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Toward a Comprehensive Strategy for Effective Practitioner–Scientist Partnerships and Larger-Scale Community Health and Well-Being

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Abstract

This article articulates joint priorities for the fields of prevention science and community psychology. These priorities are intended to address issues raised by the frequent observation of natural tensions between community practitioners and scientists. The *first* priority is to expand the knowledge base on practitioner–scientist partnerships, particularly on factors associated with positive outcomes within communities. To further articulate this priority, the paper first discusses the rapid growth in community-based partnerships and the emergent research on them. Next described is an illustrative research project on a partnership model that links state university extension and public school delivery systems. The article then turns to the *second*, related priority of future capacity-building for diffusion of effective partnership-based interventions to achieve larger-scale health and well-being across communities. It outlines two salient tasks: clarification of a conceptual framework and the formulation of a comprehensive capacity-building strategy for diffusion. The comprehensive strategy would require careful attention to the expansion of networks of effective partnerships, partnership-based research agendas, and requisite policy-making.

Keywords

prevention; community–university partnership; practitioner–scientist; capacity-building; partnership networks; public health; well-being

The *American Journal of Community Psychology* special section that examines the relationship between science and community psychology (Volume 31, Numbers 3/4) addressed natural tensions arising from differences in scientist and community practitioner goals and methods, alluding to the "battle scars of serious engagement" (p. 207). Concerning *goals*, it noted how scientists primarily seek fundamental understanding or theory-building, while practitioners predominantly desire to improve local quality of life (Price & Behrens, 2003; Wandersman, 2003). In the domain of community intervention implementation, scientists typically set the goal of replication with assurance of implementation fidelity; practitioners often want to adapt to local needs and recognize the limitations of the extant research base in guiding implementation (Sarason, 2003).

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As concerns the method-related aspects of implementing and evaluating community-based interventions, scientists often take a cautious and skeptical approach, seeking clarity and precision; community practitioners follow the imperatives of "real world" community action (Kelly, 2003), seeking practical solutions, but ones that are often unvalidated or untested. In addition, scientists are inclined to do carefully controlled, randomized outcome studies; practitioners usually opt for a more participatory, less controlled approach. In this way, science is cumulative and slow-moving; practitioners frequently want more immediate action on pressing problems. Slow-moving science is especially evident when scientists adopt a linear approach to application of scientific findings to community problems, moving methodically from basic to applied research (Price & Behrens, 2003).

Contributing greatly to tensions about goals and methods are the different *reward structures* for scientists and community practitioners. Among the key rewards for community practitioners is local recognition for successes in community action efforts, which often follows from focus on immediate outcomes and not on longer-term implementation systems change. Scientists are usually rewarded for activity that leads to publishable findings. Further, scientists often are rewarded for more basic or traditional scientific work rather than applied work (also see Boyer, 1990; Kellogg Commission on the Future of State and Land Grant Universities, 1999).

ADDRESSING PRACTITIONER–SCIENTIST TENSIONS—TOWARD MORE EFFECTIVE PARTNERSHIPS AND LARGER-SCALE BENEFITS TO HEALTH AND WELL-BEING

Practitioner–scientist tensions have generated motivation for creative solutions. Numerous approaches have been proposed for the resolution of practitioner–scientist tensions; a number of strategies have been suggested to generate mutually-beneficial and productive relationships. Various approaches and strategies are presented in the *American Journal of Community Psychology* special issue, and in earlier literature, as well. For example, to address differences in goals, the *American Journal of Community Psychology* special section authors recommend that scientists and community practitioners can start with definition of common ground or identification of interrelated goals of interest to community stakeholders early in the collaborative process, such as those suggested by community or school surveys of adolescent risk behaviors (Price & Behrens, 2003; Wandersman, 2003). To address differences between scientist and practitioner methods in community-based intervention implementation, Kelly (2003) recommends social norms that foster active, ongoing dialogues between scientist and community practitioners, consistent with earlier recommendations from action research projects (Spoth & Molgaard, 1999). Price and Behrens (2003) promote an approach that dynamically integrates community action with theory development, using a community leadership development project as an illustration. Wandersman (2003) suggests emphasis on the community delivery *process* (rather than just proven intervention content delivered with fidelity), with careful consideration of infrastructure development and capacity-building, plus local participation oriented toward accountability.

One illustration of the literature outlining recommendations of relevance to effective scientist-practitioner collaboration is that on university engagement with communities. This emerging literature recommends changes in the reward structures for university-based scientists in a way that encourages collaborative projects with communities (Kellogg Commission on the Future of State and Land Grant Universities, 1999; Lerner & Simon, 1998; Spanier, 1999; Spoth, 2004; Tierney, 1998). There also are emerging literatures of relevance that address community-based participatory research in public health (Minkler & Wallerstein, 2002) and other community-based approaches specific to prevention research, participatory or collaborative

and otherwise. One illustration of the latter is Weissberg and Greenberg (1998), who contrast two approaches to community prevention research: prevention science and collaborative community action research (Coie et al., 1993; Rappaport, 1990).

Although it is clear that prevention science and collaborative community action research each have great strengths, their utility differs according to the research question(s) being addressed and the phase in the prevention research cycle. Weissberg and Greenberg (1998) state that preventive intervention and competence-enhancement research must meet the challenge of combining the strengths of prevention science and collaborative community action research approaches. On the one hand, clinical trial methodologies, including random assignment, are needed to provide a clearer foundation for identifying the effects of programs on risk and protective factors and desired intervention outcomes. In addition, clinical trials may inform collaborative researchers about variables to address as they work with school and community settings to design ecologically-valid, contextually-responsive programs. On the other hand, collaborative community action research is likely to provide rich accounts of how culture, context, and local decision-making and history influences both model development and implementation of programs and policies. Clearly, there is a need for synthesis and further cross-learning between scientists and practitioners (also see Green, 2001; Spoth & Molgaard, 1999).

The reviewed solutions to the challenge of practitioner–scientist tensions highlight two joint priorities for the fields of prevention and community psychology. The *first* is to expand the knowledge base on processes and outcomes of practitioner–scientist partnerships that implement prevention-oriented community programs. The focus of this expanded knowledge base is primarily about collaboration *within* communities and supports for such collaboration. Additional work is required to address larger-scale organization of partnership efforts that stretch *across* communities, within states and beyond. Hence, the *second*, related priority is to learn how to increase capacity for diffusion of effective practitioner–scientist partnerships on a larger scale to achieve, in turn, larger-scale benefits in health and well-being for communities and their residents. The remainder of this paper will be devoted to consideration of each of these two priorities.

THE BACKDROP—GROWTH IN COMMUNITY PARTNERSHIPS AND EMERGENT RESEARCH

Community-based preventive interventions implemented through locally-based partnerships and coalitions have become increasingly popular in recent years (Butterfoss, Goodman, & Wandersman, 1993; Kumpfer, Turner, Hopkins, & Librett, 1993; Minkler & Wallerstein, 2002). Many of these community-based approaches were originally developed within the agent/host/environment public health model to address cardiovascular disease (e.g., Puska et al., 1985), but then extended to other health problems as diverse as cancer, HIV infection, lead poisoning, low birth weight, and injury, as well as behavioral health problems such as violence, alcohol and substance abuse, and teenage pregnancy (Roussos & Fawcett, 2000). In part, these shifts reflect disenchantment with categorical funding, isolated and poorly coordinated social service agencies, high service costs, and observation of ineffective intervention.

The growing popularity of community-based approaches is a natural outgrowth of developments in relevant theory and practice. Theorists and researchers have come to recognize the several layers of overlapping contextual influences on individual behavior problems (Bronfenbrenner, 1989; Catalano & Hawkins, 1996; Conner, Tanjasiri, Dempsey, & Robles, 1999). Individual behavior problems, including violence, substance abuse, and risky sexual behaviors, can be positively or negatively influenced by family structure and interaction, the quality and nature of school systems and health care systems, and the faith community. These

factors are influenced by community norms, attitudes, laws, and law enforcement. Further, policy makers recognize that discrete programs are rarely sufficient to alter community-wide problem prevalence rates (Butterfoss et al., 1993) and that community approaches often are necessary to positively impact those rates.

As a result of the rapid growth of community prevention/health promotion partnerships and coalitions in the last two decades, there has been greater opportunity and interest in studying their dynamics and outcomes (Backer, 2003). Indeed, many of the scientist-practitioner tensions described in the *American Journal of Community Psychology* special section are cited in a broader literature that addresses challenges in the conduct of research on the effectiveness of community partnerships or coalitions (Green, 2001; Green & Kreuter, 2002; Hallfors, Cho, Livert, & Kadushin, 2002; Kreuter, Lezin, & Young, 2000; Roussos & Fawcett, 2000). Most studies in this area have been qualitative case studies of one, or at most, a handful of coalitions (Farquhar, 1978; Francisco, Paine, & Fawcett, 1993; Goodman, Wheeler, & Lee, 1995; Jacobs et al., 1986; Mittelmark et al., 1987; Rindskopf & Saxe, 1998). Recently, however, several studies have been conducted with a sample size of 10 or more community coalitions (Butterfoss, Goodman, & Wandersman, 1996; COMMIT, 1995; Kegler, Steckler, Malek, & McLeroy, 1998; Kumpfer et al., 1993; Saxe, Reber, Hallfors, & Kadushin, 1997; Yin, Kaftarian, Yu, & Jansen, 1997). The limited evaluation of partnership outcomes overall reflects, in part, the difficulty of evaluating comprehensive, community-based prevention and health promotion interventions, as will be discussed in detail subsequently.

Recently, Hallfors and colleagues (Hallfors et al., 2002) examined the effectiveness of the Fighting Back Against Substance Abuse coalitions funded by the Robert Wood Johnson Foundation. Using a quasi-experimental design with comparison sites, the study examined alcohol and other drug use outcomes and attitudes in 14 intervention and comparison communities. These coalitions were developed at the grassroots level, attempting to bring diverse stakeholders together for decision-making. They included community education and awareness, prevention, and treatment—for both children and youth—and used schools, community agencies and police to alter a variety of policies, norms and behaviors. Regarding youth substance abuse there were no positive effects of the coalitions; for coalitions that primarily targeted adults there were mild negative effects. The authors derive a number of tentative conclusions for the discouraging findings, including (a) many competing agendas that may have paralyzed the process and reduced efficiency and quality, (b) the lack of requirements for coalitions to use tested and effective programs—(thus programs that were implemented may have had no impact), and (c) the coalitions may have been poorly organized and implemented.

In consideration of their findings, Hallfors et al. (2002) suggest that coalitions have limited and clearly focused goals, outcomes, and benchmarks. They stated these indicators should be well-defined and use effective measurement strategies from the preintervention phase onward, as well as ongoing measurement to assess outcomes. In addition, communities should be strongly encouraged to use evidence-based programs and policies and should carefully monitor dosage and quality of implementation of programs. To do so requires careful program choice, program implementation, program evaluation, and ongoing technical assistance (TA). Although the Hallfors et al. (2002) evaluation was not a randomized trial, it was well constructed. The findings clearly call into question the general efficacy of broad coalitions that use grass-roots models in which there is little TA or use of current evidence in the field of substance abuse prevention. They also suggest the need for more delimited and carefully designed studies of partnership and coalition processes and outcomes.

The practitioner–scientist partnership model illustrated in the next section is designed to address the issues raised by Hallfors and colleagues (2002) and others (El Ansari, Phillips, &

Hammick, 2001; Kreuter et al., 2000) in a number of ways. Most importantly, it focuses on structuring effective practitioner–scientist collaborations in which local teams have focused intervention goals, implement interventions that already have a strong evidence base, and have proactive technical assistance focused on implementation, evaluation and sustainability. Methods for longitudinal study of the model will be described subsequently. There also is potential for application of the partnership model to community collaboration in the pilot testing of new interventions and in evaluation of promising interventions with a limited evidence base.

AN ILLUSTRATIVE APPROACH TO EFFECTIVE PARTNERSHIPS

Land Grant System Support for Practitioner–Scientist Collaboration

An important type of practitioner–scientist partnership encompasses those that are supported by Land Grant Universities. Historically, the “land grant” university mission has encouraged partnerships with communities, with the explicitly stated purpose of benefiting the local citizenry. This mission was inspired by the “land grant idea.” Bonnen (1998) has noted that this idea evolved across centuries, consolidating a unique set of social role beliefs over time. Central to the idea is the belief that various science-based fields within the university should work “to improve the welfare and social status of the largest groups in society” (Bonnen, 1998, p. 29). Consistent with this idea, the Cooperative Extension Service (CES) was established in the early 1900s. It has created the infrastructure needed to become “the largest informal education system in the world” (Coward, Van Horne, & Jackson, 1986, quoted in Molgaard, 1997), designed to transfer a wide range of research-based information to the general public. In their informal educational capacity, CES personnel have served as linking change agents, connecting university-based innovators with the general public who could benefit from their innovations (Rogers, 1995).

The CES has thousands of local agents that reach all U.S. counties and thus has enormous potential for outreach to the general public (Spoth, 2004). It operates the outreach mission of the land grant universities in each state and is intended to link university research and community programming. Although the CES is particularly known for its work in rural areas, it functions effectively in some urban areas as well. For example, a report by the National Extension Urban Task Force (1996) has described successful CES urban partnerships in several large U.S. cities. Importantly, the structure of the CES readily lends itself to partnerships directed toward the diffusion of empirically supported family-and youth-focused preventive interventions for general populations (Halpert & Sharp, 1991; Molgaard, 1997; Spoth, 1998, 1999; Spoth & Molgaard, 1999). Illustrative youth development and parenting skill-building projects successfully utilizing the Extension System are described by Chibucos and Lerner (1999), Lande (1994), and Riley, Steinberg, Todd, Junge, and McClain (1994). There has been, however, a paucity of careful empirical validation of these program outcomes.

Illustrative PROSPER Model

The PROSPER partnership model has evolved out of a series of partnership-based prevention projects grounded in the Land Grant University-based Extension System and the elementary/secondary public school system. The projects exemplify how “action research” can address communities' action-oriented goals, adopting goals and applying applied research methods that are viable from both practitioner and scientist perspectives, with clear benefits to both local practice and science (Spoth & Molgaard, 1999). The community–university partnership model focuses on building community capacity for impact on public health and well-being through population-based development of youth competencies and reduction of youth problem behaviors, such as substance use, violence, and other conduct problems.

Rationale for Partnership Focus on Competence-Building Prevention—There is a strong empirical warrant for the broad application of competence-building preventive interventions for youth and their families (National Research Council and Institute of Medicine, 2002). It is clear that evidence-based preventive interventions targeting general populations could result in a substantial public health impact. For instance, Durlak (1997) notes that the population of normal children will contribute about 50% more cases to the population of maladjusted adults (Durlak, 1997). Tradeoff analyses (Offord, Kraemer, Kazdin, Jensen, & Harrington, 1998) indicate especially strong public health benefits when a preventable adult disorder is prevalent, the cost to treat it is high, and a general population preventive intervention is of lower cost and effective—such as can be the case with competence-building interventions designed to delay the onset of alcohol use (Spoth, Guyll, & Day, 2002).

Recent literature highlights numerous evidenced-based programs designed to enhance youth competencies (e.g., self-regulation, problem solving, peer-resistance and other personal and interpersonal skills), and reduce youth substance use, delinquency, aggression and other problem behaviors (Biglan, 1998; Catalano, Berglund, Ryan, Lonczak, & Hawkins, 1998; Durlak & Wells, 1997; Greenberg, Domitrovich, & Bumbarger, 1999; Hallfors, 2001; Mrazek & Haggerty, 1994; Spoth & Redmond, 2002; Tobler Research Associates, 1988; Weissberg & Greenberg, 1998). Importantly, there also is an emerging literature on the benefits of evidence-based competence-building interventions on factors that promote academic success, such as increased parent-school involvement, improved school attendance, and decreased disruptive behavior (Gottfredson & Wilson, 2003; Substance Abuse and Mental Health Services Administration, 2002; Zins, Weissberg, & Walberg, 2003).

Unfortunately, many of the widely implemented youth- and family-focused interventions currently utilized in U.S. communities have not been previously subjected to careful evaluation or lack demonstrated empirical support (Center for Substance Abuse Prevention, 1998; Hallfors & Godette, 2002; Mrazek & Haggerty, 1994; Rohrbach, D'Onofrio, Backer, & Montgomery, 1996). As a result, many American schools do not utilize evidence-based programs or do not do so with sufficient fidelity to ensure impact. For example, a recent survey from 81 safe and drug-free school district coordinators across 11 states indicated that 59% had selected a research-based curriculum for implementation, but only 19% actually reported their schools were implementing these programs with fidelity (Hallfors & Godette, 2002; also see Backer, in press). Given this state of the art and the widespread prevalence of family and youth problems, models and guidelines for large-scale capacity-building directed toward diffusion of evidence-based family- and youth programs are critically important; they could have significant benefits for public health and well-being. Central to large-scale capacity-building for intervention diffusion is the need for sustainable intervention delivery with collaboration of public school systems (see Adelman & Taylor, 2003; Ringwalt et al., 2002), as described in the next section.

PROSPER Partnership Structure—An exemplar of the practitioner–scientist subtype of partnerships affiliated with Land Grant Universities is the PROSPER (*PRO*moting *S*chool/community–university *P*artnerships to *E*nhance *R*esilience) model. Now functioning in two states, PROSPER partnerships foster implementation of evidence-based youth and family interventions, with ongoing local needs assessments, monitoring of implementation quality and partnership functioning, as well as evaluation of intervention outcomes. The PROPSER partnership includes representatives from three basic source organizations and agencies: (a) Land Grant University Extension System personnel (e.g., family and youth program content specialists and directors, county agents), and prevention researchers; (b) elementary and secondary school system personnel (e.g., school-based prevention coordinators, curriculum directors, teachers, principals) supported by technical assistance staff from the state public school system; and (c) community providers of prevention, family, and youth services, and

other community stakeholders (e.g., representatives of the juvenile court system, students, parents).

Figure 1 outlines the organizational structure of these partnerships. The local teams are the core of the model and are composed of three sets of partners. The *first* set of partners includes county-based CES personnel. Most county-level agents hold master's degrees, are trained in community leadership development, and are a valuable source of education and support. The *second* set of local partners consists of elementary and secondary public school personnel. One or two school district staff function as primary school representatives on the local team and serves as team co-leader, while other school district personnel (superintendents, principals, curriculum directors, educators) perform supportive roles. The *third* set of local partners is local community service providers and other stakeholders including parents and youth. As frequently noted in the literature, a range of community stakeholders should be involved in community-based intervention implementation, evaluation, and refinement if the intervention is to be successfully sustained in the community (e.g., Altman, 1995;Elias, 1992;Morrisey et al., 1997;Wandersman et al., 1998). Service providers can play an especially important role as they are already accustomed to working with schools and can facilitate the coordination of prevention and treatment services. As PROSPER teams develop, they involve a range of other potential stakeholders, in addition to social and health service providers, particularly those that can positively influence recruitment or sustained program implementation, such as representatives from faith-based institutions, parent groups, businesses, law enforcement, or the media. Also, the PROSPER approach considers it imperative that organizations representing diverse racial or ethnic populations be involved whenever they are present in the community served by the partnership (see Carnegie Council on Adolescent Development, 1995).

To provide ongoing technical assistance (TA), PROSPER includes two levels of external resources. First, a state-level group involves prevention scientists, university-based CES specialists and other state-level collaborators from the education system (see Fig. 1). This university-based team enhances capacity by providing support to an intermediate-level coordinating team (described below), administrative oversight and direction, input on local data collection, data analyses, and compilation of project reports and publications. Second, an intermediate-level coordinating team is led by an Extension prevention coordinator who functions as a liaison between the university prevention group and the local teams. These coordinators provide technical assistance, and administrative oversight for the local PROSPER teams. Notably, they place an emphasis on *proactive* technical assistance (see Mihalic, Fagan, Irwin, Ballard, & Elliott, 2002), entailing frequent, weekly or biweekly contacts with local team members to actively engage in collaborative problem solving, as indicated. They attend local team meetings, facilitating and documenting overall partnership functioning, and providing two-way communications with the university and state-level groups.

The potential of capacity-enhancing partnerships among prevention researchers, Extension System personnel, public school staff, and community service providers/stakeholders has been demonstrated through a series of partnership-based studies now organized under the umbrella of the Partnerships in Prevention Science Institute (formerly Project Family—Spoth, 1999; Spoth, Greenberg, Bierman, & Redmond, 2004; Spoth & Molgaard, 1999). Notably, universal, family-focused interventions have shown positive outcomes on parenting (Redmond, Spoth, Shin, & Lepper, 1999; Spoth, Redmond, & Shin, 1998) and on a range of substance- and conduct-related youth behaviors up to 6 years after past baseline (e.g., Spoth, Redmond, & Shin, 2000, 2001; Spoth, Redmond, Shin, & Azevedo, 2004), with favorable benefit-cost ratios (see Spoth et al., 2002). A summary of related project studies and manuscripts are available at www.ppsi.iastate.edu, including overviews of findings on community engagement and quality implementation of evidence-based interventions.

Contrasting Models—The focus on well-organized community teams that implement systematically evaluate and/or evidence-based programs suggests a similarity between PROSPER and other models focused on community collaboration for youth development, such as "Communities That Care" (CTC—Hawkins, Catalano, & Arthur, 2002) and "Getting to Outcomes" (GTO—Chinman, Imm, & Wandersman, 2004). There are, however, a number of distinctive characteristics of the PROSPER model. First, PROSPER emerges from the historical role of Land Grant Universities (LGUs) and the utilization of the CES that is intimately connected with these universities. As such, it utilizes an already existing and ubiquitous community-based infrastructure that reaches all American communities. Second, most importantly, the PROSPER model entails direct scientist involvement in partnerships. Its immediate connection to the LGU offers a close and ongoing relationship between university prevention scientists and local community collaboratives. This connection involves ongoing, two-way feedback loops between scientists and practitioners that, if used effectively, can provide cross-learning from both sides and thus supports a type of "triple helix of accountability" (Wandersman, 2003).

Third, the PROSPER model has a more narrow focus on *educational* infrastructures and intervention delivery systems—in its current form it is focused primarily on interventions in middle schools and high schools. In the future, intervention menus will be expanded and the model will be adapted for application to intervention development, pilot testing, and evaluation of promising interventions with a limited evidence base, particularly in areas where the intervention science is less advanced (e.g., youth lifestyle change and prevention of obesity). As compared to the CTC and GTO models, current PROSPER collaborators are intended to function as small strategic teams, engaging in team tasks oriented toward a carefully selected set of family and youth competency-building intervention goals, focused on supporting student learning and development. As such, these teams are intended to have local leadership representing educational program delivery organizations and a limited set of intervention goals; they are less "comprehensive" in these ways than are broader, community initiatives (Connell, Kubisch, Schorr, & Weiss, 1995). Nonetheless, they include key representatives of school and community stakeholders who wish to foster capable families and positive youth development. Also, they are designed to be part of a comprehensive strategy for larger-scale benefits to communities in public health and well-being through practitioner–scientist partnerships, as described subsequently.

Using PROSPER Model Research to Better Understand Partnership Effectiveness—As noted earlier, research on both the operation and effectiveness of school and community-based partnerships is scarce, albe it is an emerging area of investigation. Essential to scaling up evidence-based interventions through community– university partnerships is an improved understanding of partnership formation and functioning and how such functioning affects intervention implementation and outcomes across phases of partnership functioning. This deeper understanding creates opportunity for a mutually-rewarding interface between current prevention-oriented community research and the improvement of the practice of partnerships; it is the nexus of science and practice. Further, refinement of a model of partnership functioning would contribute to a much needed understanding of factors influencing partnership sustainability and institutionalization. As indicated in the prior section, a longer-term goal is to clarify how a PROSPER type of partnership can assist with earlier-stage intervention development and testing.

Although research on the CTC model has begun to clarify key developmental processes in community collaboration (Feinberg, Greenberg, & Osgood, 2004; Greenberg, Feinberg, Osgood, & Gomez, in press), most of the research literature on partnerships has been prescriptive and/or descriptive, rather than analytic, and almost no findings have longitudinally followed the cycle of partnership development (McLeroy, Kegler, Steckler, Burdine, &

Wisocky, 1994). What research does exist has focused on the process of the partnership itself rather than evaluating interrelationships among partnership processes and outcomes. Two unresolved issues in partnership process and outcome research include (a) identifying factors that may be associated with well-functioning partnerships specific to various phases of their development (phases of partnership organization, partnership operations, partnership institutionalization; see Fig. 2), and (b) determining whether communities with more effectively operating partnerships will produce higher-quality implementation of evidence-based preventive interventions, resulting in better outcomes for youth and their families.

Utilizing both the empirical and "wisdom" literatures, the PROSPER project described earlier is guided by a heuristic partnership process-to-outcome model that will be refined as research progresses. Figure 2 presents a conceptual model of relationships among various aspects of the PROSPER partnership process, the implementation of evidence-based prevention programs, and subsequent proximal (e.g., youth skills) and distal outcomes (e.g., youth substance use) for youth and families (see Spoth et al., 2004). The model also incorporates important contextual influences. The local PROSPER teams are conceptualized as moving through a developmental process including three phases. The key tasks in the organization phase involve (a) recruiting team members and building a sense of common purpose and cohesion, (b) mobilizing the partnership team to establish organizational structure and procedures, (c) technical assistance for building team capacity, as well as (d) selecting and planning programming. The quality of the partnership team process (e.g., team leadership, culture, tension, goals, integration of new members, and external relations) and degree of success at these first-phase partnership tasks are expected to be related to factors operating at both the individual level (member characteristics) and at the school and community level (school/community contextual factors specified in Fig. 2). Member characteristics include factors such as personal background and history of collaborative experiences. Community/school factors impinging on the quality of team process include the support of the home agencies (e.g., Extension, school, or social service system/agency), the outcome of past collaborative efforts, and the nature and extent of technical assistance available to support the team.

Success with these organization phase tasks is likely to influence team effectiveness during the second phase of partnership activity—the operations phase, in which the partnership moves forward to recruit families and implement evidence-based interventions for youth and families. For example, research on CTC indicated that training and TA, as well as community readiness, predicted team functioning and fidelity during the operations phase (Feinberg et al., 2004; Feinberg, Greenberg, Osgood, Anderson, & Babinski, 2002). In the second phase, the partnership-led quality of intervention implementation is expected to affect proximal and distal outcomes for youth and families. Also, it was hypothesized that (a) the quality of team process, (b) success with operations phase tasks, and (c) utilization of technical assistance will be associated with indices of team functioning and, ultimately, program institutionalization and team sustainability (Johnston, 2003).

Concerning research on the partnership institutionalization phase, the empirical literature on factors supporting the long-term sustainability of partnerships is mostly based on case studies (Gager & Elias, 1997; Johnston, 2003). However, recent longitudinal findings on a CTC coalition model show that the fidelity to the model, the level of prevention knowledge of key leaders, and the level of functioning of the partnership during the operations phase all predicted sustainability after the removal of state funding (Gomez, Greenberg, & Feinberg, in press). Further longitudinal research needs to be directed toward understanding how team functioning and the early development of plans for sustainability impact partnership longevity (Mittelmark, Hunt, Heath, & Schmid, 1993; Roussos & Fawcett, 2000).

The PROSPER partnership model and its outcomes are currently being studied through a randomized controlled trial with a sample of 28 communities in Iowa and Pennsylvania. This trial illustrates methods specific to longitudinal research on partnership processes and outcomes. Importantly, the trial is intended to be generative, informing study collaborators about possible future designs for a network of partnerships guiding multisite community participatory research. The study has two primary aims: the first is to evaluate the long-term effectiveness of partnerships in producing positive youth and family outcomes through evidence-based interventions; the second is to learn what factors are most important in partnership effectiveness, particularly as concerns sustained intervention implementation quality. To address the first aim, data is being collected from (a) two cohorts of students in project school districts (data collected from questionnaires administered in school, $N \approx 11{,}600$) and (b) a randomly selected sub-sample of families from Cohort 2 (data collected during in-home family assessments, $N \approx 1,000$). In-home family assessments include videotaped family interventions. In addition, school records data are collected and teacher assessments are conducted for Cohort 2 students whose families complete in-home assessments. These data are being collected for each cohort during the fall semester of the 6th grade, the spring semester of 6th grade, and at annual follow-ups thereafter.

To address the second aim, information is gathered at multiple time points in intervention communities, from three sources: (a) local PROSPER team members, (b) direct supervisors of the local team members, and (c) the prevention coordinators who provide ongoing technical assistance. Team interview questions and ratings assess perceptions of local team relationships, team effectiveness, and the quality of team support from the community. In addition, members of the research team review the local team protocols, plans and objectives, and provide external ratings of the team structure, task orientation, viability of the partnership, quality of plans, and utilization of technical assistance. Also, using web-based data-gathering procedures, prevention coordinators file biweekly reports on team contacts, as well as complete quarterly and annual interviews. In control communities annual interviews are allowing assessment of the degree of collaborative activity in these control communities, attitudes toward prevention, and the extensiveness and perceived effectiveness of any existing school–community collaborations, along with specific information regarding preventive interventions offered in middle schools. Early findings have demonstrated that community teams have effectively engaged community participants (Spoth et al., 2005) and have implemented with quality the evidence-based interventions selected from an intervention menu. Notably, most teams have secured resources for initially sustaining one of the interventions.

TOWARD PARTNERSHIP-BASED COMMUNITY BENEFITS ON A LARGER SCALE

The introduction highlighted two joint priorities for the fields of prevention science and community psychology. The first was to expand the knowledge base on effective practitioner–scientist partnership processes and outcomes and has been the focus of this paper up to this point. The second was to increase capacity for diffusion of effective partnership-based interventions on a larger scale in order to achieve larger-scale benefits in the health and well-being of communities and their residents. The central issue here is that, despite great advances in establishing the evidence-base of effective youth and family competence-building interventions, they are not widely implemented across communities. That is, at the same time there is increasing emphasis on accountability and results-oriented programming (e.g., Broom, 1995; Wandersman & Florin, 2003), there is limited implementation of evidence-based interventions and limited capacity for so doing on a large scale (Ennett et al., 2003; Gottfredson & Najaka, 2003; Hallfors et al., 2002). Whereas the first priority concerned improved understanding of effective community partnerships, it is critically important to address capacity building to coordinate a network of practitioner–scientist partnerships across communities—

in a state, region, or the nation as a whole. It is the latter type of effort—networking across communities and related multisite research— that is addressed subsequently.

From the authors' perspective, there are two salient and challenging tasks to address concerning increased capacity for diffusion of effective partnership-based interventions. The first is to clarify a theoretical framework to guide this type of diffusion and the second is to formulate a comprehensive strategy for promoting and facilitating it. Several important components of the second task will be addressed: (a) the expansion of networks of effective partnership innovations, drawing upon both existing and new diffusion resources; (b) the articulation of a partnership-based research agenda and related issues; and (c) the clarification of policy-making necessary to support network and research development.

Clarifying a Theoretical Framework for Partnership-Related Diffusion

There is a clear need to critically evaluate theoretical models relevant to the expansion of effective partnership-based interventions, and to develop a framework that could guide both scientific and practical aspects of such an enterprise. Although there is a number of potential theoretical models, such as those on organizational learning (e.g., Watkins & Marsick, 1993), social organizations (Mancini, Martin, & Bowen, 2003), and health services delivery (e.g., Aday, Begley, Lairson, & Slater, 1998), and others (see El Ansari et al., 2001), an obvious starting point is Rogers' (1995) diffusion of innovation theory. Recent critical reviews of the theory and related empirical work will be useful in advancing development of diffusion of innovation theory and clarifying its relevance to both diffusion of community–university partnerships and partnership diffusion of evidence-based interventions (Dearing, 2004; Kincaid, 2004; Meyer, 2004; Rogers, 2004).

Rogers' (1995) diffusion of innovation theory provides concepts of direct relevance to the question of scaling-up practitioner–scientist partnerships and partnership-based interventions, including issues of organization-level diffusion, diffusion networks, and factors in diffusion across states. Rogers describes four main elements in the diffusion of innovation: innovation, communication channels, time and social systems. For present purposes, the most important element to address is the prevention-relevant social system. A social system in this context is defined as a set of interrelated units that are engaged in joint problem-solving to accomplish a common goal about youth competency-building or prevention. In addition to the social system structure (patterned relationship and communications in the system) and system norms, the most critical elements in a system influencing diffusion or scaling-up are its opinion leaders and change agents.

Elsewhere there is an elaboration of Rogers' (1995) model of “linking” change agents as a conceptual framework to guide the scaling up of practitioner–scientist partnerships, such as the PROSPER model (Spoth et al., 2004). It describes how CES agents link “external resource” agents from both the state public education system (e.g., area education agencies) and local communities (e.g., human service providers) with “internal capacity” agents in public schools. Thus, the CES linking agents serve to network and potentiate resources external to schools (e.g., intervention training, technical assistance and evaluation) with those of public school staff to build capacity (human, technical, financial, and organizational), in order to effectively implement evidence-based intervention. Other community-based coalitions, like the aforementioned CTC model (Hawkins et al., 2002), also have been informed by Rogers' (1995) theory.

Partnerships that operationalize Roger's (1995) linking change agent concepts have proven successful in a number of ways (e.g., successful recruitment into evidence-based interventions, quality intervention implementation, positive competence-building and problem reduction outcomes, cost-benefits) and thus show promise as a part of a theoretical framework to guide

a comprehensive approach capacity building (Spoth et al., 2004; also see www.ppsi.iastate.edu). Nonetheless, key aspects of this linking-agents diffusion model needs to be critically evaluated, along with the other models noted above, in order to better articulate a theoretical framework for diffusion of partnerships and effective partnership-based interventions. For example, from this perspective, there is a need to understand how personal attributes of linking agents, as well as their infrastructural support, may influence their effectiveness. Also, experimental evaluation of the effectiveness of differing local team structures should be conducted. Finally, there could be a beneficial line of experimental study of approaches that increase numbers of influential champions of practitioner–scientist partnerships within existing program delivery systems, possibly guided by the bounded normative influence model (Kincaid, 2004).

Developing a Comprehensive Strategic Framework for Capacity-Building

A recurring theme in the literature on community partnerships involving evidence-based interventions is the need to carefully address *capacity-building* to sustain quality implementation of preventive interventions (e.g., Altman, 1995; Lerner, 1995, 2003; Morrisey et al., 1997). Capacity-building can be defined as efforts to enhance and coordinate human, technical/scientific, financial and other organizational resources (see Spoth et al., 2004). A lack of community capacity is frequently cited as a primary reason for failures in community-based dissemination of interventions (e.g., Arthur, Ayers, Graham, Hawkins, & Shavel, 2003; Backer, 2001; Feinberg et al., 2002; Goodman, 2000). This is particularly true in the case of school-based interventions (Gottfredson & Wilson, 2003; Hallfors, 2001). Especially problematic is the fact that efficacious school-based interventions are frequently unable to survive the withdrawal of grant funding (Adelman & Taylor, 2003). Conceivably, a network of practitioner–scientist partnerships could enhance individual community capacity for evidence-based intervention on a broader basis.

Although general frameworks for community-based intervention implementation and evaluation have been described (Eccles & Gootman, 2002; Minkler & Wallerstein, 2002; Villarruel, Perkins, Borden, & Keith, 2003; Wandersman, 2003), comprehensive strategies for partnership-driven implementation of evidence-based youth and family interventions in communities on a large scale are very limited at this point in time (see Hawkins et al., 2002; Romer, 2002). Relevant strategies frequently lack comprehensiveness in one or more of five ways: (a) they focus only on a single type of youth problem (e.g., substance use), (b) they fail to incorporate attention to competency building and positive youth development, (c) they fail to address coordination of resources and capacity-building across agencies and organizations within communities, (d) they fail to address coordination or networking and capacity-building across communities, or (e) they entail limited involvement and/or direct partnering of scientists with community-based practitioners.

It will be particularly important to address the often narrow focus on youth problems and the lack of attention to positive youth development and lifestyle change (e.g., dietary behaviors, exercise) in national-level efforts directed toward youth interventions (Small & Memmo, 2004). The Centers for Disease Control and Prevention (CDC) has identified a set of interrelated problem behaviors, typically originating during childhood and adolescence, ones that are critically important from a public health standpoint. To address these concerns about adolescents a number of federal (e.g., U.S. Department of Health and Human Services, 2000) and other agencies and organizations (e.g., Fleming, Towey, & Jarosik, 2001) have outlined national goals related to primary public health concerns, in part, with the intent that communities mobilize efforts directed to address the goals. The co-occurrence of multiple health-related problem behaviors among youth and common developmental paths to those

problem behaviors, however, suggest a more integrated approach to community-health goal setting (Biglan & Cody, 2002; Flay, 2002; Romer, 2002).

Advocates of positive youth development approaches emphasize that efforts to address public health concerns by preventing youth problem behaviors must be pursued in concert with youth-related competence-building and physical health promotion goals. One way in which this concept has been articulated is to state that problem-free youth are not necessarily fully prepared youth (Pittman, 2000, cited in Lerner, 2001). Lerner (2001) and others (Eccles & Gootman, 2002; Flay, 2002; Roth & Brooks-Gunn, 2002; Villarruel et al., 2003) have cogently argued for the need for interventions that prepare young people to fully participate in school and career by reducing the level of harmful or risky behaviors and building "external" developmental assets (e.g., support from parents, peers, teachers), along with "internal" assets (e.g., social competence, see Benson, Leffert, Scales, & Blyth, 1998; Scales, Benson, Leffert, & Blyth, 2000). Reviews of the literature on prevention and positive youth development (e.g., Small & Memmo, 2004) have emphasized the importance of integrating the approaches.

As defined herein, a comprehensive approach would begin with practitioner–scientist partnerships. It would need to address multiple youth and family-related problems, including careful attention to competency building and physical health (e.g., lifestyle change), necessary coordination of intervention providers, and capacity-building, both within communities and across communities within identified geographic areas. Such a comprehensive strategy could build new levels of collaboration between scientists and practitioners in the integration of prevention science with community-based practices that are directed toward the large-scale reduction of health risk behaviors among youth and the promotion of their development, including attention to physical health (Spoth, 2003). As noted earlier, some key aspects of a comprehensive approach to capacity-building that will be further highlighted include expansion of networks of effective partnerships, articulation of relevant research agendas and issues, along with clarification of necessary policy-making efforts. The following section will highlight key aspects of a movement toward a more comprehensive approach and, also will note specific examples of promising beginnings.

Expanding Networks of Effective Partnerships

In his Diffusion of Innovation theory, Rogers (1995) emphasizes the role of "diffusion networks." These networks facilitate the flow of interpersonal communications about innovations; they include inter-organizational networks that operate in parallel to the type of process that occurs among individuals in a social system who are communicating about an innovation (see Rogers, 1995, pp. 295–299). In order to broadly diffuse a model of effective partnerships, or to create a network of such partnerships, it is clear that basic infrastructure development is necessary. What seems to be required is similar to the type of infrastructure development that has been recommended by the Public Health Service, as part of the Healthy People 2010 Project (U.S. Department of Health and Human Services, 2000). That is, the Public Health Service states that to effectively deliver interventions designated as important to public health requires an underlying foundation of resources needed, including organizations, human resources, and data/information systems.

Moving toward a more comprehensive strategy for diffusion, including expansion of networks for effective partnerships, could include a systematic evaluation of (a) the resources most needed to advance the development of diffusion networks for effective practitioner–scientist partnerships and (b) the articulation of a strategic plan for relevant capacity-building, such as is illustrated by the infrastructure development plan for Healthy People 2010. Fundamentally, a critical assessment of the optimal use of existing infrastructures and resources for the purposes of effective partnership diffusion should be undertaken. Such an effort could start with

promising approaches to community-based coalitions already mentioned, like the "Communities That Care" and "Getting to Outcomes" projects.

Projects like Communities That Care and Getting to Outcomes well represent the increasing efforts directed toward development of dissemination mechanisms for science-guided guidelines oriented toward community-based prevention practitioners (e.g., Center for Substance Abuse Prevention, 2003; Chinman et al., 2004; Hawkins et al., 2003). These guidelines frequently are organized around community tasks that are needed to sustain the implementation of evidence-based interventions of various types and specify how to obtain resources for accomplishing the tasks. Most often, these guidelines assume a community coalition or partnership as the platform for the implementation. Also noteworthy is the Assets for Colorado Youth Initiative (see Benson et al., 1998; Scales et al., 2000), Community Anti-Drug Coalitions of America (http://cadca.org) and others, details about which lie beyond the scope of this section.

There are several promising beginnings of state-level collaborations of universities working with state agencies that suggest models for future work and also could provide relevant resources (e.g., Institute for Children, Youth, and Families, 2000). Some of these include collaboration of local Extension staff with school personnel (e.g., through programs funded by SDFS or the 21st Century Program in the USDE) and emphasize youth and family programming and organizational goals. In addition, an Extension-based national initiative directed toward programs for children, youth, and families at risk (CYFAR) has established national Extension organizational goals (Betts, Peterson, Marczak, & Richmond, 2001).

It is worth underscoring that the vast infrastructures of the Cooperative Extension System and public school systems provide substantial groundwork for expanding networks of partnerships. The Extension System infrastructure was described earlier. The elementary and secondary public school system also has generated a large-scale infrastructure for widespread generation and application of evidence-based programs. For example, the DOE and state education departments support area education agencies and perform various functions consistent with models of effective capacity-building and diffusion (e.g., Backer, 1991; Rogers, 1995), such as program planning, technical assistance, coordination of collaborators, and program evaluation. These functions also parallel those supported through the Extension System. A network feasibility study that will examine the capacity and readiness for practitioner–scientist partnerships in other states' Extension and public school systems is in the preparation stage by the authors. In addition, a research institute at the first author's university is serving as an organizational platform for partnership network development (see www.ppsi.iastate.edu) that would support partnership implementation of evidence-based interventions, multisite effectiveness and dissemination research, and the development and testing of innovative interventions.

Of course, a primary question of relevance to the expansion of networks of effective partnerships concerns what *new* resources might be generated to support the effort, particularly at the state and national levels. In part, addressing this question falls under the topic of clarification of necessary policy change, to be addressed subsequently.

Clarifying the Research Agenda and Related Issues

Recently, there has been much greater interest in the study of researchable questions of concern to local practitioners, including how to (a) most effectively create systems change, (b) build alliances across institutional settings, (c) diffuse programs with fidelity while still allowing local input and adaptation, and (d) sustain and institutionalize effective programs (Greenberg, 2004). Addressing such questions could provide an excellent arena for research collaboration between scientists and practitioners. In part, related efforts have been motivated by the National

Institutes of Health (e.g., National Institutes of Mental Health, Drug Abuse, and Alcohol Abuse and Alcoholism), which have developed programs of funding focused on related issues regarding health services in prevention programming. One powerful way to address the research questions is via multisite projects in which practitioners in different settings provide feedback on the processes involved in the creation and continuity of community partnerships, ideally supported by braided funding from multiple sources.

In further developing a future research agenda, there is a range of issues that should be addressed, including strategies for addressing the endemic complexity of partnership-related research, the variable standards about what constitutes "evidence-based" interventions, assumptions about the evidence for best practices as such, and controversies about primary or exclusive focus on evidence-based interventions.

Studying Partnership Outcomes—Many researchers who have attempted community partnership studies have noted the complexity of the task and the many obstacles (Altman, 1986; Farquhar, 1978; Farrington, 1997; Flay & Best, 1982; Hollister & Hill, 1995; Koepsell et al., 1992; Peterson, Hawkins, & Catalano, 1992). For example, when community is the unit of analysis, a high level of resources is needed to have sufficient sample size for the requisite power to detect effects. Because randomization is frequently not feasible at the community level, matching communities is an option, but this strategy is fraught with difficulties (Hollister & Hill, 1995). Further, evaluating community-based prevention partnerships or coalitions requires delineating specific long-term outcomes (e.g., adolescent delinquency or arrest), intermediate outcomes (e.g., increased school bonding or enhanced family relations), and immediate outcomes of programs (e.g., program attendance). Identifying long-term and intermediate community-level outcomes and collecting such data is difficult and expensive (Altman, 1986). More importantly, because communities are empowered to make their own decisions in such models, each community may select different outcomes to target, prioritize different risk factors, and select a different array of programs (Klitzner, 1993). Thus, comparing long-term, intermediate, or immediate outcomes across communities is often quite difficult. The PROSPER outcome study described earlier provides one among many possible approaches to address the aforementioned outcome research issues (also see Greenberg, 2004).

Criteria for Evidence-Based Programs—Another important issue concerns variable standards for classifying interventions as evidence-based. A review of standards for identifying effective preventive interventions highlights what has frequently been noted by researchers in the field (e.g., Elliott, 1998), namely, these standards are highly variable and differ considerably in scientific rigor. Importantly, some researchers have appropriately noted that standards for evidence need to be specific to the phase or type of intervention research (Kellam & Langevin, 2003). In addition to a systematic assessment of existing standards and development of greater consensus among scientists associated with relevant professional organizations—now being undertaken by the Society for Prevention Research and the Federal Collaboration on What Works—further research actively involving community-based practitioners (e.g., effectiveness trials and diffusion or dissemination research) could be used to address this issue (see Society for Prevention Research, 2004).

Best Practices vs. Specific Standardized Models—Related to the issue of what is considered evidence-based, there has been increasing dissemination of broad sets of guidelines or principles of best practices that have been recommended for community-based intervention implementation. These are often written for mixed audiences of researchers and community-based practitioners. For example, Nation and colleagues (2003) present a review of 35 articles from which they derived nine principles associated with effective preventive intervention. Principles concerned intervention characteristics, matching interventions with target groups, and intervention implementation and evaluation. Although such principles provide useful

guidelines for intervention selection, implementation, and evaluation, they raise a concern that communities will believe that they have engaged in evidence-based prevention if they have followed these "principles of effective interventions." The concern is due to the fact that there is no evidence that any particular intervention whose design is guided only by empirically-supported principles will be effective. If these principles are to be used in developing interventions, it will be necessary to use scientifically-sound outcome research to test their efficacy; this effort could be facilitated by practitioner–scientist collaboration.

Grassroots Concerns Regarding Evidence-Based Models—Yet another issue concerns some resistance among adolescent-health and mental-health professionals to evidence-based interventions, as has been described in recent professional publications (e.g., Nathan, 2004; Research and Training Center on Family Support and Children's Mental Health, 2004). One frequently noted concern about evidence-based interventions is that the evidence base for a given intervention does not necessarily address the diversity and complexity of real-life settings. Thus, if programs have only been tested under "efficacy" conditions, there is a need to move to the stage of effectiveness research (Greenberg, 2004). Such resistance among adolescent-health and mental-health professionals harkens back to the practitioner–scientist tensions described in the introduction and could be at least partially addressed through the formation of practitioner–scientist partnerships, as advocated herein. Furthermore, it could be instructive to conduct collaborative survey research that would systematically examine these types of resistance and contributing factors—information that could inform improved partnership design.

Clarifying Policy to Support Capacity-Building

An important step in this process is to understand how policy-making could impact capacity-building. The policy-making task is formidable and relevant policy is arguably very broad in scope. Relevant policies could be classified as direct (e.g., youth programming, community development) or indirect (e.g., economic policies influencing availability of funds for youth programming and evaluation). Even if limited to only direct approaches, there is a wide range of mechanisms by which governmental and other organizations could promote effective practitioner–scientist partnerships. These might include mechanisms that (a) mandate evidence-based interventions, (b) mandate school–community collaboration, (c) increase funding for evidence-based interventions, or (d) regulate such interventions (see Midgley, 2000). This might occur within categorical areas such as tobacco or substance abuse prevention, family–school communication, or after-school programming (e.g., 21st Century initiative), but preferably, more generically, as part of a comprehensive strategy.

There has been substantial federal activity at a broad level to build accountability through the Government Performance and Results Accountability Act (GPRAA, U.S. Congress, 1993). The effects of GPRAA are trickling down to state and local government agencies that are requiring evidence that public dollars are well spent. More directly, youth programming and other educational activities are dramatically impacted by the "No Child Left Behind" legislation of 2001 which places a new and strong emphasis on scientifically-based practice. Despite its limitations, this landmark legislation represents one opportunity to bring evidence-driven programs to U.S. education (Coalition for Evidence-Based Policy, 2002). Another set of policy changes that impacts partnership capacity-building concerns the Community Schools Movement and the 21st Century after-school programs, both supported by federal initiatives. The goal of Community Schools is to make the school a place where many sectors of a community combine forces to work in partnership to educate children (Blank, Melaville, & Shah, 2003). The 21st Century program requires participation by both school districts and local community agencies to promote both child and family development.

Although a joint emphasis on accountability and community involvement indicate promising trends, there has been little consideration of policy-making that would support capacity-building to ensure high quality program implementation as well as sustainable program-related change. Clearly there is a need for improved policies regarding the operation and infrastructural support for community partnerships focused on substance abuse, tobacco use, and youth development, for example. These regulations not only would address the use of evidence-based interventions, but would also create a structure that would provide ongoing and proactive technical assistance to communities on both a regional and state level (Hallfors et al., 2002).

One major barrier to effective long-term outcomes is the tendency toward crisis-driven, piece-meal policy-making about youth and families in this country (Briar-Lawson & Drews, 2000), which is inconsistent with the type of comprehensive youth and family competency building advocated here. It should be noted that advocacy for substantial paradigm shifts for youth-related social policy have been emerging since the early 1990s, such as those emphasizing youth as resources (e.g., see Calhoun, 1992). In addition, some groundwork for future, more comprehensive policy-making already has been laid. Most noteworthy are efforts to reformulate a framework for public health policy that promotes community-based prevention policies, with strategies specifically aimed at organization- or systems-level change (Milio, 1999). Also, Sorenson (2003) has recommended policy review and change regarding how single-state agencies, national organizations, and state affiliate organizations could better support practitioner–scientist collaboration. The primary point here is that the current literature on policy-making concerning community-based prevention should be critically assessed to evaluate policy-making priorities of direct relevance to the broad diffusion of effective practitioner–scientist partnerships.

SUMMARY

The vision guiding the practitioner–scientist approaches like those advocated in this article is, essentially, one of positive spiraling effects on public health and well-being. That is, over time, diffusion of competence-building and youth environment-enhancing interventions through networks of practitioner–scientist partnerships could conceivably improve competencies in general population youth caretakers (parents and school personnel) and the youth themselves, with correspondingly decreasing youth problem behaviors and physical health problems. Increasing competencies and decreasing the prevalence of problems among the youth in one generation will likely have benefits to the next generation of youth through cross-generational transmission processes (Elder, Caspi, & Downey, 1986; Scaramella & Conger, 1998; Whitbeck et al., 1992). The authors envision the ongoing collection of community partnership efforts and a network of such partnerships as potentially contributing to this type of positive spiraling process of public health and well-being effects.

This paper began with a summary of practitioner–scientist tensions, the related growth of practitioner–scientist partnerships, and the benefits of partnership-driven youth and family competence-building prevention. There are compelling indications in public health epidemiology for resolute pursuit of larger-scale partnership building guided by emerging community and prevention sciences. Related consideration of the wide range of issues and barriers for those involved in community–university partnerships—and the limited human, technical/scientific and funding resources available—highlights the challenges that lie ahead. On the other hand, great effort to surmount the challenges is warranted by the potential public benefits of efficient and effective practitioner–scientist collaboration directed toward capacity-building, particularly for collaboratives based in existing community, state, and national infrastructures.

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Fig. 1.

PROSPER organizational structure for state public education partnerships. *Note*: Dashed lines represent intermittent direct contact; solid lines represent regular direct contact. These partnerships are presently called PROSPER Partnerships (*PRO*moting *S*chool/community–university *P*artnerships to *E*nhance *R*esilience). *Source*: Spoth, Greenberg, Bierman, and Redmond (2004). PROSPER community–university partnership model for public education systems: capacity-building for evidence-based, competence-building prevention. Invited article for *Prevention Science* (special issue), 5(1), 31–39. (Adapted with the kind permission of Kluwer Academic Publishers.)

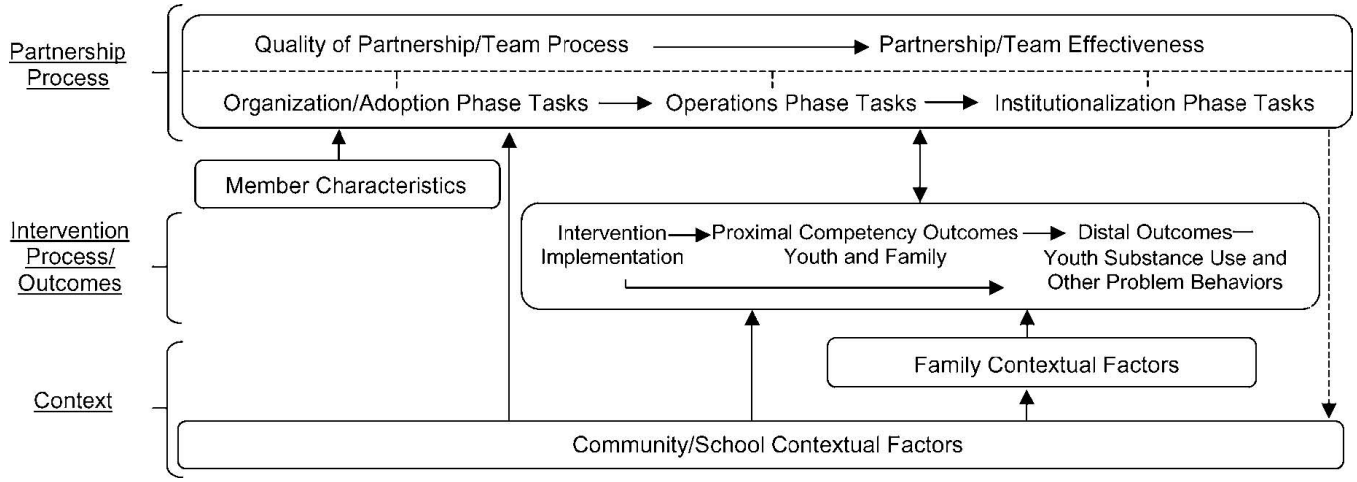

Fig. 2.
Partnership process-to-outcome model for implementation of evidence-based youth and family competence-building interventions.