

## Community and Team Member Factors that Influence the Early Phase Functioning of Community Prevention Teams: The PROSPER Project

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**Abstract** This research examines the early development of community teams in a specific university–community partnership project called PROSPER (Spoth et al., *Prev Sci* 5:31–39, 2004). PROSPER supports local community teams in rural areas and small towns to implement evidence-based programs intended to support positive youth development and reduce early substance use. The study evaluated 14 community teams and included longitudinal data from 108 team members. Specifically, it examined how community demographics and team member characteristics, perceptions, and attitudes at initial team formation were related to local team functioning 6 months later, when teams were planning for prevention program implementation. Findings indicate that community demographics (poverty), perceived community readiness, characteristics of local team members (previous collaborative experience) and attitudes toward prevention played a substantial role in predicting the quality of community team functioning 6 months later. *Editors' Strategic Implications:* The authors identify barriers to successful long-term implementation of prevention programs and add to a small, but important, longitudinal research knowledge base related to community coalitions.

**Keywords** Community · Prevention · Partnership · Substance use

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## Introduction

During the last decade increased emphasis has been placed on the formation and action of local community partnerships or teams to improve coordination and outcomes of human services (Backer 2003; Butterfoss et al. 1996; Chinman et al. 2005; COMMIT 1995; Kegler et al. 1998; Kumpfer et al. 1993; Saxe et al. 1997; Wandersman 2003; Yin et al. 1997). These community partnerships<sup>1</sup> have varying structures and have been used for the provision of both treatment services and prevention services.

The increasingly popular strategy of targeted prevention partnerships (Mayer et al. 1998) is intended to involve multiple community sectors to develop a common definition of a problem, select a coherent strategy to address the problem, and implement the strategy. Although, partnership approaches should lead to better coordination of community resources, reduce redundancies in service provision, and increase service effectiveness (Stevenson and Mitchell 2003), there has been little firm evidence that the community partnership strategy is effective for promoting behavioral health at a population level (Kreuter et al. 2000; Mitchell et al. 2004; Roussos and Fawcett 2000).

This study examines the early development of community teams in a specific university–community partnership project called PROSPER (Spoth et al. 2004). PROSPER creates local community teams that have the central goal of implementing evidence-based programs intended to support positive youth development and reduce early substance use as well as build the community's broader capacity to provide effective prevention services. We examine how a variety of factors at the time of team formation influence team functioning 6 months later, at the point at which the teams have begun planning for the local implementation of an evidence-based prevention program for 6th graders and their families in their communities. The factors operating at team formation that we examine attempt to capture the influence of factors across different ecological levels including community demographics, team member perceptions of community readiness, and the individual characteristics and attitudes of team members.

### Factors Influencing Partnership Functioning

Surprisingly, there has been relatively little scientifically rigorous research either on the structure, developmental processes, or outcomes of such partnerships that utilize rigorous scientific methods. There have been few randomized clinical trials examining the effectiveness of community coalitions or partnerships (COMMIT 1995; Hallfors et al. 2002) and even fewer longitudinal studies of their lifecycle or phases of development. A number of fundamental questions regarding the operation

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<sup>1</sup> Although one could draw distinctions, we utilize the terms coalitions, partnerships, and local teams interchangeably in this manuscript. These terms in our usage refer to a range of informal through formal collaborative groups formed to enact positive change in a community.

of community coalitions remain (Chinman et al. 2005; Harachi et al. 1999; Julian 2005; Spoth and Greenberg 2005; Stevenson and Mitchell 2003).

For example, partnerships may be highly dependent on the presence of stable, local political champions and can be hampered by agency-based turf battles as well as budgetary problems that undermine their objectives (Johnson et al. 2003). In addition, partnerships may be influenced by community contextual factors such as community attitudes, social and financial capital, prior collaborative history, and social networks that are not always favorable for sustained cooperative arrangements (Feinberg et al. 2005; Gomez et al. 2005; Klitzner 1993). Further, both maintaining interest and enthusiasm of local partnership members and creating effective internal team dynamics are challenging goals (Foster-Fishman et al. 2001a). While seemingly non-controversial, community coalitions or partnerships may even be disadvantageous when implemented ineffectively (Klerman et al. 2005).

### The PROSPER Partnership Model

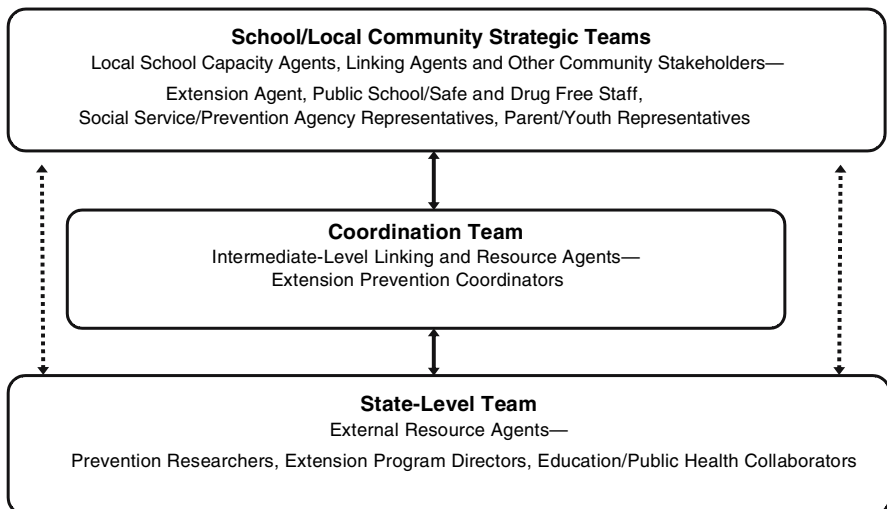
*PROSPER* (*PRO*moting School/community-university Partnerships to Enhance Resilience) is an exemplar of a university–community form of partnership that utilizes the broad reach of the Cooperative Extension Service that is central to Land Grant Universities. PROSPER partnerships foster implementation of evidence-based youth and family interventions, with ongoing local needs assessments, monitoring of implementation quality and partnership functioning, and evaluation of intervention outcomes (Spoth et al. 2004). The PROSPER partnership includes representatives from three entities: (a) Land Grant University faculty and the Cooperative Extension staff; (b) elementary and secondary school system personnel; and (c) community providers of family and youth services and other community stakeholders (e.g., representatives of the juvenile court system, students, and parents).

Figure 1 outlines the organizational structure of these partnerships. These partnering organizations and personnel operate at three different levels within a state: (a) local community-school level strategic teams; (b) an intermediate-level coordinating team; and (c) state-level team consisting of external resource agents. The local community-school strategic teams are the core of the model; these teams are responsible for prevention program selection, implementation, supervision, and ultimately, sustainability. Cooperative Extension System personnel servicing communities through county-based offices serve key roles as leaders of these local teams. Most county-level educators hold Master's degrees with a specialization in youth or family programming and are experienced in community leadership development. The *second* set of local partners consists of elementary and secondary public school personnel. One or two school district staff function as the primary school representatives on the local team and serve as team co-leader(s), whereas other school district personnel (superintendents, principals, curriculum directors, educators) may not be team members, but help support program implementation. The *third* set of local partners involves 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; Morrissey et al. 1997; Wandersman et al. 1998).

The PROSPER partnerships include two levels of external resources that provide support for local teams. As depicted in Fig. 1 (bottom tier), a state-level team involves prevention scientists, university-based Extension specialists, and other state-level collaborators from the education system who can assist with local adoption of evidence-based competence-building prevention programs, and with ongoing technical assistance and evaluation. This university-based team also enhances capacity by providing support to the intermediate-level coordinating team led by an Extension prevention coordinator (middle of Fig. 1). These Prevention Coordinators provide technical assistance, and administrative oversight for the local PROSPER teams. Notably, these coordinators place an emphasis on *proactive* technical assistance (see Mihalic et al. 2002) and frequent (at least weekly) contacts with local team members to actively engage in collaborative problem solving. They attend local team meetings, facilitating and documenting overall partnership functioning, and provide two-way communications with the university and state-level groups.

As with other models of partnership or coalition processes (Chinman et al. 2004; Florin et al. 2000; Hawkins et al. 2002; Pentz 1986), the local PROSPER partnerships proceed through a series of broad phases (see Spoth and Greenberg 2005). The first, organizational phase usually lasts for 6–8 months and involves partnership formation activities. These activities include recruiting key members, receiving training in the PROSPER model and understanding how to maintain



\*Note: Dashed lines represent intermittent direct contact; solid lines represent regular direct contact.

**Fig. 1** PROSPER organizational structure

fidelity to the model, and coalescing as a team. The second phase, the operational phase, consists of implementing chosen programs and policies; in the case of PROSPER, its duration is open-ended with an initial operational phase that is funded for 3 years. The third broad phase, institutionalization, focuses on sustaining the effective activities of the local partnership and often involves engaging other community entities to create a more permanent structure for the team's operations. During both the operational and institutional phases, teams are likely to change their composition and it is likely that new programs, policies, or even goals may emerge. In the current report we examine how initial community and team characteristics relate to team functioning at the end of the organizational phase. At this point each local team is finalizing its organizational efforts and beginning the planning process for implementing a family-focused prevention program. This planning process includes a variety of activities, including program selection, hiring of implementation staff, and development of a recruitment/marketing campaign to encourage families to attend.

### Factors Potentially Influencing PROSPER Partnership Functioning

Most of the research literature on partnerships has been prescriptive and/or descriptive, rather than analytic, and almost no studies have longitudinally followed the cycle of partnership development from initiation to institutionalization or sustainability (McLeroy et al. 1994). The limited research that does exist has focused primarily on the process of the partnership itself (Foster-Fishman et al. 2001a), rather than evaluating interrelationships among partnership processes and outcomes. An unresolved issue in partnership process and outcome research is the identification of factors that may be associated with well-functioning partnerships specific to various phases of their development (phases of partnership organization, operations, and institutionalization). Untangling causal chains of influence in partnership development is best guided by longitudinal studies that examine communities from the initial formation through training and program implementation, such as is the case in the present study.

#### *Team Dynamics and Leadership*

Although there is no guarantee that effective team functioning will ensure positive community health outcomes (e.g., community level reductions in youth substance abuse), positive team dynamics in the organizational phase are likely to promote the intermediate goal of an effectively functioning team that is able to assess communities needs, successfully recruit program participants, implement evidence-based programs with fidelity, and serve as a resource for improving policies for the community. Much of the available research indicates that factors such as participation, leadership, task-focus, cohesion, and identity are related to indicators of success (Allen 2005; Florin et al. 2000; Foster-Fishman et al. 2001a; Gottlieb et al. 1993; Greenberg et al. 2005; Kegler et al. 1998; Stevenson and Mitchell

2003). For example, teams with ineffective leadership are frequently riddled with conflict or lack a clear focus and are less likely to make effective decisions or implement programs with quality (Emshoff et al. 2003). Thus, team dynamics are an important signpost in the early phases of partnership operations, and they serve as the dependent measures in the current study (Foster-Fishman et al. 2001a).

### *Community-level Factors*

A number of factors have been hypothesized to influence team functioning the early phases of local team organization and operations. Community level factors that may influence team functioning include the structural, financial, and social capital (i.e., relationships among individuals and organizations) of a community (Herrenkol et al. 2002; Osgood and Chambers 2000; Reisig and Cancino 2003; Sampson et al. 1997). Communities that are poor have few well-functioning institutions and have a history of mistrust or failure may have more difficulty in developing effective partnerships. Measures of social capital such as the readiness of a community to support collaborative efforts, as well a history of collaboration, have been shown to predict early team functioning in other studies (Feinberg et al. 2004; Foster-Fishman et al. 2001b; Jausa et al. 2005).

In the present study we assess a number of community level factors. First, we examine community readiness. Although there are a number of models of readiness (Chilenski et al. 2007), all of these models hypothesize that key determinants of success are the organizational and motivational “readiness” of the community in terms of leadership capacity, organizational resources and networks, and public and local leadership attitudes. In the current study we operationalize community readiness by assessing key leader perceptions of community attachment, community initiative, community efficacy, and community leadership. Although community readiness is believed to influence team functioning, some have argued that the processes leading to coalition success are frequently unpredictable and idiosyncratic (Klitzner 1993).

Second, we examine community financial, capital, and structural characteristics by assessing how community level poverty and community level educational attainment may influence team processes. Although demographic variables have been examined to understand who is willing to participate in local community action projects (Wandersman and Florin 2000), no longitudinal studies have examined how community-level characteristics impact team functioning. Further, we are aware of no longitudinal studies of community partnerships that have examined the influence of these processes from the point of team formation. To date, these data have only been gathered retrospectively (Feinberg et al. 2004; Florin et al. 2000; Jausa et al. 2005).

### *Individual Team Member Characteristics*

Another set of factors includes characteristics of the individual members of local teams. For example, in a study of Communities that Care (CTC) coalitions,

members' knowledge of prevention was associated with coalition sustainability (Gomez et al. 2005), suggesting that coalition or local team members' knowledge of prevention is an important factor. There has been little empirical examination of factors such as members' prior history of involvement with other coalitions, or how factors such as individual personality characteristics might impact later team functioning (Foster-Fishman et al. 2001a; Sink 1996). Here we examine how team members' history of collaborative experience, attitudes regarding the efficacy of prevention, attitudes toward this specific project, and the skills and resources team members bring to the local teams relate to later team functioning.

Previous research indicates that factors like those examined in this study, such as perceived readiness and individual level factors such as past collaborative experience of team members, are likely to impact the success of the initial organizational phase tasks. In turn, success in the organizational phase is likely to influence effective team functioning during the second phase of partnership activity—the operations phase in which programs and/or policies are implemented (Florin et al. 2000; Foster-Fishman et al. 2001a). For example, research on CTC coalitions indicated that amount of training, as well as community readiness, predicted team functioning and fidelity during the operations phase (Feinberg et al. 2002, 2004).

This study is exploratory and descriptive. We explore how community readiness, community resources, positive attitudes towards prevention, and previous experience and leadership in coalition activities contribute to team functioning in rural and small town settings. Because data for this study were collected from team members from the very outset of team formation, we can examine how team member experiences and attitudes measured before PROSPER implementation began, as well as structural factors at the level of the community may impact subsequent team development and progress.

## Method

### Participants

Participants included 108 prevention team members in 12 intervention communities located within two states that are participating in the PROSPER project.<sup>2</sup> These individuals included local Cooperative Extension and school representatives, local mental health and substance abuse agency representatives, and parents. An average of 9.0 individuals from each team participated in the interview across both data collection points (range 6–13). Respondents ranged in age from 24 to 58 ( $M = 42.1$ ,  $SD = 8.37$ ) and 35.2% of respondents were male. Ninety-nine percent of the respondents were Caucasian, which was representative of the overall population in

<sup>2</sup> As reported previously (Chilenski et al. 2007) the full PROSPER model includes 14 intervention communities. The smaller number of communities involved in this data analyses is due to the two intervention communities that dropped out early in the project and subsequently were replaced. The two new intervention communities missed participating in this first post-test data collection, at 6 months.

the project communities (96% Caucasian). All respondents indicated completing a minimum of a high school education or GED, with 90.2% of the sample having obtained a college degree. Eighty-five percent of the sample lived in or near the school district that organized the PROSPER intervention team.

## Procedure

### *Recruitment*

Primary eligibility criteria for communities considered for the project were school districts that had (a) an enrollment of 1,300–5,200 and (b) at least 15% of the student population eligible for free or reduced cost school lunches. A total of 28 communities were recruited for the project; half of these were assigned to the partnership intervention condition and half were assigned to a control condition. Communities assigned to the partnership intervention condition comprise the sample analyzed for this study. Communities in which over half of the population was either employed by or attending a college or university were excluded from the project, as were communities that were involved in other university-affiliated prevention research projects with youth. The participating universities' Institutional Review Boards authorized the study before participant recruitment began.

Community and participant recruitment followed several steps. Initial contacts were made with regional- and/or county-level Extension personnel about the project. Where there was interest and available personnel, project investigators explained the project in more detail to the Extension personnel who had the requisite programming expertise. Subsequently, investigators and Extension personnel met with local school district superintendents and principals to describe the project's partnership model and research design. Communities that had both a school district and a county extension agent that were willing to be involved in PROSPER programming were recruited to participate. After recruitment, districts were matched on size and geographic location and then randomized to intervention and control conditions. Local teams (as described above) were formed in the communities assigned to the intervention condition.

### *Assessment*

All measures except community poverty and the community measure of educational attainment were derived from team member responses to a structured interview with quantitative rating scales. Team members (TM) participated in a 1-h face-to-face interview at two time points. Time one occurred within 2 months of team initiation. Over 80% of the team members had attended only one team meeting prior to this initial interview. Time two occurred approximately 6 months later, towards the end of the organizational phase and before program implementation began. Upon completion of the interviews, participants were compensated with \$20.

## Measures

Several constructs describing community and team characteristics were created. Unless otherwise noted, response items were scored on a 4-point Likert scale that ranged from “Strongly Disagree” to “Strongly Agree,” and all scales were formed by taking the mean of the scale items. In addition, all individual-level scales were aggregated to the team level in order to explicitly assess predictors of community-based prevention team functioning.

### *Time 1 Measures*

Assessment of the community context included demographic measures and a measure of community readiness. *Community poverty* was aggregated to the level of the school district from the US 2000 Census (2000) by the National Center for Education Statistics (2003), and it measures the percent of families that live below the federal poverty threshold ( $M = 6.7\%$ ,  $SD = 2.52$ ).<sup>3</sup> *Educational attainment* was measured by the percent of high school graduates that attend a 2- or 4-year degree granting institution after high school ( $M = 76.9$ ,  $SD = 7.5$ ).<sup>4</sup>

Four conceptually-based sub-scales were developed and merged into a master scale to measure *Community Readiness* (Chilenski et al. 2007): (a) *Community attachment* (adapted from Wandersman et al. 1987) measures the level of resident investment and closeness in a community; an example item is, “most people care greatly about what this community is like.” (b) *Community initiative* measures the level of active engagement of community members (adapted from Feinberg et al. 2004); an example item is, “this community is willing to try new ideas to solve community problems.” (c) *Community efficacy* measures the ability of community members to work together for community benefit (adapted from Feinberg et al. 2004 and Wandersman et al. 1987); an example item is, “in the past the community has been successful at addressing social problems.” (d) *Community leadership* measures the effectiveness of community leadership (adapted from Feinberg et al. 2004); an example item is, “community leaders are able to build consensus across the community.” The overall *Community Readiness* scale had an alpha of 0.75. Chilenski et al. (2007) provides information describing the second-order factor structure and validity of the scale.

Several scales corresponding to constructs describing team characteristics also were assessed at Time 1. *Collaborative experience* assessed team members’ prior involvement in collaborative activities: their involvement in collaboration (yes/no), their attendance at meetings, and their leadership (formal leader, informal leader,

<sup>3</sup> The percentage of students that receive a free or reduced lunch and the median household income can also be used to assess the economic risk of our community sample. The percentage of students receiving free and reduced lunch was 28.5% ( $SD = 10.6$ , range = 10.4–48%), and the median household income for the community sample was \$37,114 ( $SD = 6,596$ ).

<sup>4</sup> The Pennsylvania school district data was compiled from the Pennsylvania System of School Assessment District Report Cards (2003). The Iowa school district data was compiled from the Iowa Department of Education Data Spreadsheets (2003).

not a leader). The scale ranged from 0 to 4 with individuals that had not been involved in any collaborations within the last 6 months receiving a “0” for the scale, and individuals that were highly involved in at least one collaboration within the last 6 months (i.e., they attended the majority of the meetings and were a formal leader of the group) receiving a “4.” Two scales (13 total items,  $\alpha = 0.79$ , scales correlate  $r = 0.64$ ) were merged into a factor to measure *attitudes regarding prevention and project goals*. The first subscale, *Value of prevention*, assesses the degree to which members view prevention programs as valuable; an example item is, “Violence prevention programs are a good investment.” The second subscale, *PROSPER expectations*, assesses the degree to which team members expected that PROSPER could make positive changes in the community; an example item is, “I expect my community to accept PROSPER and get behind it.” One scale assessed *Team skills*, the amount of skills and resources available for program implementation and collaboration (13-items,  $\alpha = 0.85$ ). Two example items are, “To what degree would you rate your strengths and skills...in your experience implementing or running youth or family programs?” and “...in your access to resources such as money, equipment, media, or volunteers that will help the PROSPER team?”

### *Time 2 Measures: Team Functioning*

Three scales were developed to measure different aspects of team functioning. *Team focus on work* was a five-item, true-false scale that assessed the work-orientation of the team ( $\alpha = 0.69$ , adapted from Moos and Insel 1974). An example item is, “People pay a lot of attention to getting work done.” *Team culture* was an eight-item scale that assessed the team atmosphere ( $\alpha = 0.80$ , adapted from Kegler et al. 1998). Two example items are, “there is a strong feeling of belonging in this team” and “this is a decision-making team.” *Team leadership* was an eight-item scale that assessed the degree to which team leadership encouraged input and consensus and promoted a friendly work-environment ( $\alpha = 0.78$ , adapted from Kegler et al. 1998). Two example items are, “the team leadership...gives praise and recognition at meetings” and “...intentionally seeks out your views.”<sup>5</sup>

### Methods of Analysis

All analyses are conducted at the level of the community-level team utilizing community means. Given the inherent difficulty of assembling a large sample size in community partnership research, the sample size of 12 communities affords limited statistical power, not sufficient for the use of multi-level modeling (Baldwin et al. 2005). First, zero-order correlational analyses are conducted within Time 1 and Time 2 measures. Second, partial correlations examine how Time 1 measures

<sup>5</sup> Technical reports with complete description of all constructs and scales can be obtained from the first author.

are related to Time 2 functioning. Because the sample size of 12 affords limited statistical power, we cautiously note and interpret correlations that are greater than or equal to 0.38 and have a 1-tailed significance test of  $p \leq 0.10$ . A correlation equal to 0.38 is equivalent to explaining a considerable amount (approximately 14%) of variance. Interpreting only the associations that meet this significance criterion, are in the expected direction, and are not overly influenced by one or two cases are safeguards against drawing inappropriate conclusions from findings that have occurred by chance.

## Results

### Descriptive Statistics

Table 1 presents the descriptive statistics for all scales both at the individual and community levels. Table 2 contains simple correlations for all variables at the community level ( $N = 12$ ). A few strong correlations are worth noting. First, community poverty had strong negative relationships with readiness ( $r = -0.51$ ), team culture ( $r = -0.70$ ), and team leadership ( $r = -0.58$ ). These correlations indicate that communities that had more families below the poverty level were rated as less ready to initiate community partnerships, and had lower ratings of team culture and team leadership 6 months later at Time 2. In contrast, the relationship between community poverty and team focus on work was relatively weaker. Second, team-level attitudes regarding prevention at Time 1 were related positively with team level perceptions of their skills and resources ( $r = 0.76$ ). In addition,

**Table 1** Descriptive statistics

Variable	Individual level <sup>a</sup>		Community level <sup>b</sup>			
	Mean	SD	Mean	SD	Min	Max
Community characteristics						
Community poverty	na	na	6.67	2.52	1.8	10.7
Education attainment	na	na	76.94	7.55	63.9	88.9
Community readiness	2.67	0.36	2.69	0.21	2.4	3.1
Team characteristics						
Collaborative experience	2.45	1.64	2.43	0.48	1.4	3.1
Prevention attitudes	3.74	0.28	3.73	0.14	3.4	3.9
Team skills	3.28	0.44	3.28	0.12	3.1	3.5
Team functioning						
Focus on work	93	0.17	0.92	0.08	0.7	1.0
Team culture	3.59	0.38	3.58	0.22	3.1	3.9
Team leadership	3.75	0.32	3.74	0.14	3.6	3.9

<sup>a</sup>  $N$  varies from 95 to 102 for the individual variables

<sup>b</sup>  $N = 12$  communities

**Table 2** Simple correlations of all scales

	1	2	3	4	5	6	7	8	9
1. Community poverty	–								
2. Educational attainment	0.07	–							
3. Community readiness	–0.51*	–0.24	–						
4. Collaboration experience	–0.36	0.34	0.39**	–					
5. Prevention attitudes	0.11	0.17	0.16	0.33	–				
6. Total skills	0.15	0.23	0.07	0.33	0.76***	–			
7. Focus on work	0.30	–0.23	0.21	–0.25	0.11	–0.24	–		
8. Culture	–0.70***	0.10	0.45**	0.28	0.29	0.06	0.16	–	
9. Leadership	–0.58*	0.04	0.36	0.24	0.54***	0.28	0.09	0.92***	–

\*  $p < 0.05$ \*\*  $p = 0.10$ \*\*\*  $p < 0.01$ 

initial attitudes regarding prevention were positively related to Time 2 ratings of team leadership ( $r = 0.54$ ).

### Partial Correlations

We followed-up the initial simple correlations with partial correlations. Given the strong relationship between poverty and other variables noted above, this analysis partials-out the effect of poverty to assess the independent and additive contribution of the Time 1 variables of community readiness, team collaboration experience, prevention attitudes, and total skills. Results are presented in Table 3. After the effect of community poverty was taken into account, several meaningfully additive relationships surfaced. Community readiness was more strongly related to team focus on work ( $r = 0.45$ ,  $p = 0.08$ ); teams that reported their communities were more cohesive and involved in community events were more focused on getting work done. A team's overall attitude regarding prevention was significantly related to later team culture ( $r = 0.63$ ,  $p < 0.05$ ) and team leadership ( $r = 0.75$ ,  $p < 0.01$ );

**Table 3** Partial correlations between independent and dependent variables (partialling out the effect of community poverty)

	Community readiness	Collaboration experience	Prevention attitudes	Total skills
Focus on work	0.45*	–0.16	0.08	–0.30
Culture	0.14	0.05	0.53**	0.24
Leadership	0.09	0.04	0.75***	0.46*

\*  $p \leq 0.10$ \*\*  $p \leq 0.05$ \*\*\*  $p \leq 0.01$

teams that placed a higher value on prevention activities and project goals had a more positive work atmosphere ( $r = 0.53, p < 0.05$ ) and rated their leaders as better at building consensus and promoting a friendly work-environment ( $r = 0.75, p < 0.01$ ).

### Post-hoc Examination of Poverty Effects

We conducted a number of post-hoc analyses to investigate whether other variables might account for the strong effects of poverty on team outcomes. First, we examined the characteristics and attitudes of the team leaders at Time 1 (Extension agent) including their own attitudes towards prevention and their experience and skills. Second, we examined other community characteristics including team members' Time 1 ratings of their local schools quality, the local reputation of Cooperative Extension, perceptions of local substance abuse norms and availability, and census data on residential stability. Planned, hierarchical regressions were run in two ways: (a) entering these characteristics prior to community poverty and (b) entering these characteristics just after community poverty to test for mediation (MacKinnon et al. 2000). None of these potential proxies for poverty decrease the amount of variance accounted for by poverty or were significant in predicting team culture or leadership.<sup>6</sup> Essentially these post-hoc analyses demonstrated that poverty remained the variable most associated with team functioning. We also examined the community level correlation between the percent of families in poverty and total school district spending per student; the correlation was  $-0.28$  indicating that communities with higher rates of poverty spent somewhat fewer dollars per student on total education costs.

### Discussion

This study examined various factors that may affect the early functioning of community teams focused on promoting healthy youth development and reducing early substance use and other youth problem behaviors. These community teams are located in small towns in rural areas in Pennsylvania and Iowa and were volunteer communities where substantial interest was expressed by key staff in the local schools and Extension system for engaging in community action. The team members were primarily professionals from Cooperative Extension, education, and social services, as well as parents and youth. Results indicated that community demographics as well as characteristics and attitudes of local team members had substantial associations with the quality of coalition functioning 6 months later.

Somewhat surprisingly, the degree of poverty in a community (the percent of families below the Federal poverty level) was strongly associated with both the perceived quality of the team's leadership and the team's culture after 6 months of team operation. The strength of this finding was unexpected given the relatively

<sup>6</sup> These regression analyses can be obtained from the first author.

narrow range of poverty levels found in these communities (percentage of families below the poverty level ranged from 2 to 11%, with a mean of 6%; free and reduced lunch rates ranged from 10 to 48%, with a mean of 28.6%). The national average of families of school age children below the poverty level is approximately 10% (National Center for Educational Statistics 2004).

The strength of the community poverty level in relating to later team functioning may be somewhat consistent with theories regarding the impact of social disorganization on individual level outcomes. However, it should be noted that models of social disorganization have been previously applied in the context of urban setting with much higher average rates of poverty. Secondary analyses were run to examine how other factors at the level of the team members as well as perceptions of the community might mediate or explain the role of poverty given previous findings on factors related to social disorganization (Duncan et al. 2002). None of the analyses that added additional constructs including team member perceptions of community norms for substance abuse, the quality of schools, or census data on residential mobility substantially reduced the variance accounted for by the single measure of community poverty. While these analyses do provide support to theories of social disorganization, other unmeasured variables might account for this effect. For example, this study did not directly measure such factors as neighborhood social cohesion, mutual trust, or the willingness of residents to intervene when they see a problem, all of which have been found to affect community rates of crime and adolescent delinquency in urban communities (Coleman 1988; Sampson et al. 1997).

Although unmeasured mediators might account for the influence of community poverty on team functioning, one possible explanation is analogous to that accounting for the link between SES and individual level-health: that is, lower SES individuals experience more stress, which places them at higher risk for poor outcomes. Adler et al. (1994) summarizes research that demonstrates consistent relationships between SES and health, behavioral, and psychological outcomes. In a similar fashion, community poverty may stress agencies and institutions in a manner that has a number of effects. First, communities with greater poverty are achieving poorer outcomes as assessed by community level indicators of outcomes such as higher rates of substance abuse and serious delinquency, and lower rates of college attainment. Second, along with poorer outcomes may come lowered expectations for change by both professionals and families that may lead to a sense of disempowerment or low community-level efficacy for change. Correlations in the current study support this idea given the strong relationship between team members perceptions of community readiness for change and level of poverty ( $r = 0.51$ ). Third, higher levels of poverty also are related to somewhat lower levels of funding for services (per pupil revenue in education) and also may reflect less adequate community facilities. In this study there was a negative relationship between community level poverty and total spending per student of 0.28, providing some support for this explanation.

As a result of funding constraints in more impoverished communities, there may be greater fractionation of human services and greater territoriality between agencies. The stress and conflict that result from fewer funds and less readiness for

change may influence attitudes and sense of efficacy of staff (agency personnel, teachers) as well as create higher levels of burnout. This greater conflict between agencies may also reflect a previous history of inaction or failure at collaboration. In addition, there may be issues that are unique to the culture of small towns and rural settings in which there is substantial community stability in economic and social circumstances, and a community's identity (both internal and external reputation) may be stereotyped as progressive, open, effective, or the opposite. Thus, the effects of poverty and related conditions may be due to a cascade of influences on both actual services as well as relational and psychological features of a community. These cascading effects might influence not only individual outcomes, but the ability of a collaborative team to show effective leadership and culture.

These findings have practical implications for developing community partnerships with sensitivity to community conditions. It may be that greater focus should be given to team building, cross-agency communication and understanding, and the history of collaborative difficulties in more highly stressed, lower-resource and more impoverished communities. In this case, it might be useful to delay the operations phase and allocate greater time to developing positive expectations and cross-agency understanding prior to moving the operations phase in these communities.

We hypothesized that the team member's report of community readiness at the outset of team formation would influence team culture and function as has been shown in other studies (Feinberg et al. 2004; Murphy-Berman et al. 2000). Indeed there was a strong and significant relationship between readiness and team culture in the initial correlational analyses and after accounting for the substantial effect of poverty, a similarly strong correlation between readiness and team focus on work emerged. However, after partialling out the role of community poverty, the effect of readiness was no longer significant for team leadership or team culture. This may be due to a number of factors. First, there is a strong correlation between readiness and poverty. Second, it may be that community demographics are a stronger predictor of team functioning than are the community members' perceptions of readiness. Third, because these were volunteer, and not randomly chosen communities, the truncated distribution of readiness may have somewhat reduced the likelihood that a significant relationship would be demonstrated. This finding points out the need to utilize both community-level demography as well as perceptions of community members in understanding the functioning of community teams. We know of no other studies that have simultaneously examined both factors.

Although community poverty strongly influenced team functioning, team-level data on the perceptions and experiences of team members also played a significant role. Team level attitudes regarding the value of prevention and expectations for the PROSPER project were highly related to both team culture ( $r = 0.53$ ), and team leadership ( $r = 0.75$ ). That is, teams whose members showed a more positive collective perception of prevention efficacy and of the prospects of the current project had teams who showed more effective team leadership and healthier team cultures 6 months later. Further, teams who had members who felt that they brought greater skills and resources to the team also perceived more effective team leadership 6 months later.

Thus, in addition to the perceptions of community readiness, the beliefs in the value and efficacy of prevention and the specific belief in the PROSPER model had a substantial relationship to certain aspects of later team functioning in the period in which teams were planning their first interventions. In addition, teams that on average had members with a high diversity of skills also had better perceived leadership. These findings have two practical implications. First, it may be important to select team members early in the team formation/organization phase who believe in the value of prevention, and bring different skills to the team's repertoire, and to screen out or limit the influence of individuals who have less belief in the efficacy of prevention strategies. Although some important stakeholders in the community might be initially excluded, they could be added after there is coherence and a sense of clear mission on the team (Stevenson and Mitchell 2003). Second, early training and technical assistance should provide both knowledge about the efficacy of prevention and the tools for individuals and teams to continue learning about prevention programs and prevention science (Foster-Fishman et al. 2001a).

As in almost all studies of prevention and health-promotion community partnerships, this study has a number of limitations. though the number of key leaders interviewed is substantial (over 100), the number of community teams studied (12) limited our statistical power. The measures utilized here are based on team member reports, which may reflect a number of individual and community biases. In addition, most measures rely on member self-reports aggregated to the team level. Given the relatively small sample sizes of most coalition research, meta-analyses will be important in providing a larger perspective on factors that influence coalition success. Finally, this study examined partnership teams in small towns and rural communities with almost all Caucasian residents and team members, and as such, these findings may not generalize to urban settings or rural settings with different racial or ethnic compositions.

Despite these limitations, this report contributes substantially to our understanding of some of the factors that may influence how communities and their teams prepare to direct and coordinate prevention programming. The data here suggest that community financial assets and community readiness may have substantial influence on internal team functioning. Further, since attitudes regarding prevention also influence team functioning, careful decisions about team member composition are warranted. Training that provides both a strong public health rationale for the effectiveness of prevention and boosts motivation and a sense of efficacy as well training that focuses on effective team communication and leadership are also indicated.

The current findings primarily focus on the first, organizational phase in our model of coalition processes. In the second, operations phase, the nature of team leadership and functioning and the effective utilization of technical assistance are expected to influence the quality of intervention implementation. The quality of implementation is, in turn, expected to affect proximal and distal outcomes for youth and families, as well as program institutionalization and team sustainability (Johnson et al. 2003). However, it is likely that at each stage of the coalition process, different factors may be critical for progress towards full implementation

and sustainability (Greenberg et al. 2005; Jausa et al. 2005). Of considerable interest in the later development of the local teams (i.e., sustainability phase) is the question of what influence local champions and charismatic leaders may have, especially in small towns in which there may be stable networks of social influence. While we have not yet been able to detect the role of such leaders, we expect longitudinal analyses will indicate the strong influence of such leadership in some communities.

### Using the 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, albeit an emerging area of investigation. Essential to scaling up evidence-based interventions through community–university partnerships is an improved understanding of partnership formation and early functioning and how such functioning affects intervention implementation and outcomes across phases of partnership functioning. This deeper understanding creates opportunity for an interface between current prevention-oriented community research and the improvement of the practice of partnerships; it is the nexus of science and practice (Chinman et al. 2005; Julian 2005; Miller and Shinn 2005).

In future reports, we will test the adequacy of our longitudinal conceptual model (Spoth et al. 2004) and examine how team leadership, culture, and other factors in the early phase of PROSPER impact community-level public health outcomes. Understanding the factors that influence both the functioning and outcomes of community coalitions is essential for developing effective community-wide delivery systems for prevention activities and improving public health for adolescents, their families, and communities.

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