

Our accomplishments and our unfinished business lead us to a vision of the future of PBS that is encapsulated by three themes: happiness, helpfulness, and hopefulness. These themes reflect the three major points of this article. First, the central dependent variable in PBS is quality of life (QOL) or, arguably, happiness and personal satisfaction. Second, the central independent variable in PBS is systems change, an area in which we have been helpful. Third, to fully develop our contributions to QOL and systems change, we need to incorporate the knowledge base of other sciences and disciplines into the field of PBS; a process of integration that offers much hope.

Happiness

CENTRALITY OF QOL

The dependent variable that best exemplifies the field of PBS is QOL, specifically, QOL for people with challenging behaviors and problems adapting. This dependent variable focuses our attention on the question, "What can go right in a person's life?" and not on, "What are the forms of psychopathology that ruin a person's life?" In lay terms, we are seeking to identify the contexts likely to promote happiness and personal satisfaction, sometimes collectively referred to as *subjective well-being*. The research literature connecting QOL to issues of personal happiness and satisfaction is voluminous and derives from many sources, including the social and behavioral sciences, education and disabilities studies, and biomedical science (L. K. Koegel, Koegel, & Dunlap, 1996; Lopez & Snyder, 2003; Lucyshyn, Dunlap, & Albin, 2002; Rappaport & Seidman, 2000; Schalock, 1990; Wehmeyer & Patton, 2000). We need to organize, analyze, and utilize the concepts and strategies represented in this broad research base to maximize its relevance to the populations we serve. This job is both daunting and doable.

RELEVANT DIMENSIONS OF QOL

Several key dimensions that define QOL can be gleaned from the research literature just cited. These dimensions help to operationalize the ultimate goals that the field of PBS is striving to achieve, namely, meaningful gains in the areas of material well-being, health and safety, social well-being, emotional well-being, leisure and recreation, and autonomy. These six dimensions provide a framework for guiding our assessment and intervention efforts and act as benchmarks for judging the degree to which the outcomes we produce can be viewed as successful.

The six dimensions of QOL must be individualized to address the needs and values of each focus person being supported. The process involved is complex and has led to some confusion in the field. Specifically, there is a danger that in selecting priorities, we may impose our own values on the people whom we serve (Baer, 1998). To avoid this pitfall, we need to acknowledge, forcefully, that PBS does not purport to have a list of correct versus incorrect values upon which decisions are made. To say that PBS is values based is simply to acknowledge that we need to consider that people with behavior challenges and their families do have values, and if we do not recognize these values in selecting goals, we will develop strategies that will be ignored and will ultimately fail. To reiterate a point that my colleagues and I have made elsewhere, values must not replace empiricism, but they need to influence the focus and direction of our efforts to produce a meaningful empiricism (Carr, 1996; Carr, Dunlap, Horner, Koegel, Turnbull, Sailor, et al., 2002).

Fortunately, the field of PBS has a useful tool for setting goals relevant to enhancing QOL, namely, person-centered planning (Kincaid, 1996; Mount, 1994). The person-centered planning process involves bringing together the focus person, his or her loved ones, members of the community, and professionals to compare and debate values, goals, and frustrations and to create opportunities to establish short- and long-term goals relevant to happiness and personal satisfaction. At first, it may appear that this process is unnecessary. When considering the six dimensions of QOL, it is obvious that a person who is poor, in ill health, socially unskilled, lacking close relationships, having few interests, and having little autonomy will be unhappy. Therefore, is it not equally obvious that all we need to do is to reverse each of these problems and happiness

will abound? Unfortunately, achieving a good QOL is more complex than this. The literature has suggested that whether a particular context or set of circumstances contributes positively to a person's QOL depends both on the objective properties and subjective evaluation of that context, as well as on how highly the focus person rates the importance of that context in terms of his or her own priorities (Felce & Perry, 1996; Schalock & Felce, 2004). In this sense, only the focus person is able to say what makes him or her happy. On the other hand, what makes the focus person happy may well make those around him or her unhappy. Therefore, the real purpose of person-centered planning is to produce a creative tension among interested parties that balances the needs of the individual with the needs of the broader system in which the individual participates. That way, goals can be set that are responsible, realistic, and relevant to achieving personal satisfaction.

IMPEDIMENTS TO QOL

The effective setting of goals relevant to QOL also involves identifying and addressing impediments to achieving these goals. There are three classes of impediments: problem behavior, skill deficits, and dysfunctional systems.

Consider problem behavior. The traditional focus on psychopathology is particularly relevant to dealing with issues pertaining to problem behavior. PBS neither rejects nor ignores the important literature on psychopathology that demonstrates numerous strategies for ameliorating problem behavior (Carr, Horner, Turnbull, Marquis, McLaughlin, McAtee, et al., 1999). Rather, it seeks to contextualize this literature in a way that promotes QOL. Consider the impact of problem behavior as described in the research literature (Koegel et al., 1996). It is clear that problem behavior can reduce opportunities for social, emotional, and material well-being, as well as having a negative impact on health, safety, leisure, and autonomy. For example, problem behavior can prevent employment, thereby contributing to poverty and a decrease in material well-being. It can result in personal injury, both chronic and acute, thereby negatively impacting health and safety. It can produce isolation and rejection, thereby decreasing social and emotional well-being, and it can lead to institutionalization, largely eliminating autonomy. Problem behavior, in short, destroys QOL. Therefore, from a PBS perspective, the focus of intervention cannot simply be on reducing the occurrence of problem behavior. Instead, intervention must focus on enhancing relevant skills and creating systems that help support personal satisfaction and happiness.

Consider skill deficits. The remediation of skill deficits is essential for addressing this second class of variables noted as an impediment to QOL. Again, there is substantial literature, at least 40 years in the making, describing behavioral and educational strategies relevant to remediating skill deficits (Lovaas, 2003). It is important to emphasize again, however, that the remediation of skill deficits needs to take place in those contexts where problem behavior most impacts QOL. For example, within a family situation, one may have a child whose aggressive behavior and limited skills make mealtime, bedtime, playtime, shopping time, and vacation time unbearable and undoable, resulting in a constricted and unhappy lifestyle for everyone involved. Our task is to focus on these high-priority contexts by giving the child the skills that he or she needs to function effectively in those contexts and by giving the family members the skills they need to support the child's prosocial behavior. In addition, a child may have a medical condition that produces ongoing pain and discomfort, manifested as aggression, irritability, and noncompliance (Carr & Owen-DeSchryver, in press). By teaching the child communication skills that elicit support, nurturance, and medical intervention, we may be able to positively impact health as well as reduce family stress. As problem behavior decreases following skill acquisition, family QOL improves, and our job is almost done. I say "almost" because we have not yet developed a large, systematic database integrating concepts and strategies from the general literature on QOL to alter problem behavior in those high-priority contexts most closely associated with happiness and personal satisfaction. Of course, JPBI and other journals contain many evidence-based demonstrations of the value of PBS in the community. What is missing at this point in time is a set of algorithms that allows us to proceed, systematically, from the person-centered planning process to the process of successfully resolving problem behavior and skill deficits in those real-world contexts that best promote QOL and correlated happiness. The algorithms are missing because of the third impediment alluded to earlier, namely, dysfunctional systems. The best strategies for problem behavior reduction and skill enhancement will fail if they are embedded in systems that are antagonistic to our goals, poorly organized, or lacking well-trained personnel. The task of PBS will not be complete until we have effectively addressed systemic issues, and this is an area where we have begun to help.

Helpfulness

SUPPORT VERSUS CAUSE AND CURE

To fully appreciate the importance of systemic issues in our field, we must first explore the concept of support and its alternatives. In PBS, *support* is a term that refers to the use of educational procedures to enhance personal competencies (skill development) and systems-change procedures to create environments in which those competencies can be used to promote a good quality of life (Carr et al., 2002). Consider autism, a problem that countless PBS re-

searchers and practitioners have addressed for many years. By teaching new skills to children with autism and redesigning their school and home environments, we are often able to generate a higher QOL for them and their families (L. K. Koegel, Koegel, & Dunlap, 1996; R. L. Koegel & Koegel, 2006; Lucyshyn, Dunlap, & Albin, 2002; Turnbull & Turnbull, 2001). Yet, a focus on support is not the only model in our society that is available for addressing the serious issues associated with autism and a host of other disorders in which advocates for PBS have a stake. There is another model, and it involves the concept of cause and cure. Even in the field of PBS, one can find programmatic lines of research (e.g., R. L. Koegel & Koegel, 2006) that focus on the issue of cure as well as QOL. However, an emphasis on the logic of cause and cure is most commonly found within the biomedical field, where basic science plays a dominant role.

Many agencies of the federal government, private foundations, and the powerful pharmaceutical industry have as their top priority the funding of basic science projects related to genetics, neurochemistry, neuroanatomy, animal models, and radiological studies such as functional magnetic resonance imaging (fMRI). The laudable purpose of such research is to find causes for disorders, thereby raising the possibility of cure through medication or prevention by mitigating or eliminating risk factors. Cause-and-cure research needs to be funded so that many people and their families now suffering as a consequence of a variety of disorders can have a brighter future. There is considerable question as to how soon that brighter future will occur. Consider, again, a condition such as autism and compare it with a disease, such as cancer. For decades the brightest scientists in the world, with research funding in the tens of billions of dollars, have labored to make progress against cancer. They have achieved a number of successes, but unfortunately, for certain types of cancers, we are far from understanding the causes and far from being able to provide cures. This fact raises an interesting question: Is autism, a condition known to be a polygenic brain disorder, any simpler than cancer? Is it likely that the cause and cure for autism will soon be found, even though there are far fewer scientists studying it and with much less funding than for cancer research? What is true for autism is equally true for many other challenging populations with whom we work. Too many people in our society equate support with "second best" and prefer to invest their hopes and resources in the search for causes and cures. They expect scientists to be omnipotent although neither basic nor applied scientists are. Omnipotence, real or imagined, is only relevant to God, most teenagers, and people suffering from certain psychiatric disorders. As for the rest of us, with age and experience we realize that we often have to think in terms of acceptance. Support makes it possible to accept and live with problems that we cannot completely resolve. We may not be able to cure every condition or to prevent every disorder, but we can offer support that improves lives even if we are unable to perfect lives. Support makes human frailty bearable. Even in medical circles, it is understood that although cures do not exist for most cancers, diabetes, arthritis, or a host of other problems, quality of life can nonetheless be raised to a higher, often acceptable, level through carefully planned support. The special mission of PBS, our major contribution to the field, involves the detailed analysis and development of support mechanisms that improve QOL, engendering personal satisfaction and happiness for legions of people and their families who need help now and cannot wait for a cure. How have we gone about building effective support strategies? Laboratory research has been a key first step that has heightened our awareness of the necessity for examining systems change.

LABORATORY RESEARCH AS A PRELUDE TO EFFECTIVE SUPPORT

The independent variable that best exemplifies the field of PBS is systems change. Systems change makes support possible, facilitating meaningful and lasting gains in QOL. As I noted before, we already have many procedures available for dealing with problem behavior and skill deficits, two of the major impediments to improved QOL. Why do we also need to consider systems change? The answer is that the ecological validity of many procedures, when used without consideration of impeding systemic factors, is often in doubt and, therefore, the procedures' contribution to effective support is also in doubt. The reason for this predicament is that many of the procedures we use have been developed within the context of laboratory research and simulated or analog settings. Sometimes laboratory research is the art of making weak variables appear as if they are strong. Consider a young boy whose occasional aggressive behavior in the classroom is maintained by attention. To demonstrate the efficacy of a new intervention procedure, one might develop a classroom simulation (analog) in which a highly trained and highly motivated researcher delivers attention noncontingently every 2 minutes, thereby undermining the necessity for the child to display aggressive behavior to receive attention. Furthermore, the sessions are kept short (20 minute duration) to prevent the "simulated" teacher from tiring of the procedure and to prevent the child from satiating on the attention. To prevent distracting stimuli from interfering with the demonstration, other children are not permitted in the analog situation and noise levels are minimized. Also, to eliminate additional confounding variables that may be functioning as setting events that alter responding, sessions are not conducted if the child is excessively fatigued,

ill, on medication, or has recently been teased. Under these conditions, the boy's aggression plummets to near-zero levels, and the procedure is pronounced a success. Later, when a real teacher tries the same procedure in a classroom of 25 noisy children, over a 6-hr school day, with multiple uncontrolled setting events, no change is seen in aggressive behavior, and the teacher writes off the procedure as a failure and a strategy never to be tried again.

Does this all-too-often repeated scenario mean that laboratory research and analogs have no place in our field? As someone who has published analog research, I would answer "no." Laboratory research is often an essential first step, a prelude to establishing the efficacy of interventions. After all, if we cannot identify a procedure that works under "ideal" conditions, what good is it to ask whether it would work under complex "natural" conditions? The lengthy and ongoing tradition of analog research in our field is useful and necessary because it establishes guidelines and raises issues. The most prominent issue raised concerns the question of ecological validity. That is, what do we need to do to ensure that our evidence-based practices, often developed in analog settings, will still be effective when applied in real-world settings? The answer is that we must attend to systemic factors that either impede or facilitate two aspects of effective support: maintenance and sustainability.

SUPPORT: MAINTENANCE AND SUSTAINABILITY

Meaningful support requires that the procedures we develop be effective not for days or weeks but, typically, for months or even years. Understandably, this requirement has led people to focus on the question of whether one procedure produces better maintenance than another. This is the wrong question and has led to considerable confusion and wasted effort. Maintenance is not a function of procedures; maintenance is a function of the systems in which the presumed efficacious procedures are embedded. If those systems are dysfunctional, maintenance is not likely to occur. The reason is that for maintenance to occur, systems must be designed that sustain the application of our evidence-based procedures. *Maintenance* thus is a dependent variable that refers to the durability of behavior change *effects*. *Sustainability* is an independent variable that refers to the durability of behavior change *efforts*. For success, we need both good effects and good efforts: good effects generated by evidence-based procedures and good efforts generated by well-designed systems that promote the long-term use of these procedures. Parents, teachers, and service providers need to work in systems that sustain their efforts at applying effective procedures, thereby ensuring maintenance of desirable behavior change. In sum, for PBS to be helpful, it must link maintenance to sustainability, and sustainability to systems change. When all these linkages are made, effective support becomes possible and improved QOL becomes plausible.

LINKING SUSTAINABILITY TO SYSTEMS CHANGE: A MODEL

Efficacy is a technical term that refers to how successful an intervention procedure is under carefully controlled conditions, such as that of a laboratory or analog setting. *Effectiveness* is a technical term that refers to how successful an intervention procedure is once it is taken out of the laboratory and applied in the natural, real-world settings of home, school, workplace, and community. We need a model that allows us to move from efficacy to effectiveness, a model that ensures maintenance by ensuring sustainability, a model that promotes sustainability by promoting constructive systems change. One such model, derived from the literature on organizational psychology (Knoster, Villa, & Thousand, 2000), highlights five factors that need to be addressed to promote constructive systems change: vision, skills, incentives, resources, and action plans. Collectively, these factors, when properly addressed, help create systems that sustain the application of evidence-based procedures by parents, teachers, and others involved in support.

In illustration, with respect to vision, unless people within a system share a common set of goals or mission (e.g., everyone agrees that community-based intervention must replace intervention in segregated settings), they will be working at cross-purposes with one another, and inconsistent goals will be pursued that make meaningful, sustained efforts impossible. Likewise, the quality of the personnel infrastructure, a skills issue, becomes a major factor in undermining sustainability if there are too many people in the system who lack the knowledge and expertise needed to competently implement procedures that are known to be helpful. Motivation, an incentives issue, can derail efforts to sustain an otherwise effective program if it should be the case that administrators, staff, and caregivers do not experience relevant reinforcement for implementing the program. Resources become a factor impacting sustainability when time, finances, and the material necessities required for proper implementation are lacking. Finally, unless there is a well-constructed action plan in which the roles and responsibilities of personnel and caregivers are carefully defined and mechanisms are in place for correcting newly identified deficiencies, ongoing efforts to implement appropriate procedures may become erratic, and the sustainability of procedural implementation may deteriorate. The model just described is one of many that stresses the centrality of systems change in PBS research and practice, and it provides a template to guide our efforts at sustaining practices that result in effective support. We

can illustrate the use of this model with a notable and successful application, namely, family-based support for children with autism.

APPLICATION OF THE SYSTEMS CHANGE MODEL

Family-based support (Dunlap & Fox, 1999; L. K. Koegel, Koegel & Dunlap, 1996; Lucyshyn, Dunlap & Albin, 2002; Turnbull & Turbull, 2001) for children with autism nicely illustrates the sensitivity of the PBS approach to the systems issues just described. For example, the concept of goodness-of-fit (Albin, Lucychyn, Horner, & Flannery, 1996) is used to evaluate whether support plans take into account the cultural and personal values of families (a vision issue), responsivity to their social and emotional needs (an incentives issue), and feasibility relevant to time required, labor intensiveness, finances, and sources of support available in the community (a resources issue). The concept of life arrangement and life coaching (Risley, 1996)—with its emphasis on making available for the individual preferred housing, housemates, neighbors, employment, transportation, friends, and recreational opportunities—as a way of minimizing behavior challenges and maximizing life satisfaction directly addresses the systemic issue of resources. The focus on collaborative teaming (Bambara, Nonnemacher, & Koger, 2005) and team training (Anderson, Russo, Dunlap, & Albin, 1996) using a case study team format composed of parents, teachers, professionals, peers, friends, co-workers, and paraprofessionals who learn to problem solve together in real-life contexts is a powerful example of addressing the systemic issue of skills by building a viable human infrastructure. Person-centered planning (Kincaid, 1996), mentioned previously, is a method for goal setting that carefully assesses the personal values of all participants in the system (a vision issue) as well as identifies strategies for overcoming the fiscal, legal, material, and personnel barriers to change (a resources issue). Finally, the strategy of group action planning (Turnbull & Turnbull, 1996) in which roles, responsibilities, team problem-solving, monitoring, and repair strategies are carefully specified and integrated is a clear example of directly addressing the role of action plans in systems change.

The example of family-based intervention for autism makes clear that effective support depends not simply on the application of procedures derived from laboratory and analog research but rather on the detailed analysis and development of systems that make possible the sustainable application of these procedures so that positive behavior change can be maintained. Similar successes have been obtained in the area of schoolwide PBS (SWPBS), an approach that focuses on reducing challenging behavior in academic settings by changing the system to establish a culture of learning and personal competence (Sugai, Horner, Dunlap, Hieneman, Lewis, Nelson, et al., 2000).

As impressive as these successes are, we cannot allow the field of PBS to be defined solely by its achievements in the areas of autism and schoolwide discipline. We need to expand the venues and populations to which PBS is applicable. We can do so by reaching out to other sciences and disciplines, a process that has already begun and that offers many opportunities and much hope.

Hopefulness

EXTENDING PBS: MULTIPLE POPULATIONS AND VENUES

As noted, the process of extending PBS to multiple populations and venues has already begun. For example, in examining the agendas for the 2003, 2005, and 2006 APBS conferences, one can identify research presentations dealing with a variety of populations involving emotional and behavioral disorders, mental health issues, traumatic brain injury, juvenile delinquency, Tourette's syndrome, conduct disorder, literacy issues, typical families, fetal alcohol syndrome, Alzheimer's disease, and sex offenders. In addition, PBS work is documented in multiple venues, such as cross-cultural settings, Head Start classrooms, high schools, rural settings, normative work/living settings, and medical clinics. This variety is a hopeful beginning—but only a beginning—because beyond autism and SWPBS, the *published* database is quite restricted, even in the primary PBS journal, namely, the *Journal of Positive Behavior Interventions*. Thus, in looking at the first 5 volumes of JPBI (1999–2005), one finds only a small amount of research on the application of PBS to, for example, people with emotional and behavioral disorders (Stichter, Sasso, & Jolivette, 2004), attention-deficit/hyperactivity disorder (Barry & Messer, 2003), and sleep disorders (Durand & Christodulu, 2004). Clearly, we need to develop a much broader and richer database so that the promise of PBS as an approach to all human behavior challenges can be more fully met. To accomplish this goal, we need to link the applied behavior analytic and special education methods that are so prominent a part of PBS (Carr, Dunlap, Horner, Koegel, Turnbull, Sailor, et al., 2002) with concepts, strategies, and procedures derived from other relevant sciences and disciplines.

EXTENDING PBS: LINKAGE TO MULTIPLE SCIENCES AND DISCIPLINES

There are five sciences or disciplines of particular relevance to accomplishing the goals of PBS: organizational management, community/ecological psychology, cultural psychology, biomedical science, and positive psychology.

Organizational Management

There is a broad, well-developed literature on organizational management, derived partly from business models,

that speaks to the concern of PBS with systems change (Ambrose, 1987; Landy & Conte, 2004). Although behaviorists have long contributed to addressing management issues in the workplace through the *Journal of Organizational Behavior Management*, the broader literature on organizational management deals with multiple venues and systems and is not restricted to the workplace per se. This broader literature has generated six models (highlighted in italics in this section) pertinent to the practice of PBS. These models have already begun to influence the way in which PBS as a discipline is implemented in real-world settings. In illustration, PBS has been extended to children with emotional and behavioral disorders by incorporating *models of effective service delivery* that focus on interagency collaboration, wraparound services, and flexible funding initiatives (Eber & Nelson, 1997; Turnbull & Turnbull, 2001). *Effective training models* in the disabilities field now emphasize the use of a trainer-of-trainers approach that helps take training efforts up to scale so that a competent personnel infrastructure is available to meet the extensive demand for PBS services (Anderson, Russo, Dunlap, & Albin, 1996). In the field of SWPBS, efforts have been made to organize trained personnel (*team building models*) through structural reforms (Sailor & Roger, 2005) that integrate all personnel within a school into a unified team, helping to ensure a consistent group approach to meeting goals. These SWPBS efforts in turn are supported by *models of how to build staff motivation* (Crone & Horner, 2003) to produce sustainability of best practices over periods of time sufficient to impact QOL and maintain behavior change. In addition, *models of accountability* have been developed (Crone & Horner, 2003) to ensure that roles and responsibilities are carefully delineated, assigned, and monitored so that interventions are applied with fidelity. Finally, *models pertaining to data management systems* have been created for SWPBS to facilitate and promote the process of basing decisions on evidence rather than on opinion or emotion (Horner, Todd, Lewis-Palmer, Irvin, Sugai, & Boland, 2004). In sum, principles of organizational management have demonstrated great potential to create systems that are conducive to supporting PBS best practices and therefore merit continued scrutiny and application within our field.

Community/Ecological Psychology

The closely related fields of community psychology and ecological psychology are philosophically, conceptually, and strategically congruent with PBS and offer a rich source of information that can be used to inform PBS research and practice (Bronfenbrenner, 1989; Levine & Perkins, 1987; Rappaport & Seidman, 2000; Scileppi, Teed, & Torres, 2000). The Dohrenwend (1978) definition of *community psychology*, arguably the most influential one in the field, emphasized that behavioral challenges are best conceptualized as a mismatch between a person's competencies and the degree of support available in the person's environment. Therefore, the intervention implication is that we must build skills and redesign the environment, an implication that also captures the essence of PBS (Carr, Dunlap, Horner, Koegel, Turnbull, Sailor, et al., 2002). Consistent with these ideas, the approach to intervention taken by community psychologists features three factors, all relevant to PBS: a focus on prevention, the necessity of building social support, and empowerment of those in need.

Focus on Prevention. Community psychology has an extensive database related to the identification and analysis of environmental risk factors for challenging behavior (e.g., poverty, mental illness, marital conflict, unemployment, racism, health issues), models for proactively addressing and correcting the problem of scarce resources (i.e., not enough time, money, or personnel), and strategies for designing preventive support plans that appeal to the broader needs of a setting or community, thereby ensuring buy-in or acceptance of those plans (Rappaport & Seidman, 2000). These and other principles of prevention have been used successfully to deal with a wide range of challenges related to developmental problems, education, mental health, physical illness, and wellness (Felner, Felner, & Silverman, 2000; Nation, Crusto, Wandersman, Kumpfer, Seybolt, Morrissey-Kane, et al., 2003). Therefore, this research literature constitutes a model that may well be worth emulation by PBS practitioners, particularly as we attempt to extend our efforts to new populations.

Necessity of Building Social Support. Inadequate levels of social support act as a stressor to initiate or exacerbate behavior problems. Community psychology offers two kinds of models for building support: life cycle and self-help. Life-cycle support is linked to developmental stages and may therefore involve building social networks related to parenting, childhood and adolescence, adulthood, or aging (Scileppi, Teed, & Torres, 2000). For example, a parental social network may help mothers whose children have discipline issues gain access to information about child development. The network may also provide emotional support, motivation, and role-playing opportunities. The second model, self-help groups, offers support in two ways: by functioning to help members acquire prosocial behaviors and control inappropriate behavior or by helping members to educate the public to be more accepting and understanding of people with disabilities and others who traditionally have been stigmatized and rejected by society (Sagarin, 1969). Social support strategies help reduce the likelihood that difficult life circumstances will instigate problem behavior.

Empowerment. Often, the people with whom we work, and their families, suffer because the societal institutions

on whom they are dependent for services are structured in a way that frustrates their legitimate needs and aspirations. Community psychology articulates strategies for empowering individuals by teaching them and their advocates how to network, influence policy, effectively compete for resources, and build organizational coalitions to ensure fair treatment (Zimmerman, 2000). These strategies are in the published literature and thus are available for us to use. Indeed, the field of PBS has already begun the process of incorporating empowerment concepts and methods in working with families (Brookman-Frazee, 2004; R. L. Koegel, Koegel, & Brookman, 2003; Turnbull & Turnbull, 2001).

In sum, by tapping into the extensive research base of community and ecological psychology, we can identify ideas and strategies relevant to achieving the goals of expanding PBS to many different populations. By attending to this literature, we can avoid having to reinvent the wheel.

Cultural Psychology

As the application of PBS expands to varied ethnic, racial, social, and religious groups, the issue of cultural diversity becomes more salient. Cultural variables profoundly influence an individual's world view and how that individual communicates, interacts with, and perceives others (Matsumoto, 1996). Therefore, to ensure success, PBS concepts and strategies need to be modified so that they reflect sensitivity to three major sets of issues: cultural relativism (conceptualizing problem behavior), cultural values (setting goals), and cross-cultural competence (designing interventions in a way that is acceptable to others).

Cultural Relativism. Abnormal behavior cannot be fully understood without considering the values, beliefs, and norms of the ethnic, racial, religious, or social groups to which an individual belongs. Concepts of abnormality vary across cultures (Draguns, 1997); therefore, a given pattern of challenging behavior needs to be assessed relative to its cultural context. Consider social phobia, a common mental health problem that represents a plausible intervention opportunity for the expanding field of PBS. A person with social phobia experiences intense fear in group situations. In American culture, where there is a great emphasis on independence and individualism, social phobia typically represents a fear of embarrassing *one's self*. In contrast, in Japanese culture, where there is a great emphasis on interdependence and collectivism, social phobia, referred to as *Taijin Kyofusho,* may represent a fear of embarrassing or offending *others* (Kleinknecht, Dinnel, Kleinknecht, Hiruma, & Harada, 1997). A failure to recognize this cultural difference in assessing the problem would reduce the likelihood that any subsequent advice or strategy offered would be seen as relevant. Our efforts to support such people would fail. As we reach out to diverse groups, we need to tap into the knowledge base of cultural psychology so that we can conceptualize the problems of others in ways that are credible and sensitive to their needs.

Cultural Values. PBS has largely been developed within English-speaking Western culture, and the selection of specific goals for intervention reflects the values of that culture. Not all cultures value the same goals, however. Consider again the difference between American and Japanese cultures. When we work with the child of a U.S. family, we often stress the importance of building autonomy and self-reliance as critical goals, especially if the child has a disability. In Japanese culture, where group identity, mutual dependency, and obligation to others are revered (Weisz, Rothbaum, & Blackburn, 1984), these same goals may be viewed as encouraging selfishness, lack of responsibility, and immaturity. One therefore might expect low compliance with intervention strategies that appear to embrace alien values. If, instead, the professional noted that PBS strategies can produce skills that enable the child to contribute to the welfare of the family and meet his or her responsibilities and obligations to others, he or she might expect much better compliance. These and other important value concepts are now being incorporated into the PBS research literature (Wang, McCart, & Turnbull, this issue).

Cross-Cultural Competence. As PBS moves to expand its contributions from primarily White, middle class groups to minority groups, it will become increasingly important to have a competent understanding of the customs, family structure, and child-rearing practices of these latter groups (Chen, Downing, & Peckham-Hardin, 2002). For example, in traditional Hispanic families, the family structure tends to be patriarchal (Zuniga, 1998). Therefore, defining intervention goals, designing strategies, and agreeing on criteria for success by focusing heavily on input from the mother (as White, middle-class practitioners are accustomed to doing) would be viewed as insulting and disrespectful to the father. By seeking the father's input and approval, we show appropriate respect for him, increasing the likelihood of cooperation, even if in the end it is the mother who does all the work. Similarly, with African American families, one must be sensitive to the importance of family structure, specifically, that it is often extended rather than nuclear (Willis, 1998). Therefore, establishing goals and building interventions by consulting only with the mother or father while ignoring aunts and uncles, grandparents, and cousins is often a strategic mistake that undermines rapport and reduces cooperation.

Concluding Comment. Although there are features of PBS that are relevant to all populations and venues, it is

also true that consideration must be given to unique cultural factors that vary across populations and venues. Cultural psychology is a rich and largely untapped source of ideas and methods for increasing our effectiveness as we expand our efforts.

Biomedical Science

Traditionally, the biomedical and behavioral sciences fields have developed side by side, paying relatively little attention to one another. With the current emphasis on "translational research," the situation has begun to change. Scientists and practitioners are now looking for ways to take what has been learned from the biomedical sciences and apply it to solving practical problems. PBS advocates can play an important role in making this application successful.

Brain Function and Intervention. Knowledge of brain function can be used to tailor interventions designed to enhance personal competence and skills, a key focus of PBS efforts. A good example of this point concerns the work that is being done in the field of traumatic brain injury (TBI). Neuropsychological research has demonstrated, on the basis of behavioral consequences, that trauma that produces damage to the ventral or dorsal frontal lobe greatly impedes the ability of an individual to learn (Scheibel & Levin, 1997; Schlund, 2002). This fact has prompted applied researchers to develop alternatives to contingency management. These alternatives are based on PBS strategies that emphasize antecedent-based approaches, such as choice-making, the use of preferred activities, and the development of positive routines (Ylvisaker & Feeney, 1998). TBI research thus serves as a model for translating findings from biomedical research into intervention strategies relevant to PBS practice.

Role of Biological Setting Events. Biological variables have been implicated as a major category of setting events for problem behavior, another PBS concern (Carr & Smith, 1995). For example, illness-induced pain (Carr & Owen-DeSchryver, in press) has been linked to the display of problem behavior. Pain may function as a setting event that makes environmental demands more aversive, thereby increasing the negative reinforcement value associated with aggression, self-injury, and tantrums that result in escape from those demands (Carr, Smith, Giacin, Whelan, & Pancari, 2003). Pain, however, is not the only variable that is a likely setting event for problem behavior. The literature has suggested the potential role of temperament (Eisenberg, Sadovsky, Spinrad, Fabes, Losoya, Valiente, et al., 2005), psychiatric disorder (Baker, Blumberg, Freeman, & Wiesler, 2002), hormonal state (Taylor, Rush, Hetrick, & Sandman, 2003), and medication side effects (McCracken, McGough, Shah, Cronin, Hong, Aman, et al., 2002) as additional plausible classes of setting events. As a result, an opportunity exists to link knowledge of these and other biological factors to models of problem behavior that blend with PBS practices.

Quality of Life and Health Psychology. One important dimension of quality of life from a PBS perspective involves health issues. Individuals who suffer from chronic illnesses or physical impairments, who fail to adhere to therapeutic medication regimes, who lack access to medical services, or who have limited social support during illness episodes frequently experience poor QOL because these difficulties often generate feelings of dysphoria, interfere with maintenance of social contacts, limit leisure and recreation, and diminish autonomy (Schwartz, Kaplan, Anderson, Holbrook, & Genderson, 1999; Taylor & Aspinwall, 1990). There is hope for addressing these issues successfully if one carefully examines the literature in the fields of health psychology and behavioral medicine. This extensive literature (Sarafino, 1994; Taylor, 2003) is a source of ideas and strategies that can be incorporated into PBS plans that focus on coping strategies for dealing with stress, pain management, promotion of health behaviors and wellness, adherence to medication regimens, and self-advocacy in accessing good medical services. All this information is available to us in our quest to improve multiple aspects of QOL.

Positive Psychology

According to Seligman, Steen, Park, and Peterson (2005), "Positive psychology is an umbrella term for the study of positive emotions, positive character traits, and enabling institutions" (p. 410). Seligman et al.'s definition of positive psychology makes clear that this emerging field has the potential for being one of the strongest allies of PBS and a major source of assessment (Lopez & Snyder, 2003) and intervention (Snyder & Lopez, 2005) ideas for our field. Positive emotions are related to QOL life issues, and positive character traits are related to building personal competence and skills. Enabling institutions are related to the PBS concept of environmental redesign. Positive psychology is a strengths-based approach. Like PBS, it does not deny the value of accumulated research on psychopathology but rather focuses on the additional opportunities for enhancing human functioning that are provided by attempting to build individual strengths rather than focusing on weaknesses. These strengths are described in terms of character education or virtues (Peterson & Seligman, 2004). Behavioral challenges are dealt with not simply by focusing on psychopathology but rather by focusing on building character or virtues. The six virtues are: wisdom, courage, humanity, justice, temperance, and transcendence (Seligman et al., 2005). Each of these virtues consists of mul-

tiple character strengths that impact positively a person's ability to adapt constructively to his or her environment.

Wisdom includes strengths such as creativity and open-mindedness that enable a person to solve problems in novel ways and examine issues from all perspectives. Courage includes strengths such as bravery and persistence that allow a person to accomplish goals in the face of external opposition. Humanity involves strengths such as kindness and social intelligence that help a person to build relationships with others, generating and solidifying social support. Justice involves strengths such as fairness and teamwork that promote effective functioning of institutions and systems. Temperance combines strengths such as forgiveness and self-regulation that check and limit negative behavioral excesses. Transcendence combines strengths such as gratitude, hope, humor, and spirituality that provide a person with meaning and the motivation to persevere in a course of action in spite of setbacks and disappointments. Advocates of PBS could profitably examine the substantial literature on virtues and character education (Peterson & Seligman, 2004) as a source for assessment and intervention strategies relevant to designing PBS plans for the individuals and families we serve.

Positive psychology directly addresses QOL issues, particularly in the realms of social and emotional well-being, and is therefore clearly relevant to PBS. Numerous studies of subjective well-being and happiness (Diener, 2000; Lyubomirsky, 2001; Myers, 2000) have served as a catalyst for developing intervention procedures that promote happiness. For example, one packaged approach includes a series of exercises in which participants practice expressing gratitude to others, identifying three good things in their lives, writing a story that captures a time in their life when they were at their best, and identifying their five greatest strengths and using one or more of them each day. These strategies produced substantial and durable increases in indices of happiness (Seligman, Steen, Park, & Peterson, 2005).

As noted, environmental redesign—a major feature of PBS—is discussed in the positive psychology literature under the term *enabling institutions.* For example, institutional change involving restructuring the workplace, promoting wellness rather than focusing on disease, providing respite services, and creating venues that enhance social interconnectedness has been related to social and emotional well-being and a higher QOL (Diener & Seligman, 2004).

Finally, positive psychology has been successfully used to address behavior challenges across the entire developmental, psychiatric, and health spectrums as well as in multiple educational, home-based, vocational, and community venues (Linley & Joseph, 2004; Snyder & Lopez, 2005). The breadth, depth, and variety that characterize positive psychology and its obvious conceptual and practical linkage to PBS is a source of hope for our field and makes clear that we are not a lonely voice in the wilderness; we are one of many voices in a chorus.

Conclusion

What are happiness, helpfulness, and hopefulness as they pertain to PBS? Collectively, they represent an empirically driven concern with QOL, with support through systems change, and with linkage to multiple behavioral, social, and biomedical sciences. This is the expanding vision of PBS, a vision that impels us to create meaningful lives and not simply to eliminate psychopathology, a vision that spurs us to change systems and not just people, a vision that motivates us to seek collaborative possibilities with our colleagues in many different sciences so that we can transcend our superficial differences and focus on deeper commonalities. It is a vision that holds promise for each one of us so that at the end of our lives we can say, "*I* made a difference."

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