

## Chapter 4

### Extracurricular and Other After-School Activities for Youth

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There is growing interest in the developmental consequences of extracurricular and after-school programs for youth, fueled by (a) concerns about the possible role of such activities in both promoting school achievement and preventing school dropout and school disengagement, (b) the continuing disparities in the school achievement of poor youth of all ethnic and racial groups relative to White middle-class youth, (c) the underachievement of American youth relative to youth in other industrialized countries, (d) concerns about whether youth are adequately prepared to enter an increasingly demanding and technical labor market, and (e) the amount of unsupervised time spent by so many youth (e.g., Cooper, Denner, & Lopez, 1999; Dryfoss, 1999; Eccles & Gootman, 2002; Gambone & Arbreton, 1997; Halpern, 1999; Larson, 1994; Lerner & Galambos, 1998; Pittman, Ferber, & Irby, 1999; Quinn, 1999; Scales, 1999). Other critical forces and events highlighting these concerns include the Carnegie Foundation's publication of *A Matter of Time* (1992), the growing interest in positive youth development among both youth advocates in the policy world and developmental and educational researchers interested in adolescence, the growing interest in positive psychology launched by Martin Seligman when he was president of the American Psychological Association, the publication of *When School Is Out* (1999) by the David and Lucile Packard Foundation in their Future of Children series, the increasing concern with violence at schools and declining school engagement among many youth as they move into and through secondary school, and the growing evidence of strong relations between school experiences and socioemotional development.

Added to this list is the growing interest in education outside of the school building and outside of normal school hours. As continued evidence of educational outcome

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disparities between ethnic groups within the United States and continued evidence of weak performance by American students in comparison with students in other countries have accumulated, more and more people have discussed using the out-of-school hours for educational purposes. Although there are ongoing major debates about how best to use the out-of-school hours, school-based educators as well as positive youth development practitioners and policymakers are looking to programs both within and outside of school to understand what kinds of programs provide the best learning and developmental experiences for America's youth. Growth in the funds available for such programs through the federal government's 21st Century Learning Center initiative has accelerated the need for information. Finally, because these funds are targeted for collaborative efforts between schools and community-based organizations, school systems are being asked to play a major role in how the funds will be spent.

In this chapter, we review several bodies of work in an effort to identify the components of extracurricular and other out-of-school experiences that can facilitate the cognitive, psychological, and social aspects of positive youth development. We focus on three large bodies of work: studies of extracurricular activities, nonexperimental studies of after- and during-school programs housed both in and out of school buildings, and experimental evaluation studies of intervention and positive youth development programs housed in and out of school buildings. In the first section, we discuss the methodological issues we confronted as we conducted our review. In the subsequent three sections, we review the research in each of the three aforementioned bodies of empirical work on extracurricular and after-school programs for youth. Although many of these programs are housed in schools, none have academic instruction as their primary mission. In the final section, we draw upon all of the studies to offer some tentative conclusions regarding which features of these types of programs are likely to account for their impact on youth development.

### **METHODOLOGICAL ISSUES IN STUDYING NONACADEMIC AND OUT-OF-SCHOOL PROGRAMS FOR YOUTH**

As we reviewed the work being done in each of the four aforementioned fields, we were struck by the heterogeneity in the following design features:

- characteristics of the youth being studied in terms of age, gender, sexual orientation, ethnicity, family social class, and place of residence
- research designs being used, including in-depth ethnographic studies of small and large local programs, cross-sectional and longitudinal survey-type studies of youth development across a diverse set of contexts, large- and small-scale experimental evaluations of both long-standing programs and new programs, descriptive studies of programs considered to be effective by the communities in which they reside, meta-analyses of other published articles, and more traditional summative reviews of both published and nonpublished reports

- the “outcomes” being studied, which ranged from such youth characteristics as increases in academic achievement, school engagement, mental health, and life skills to decreases in, or avoidance of, such problematic outcomes as teen pregnancy, alcohol and drug use/abuse, and involvement in delinquent and violent behaviors, as well as the quality of implementation of program goals
- level of study focus and analyses, which ranged from individual micro-level changes to much more macro-level changes (community or even city or state)

In addition to these variations, of course, were the variations associated with our initial goal, namely, to look at both school-based and community-based programs and to look at both prevention intervention and positive youth development programs. Being both optimists and intellectual “lumpers,” we decided not to limit the scope of our review in hopes of providing as comprehensive a set of conclusions as possible at this point in time. Although we provide some discussion of the strengths and weaknesses of the methods we found, we do not want to focus too much attention on these problems because we found amazing convergence in the findings and conclusions across the various studies we reviewed. This convergence is made even more important by the diversity of methods used to gather the data.

### **Extracurricular Programs**

As noted, a variety of methods have been used to study extracurricular and other after-school programs for youth. Most of the studies of extracurricular activities have relied on either cross-sectional or longitudinal survey methods that link participation in such activities to a variety of different individual-level outcomes, including indicators of school achievement and engagement, mental health, social development, and involvement in several different types of problem behaviors. Typically, the primary goal of such studies is to describe the relation between participation and other individual-level indicators of youth development. Few of these studies directly measure characteristics of the programs themselves (although more of this type of work is occurring in recent studies). Consequently, such studies tell us little about the actual characteristics of the programs that might explain any observed changes in participants’ characteristics. Nonetheless, they represent a first step along the road toward more firm inferential conclusions. Sports psychologists have done a better job of assessing the specific features of sports programs in their work on effective coaches and effective programs. We include these studies in the extracurricular activities section.

Even the longitudinal studies of extracurricular activities and after-school activities are subject to selection concerns. Some of the recent longitudinal studies have included the most obvious third variables likely to provide an alternative selection bias explanation for longitudinal changes. Some have also gathered data consistent with the theory-based evaluation perspective outlined later in this section; in these studies, the researchers have measured the hypothesized mediators of participation in regard to individual change and then used causal modeling techniques to test these

hypotheses. Such designs tell us more about the plausible "causes" of the longitudinal changes that might be associated with participation in the activity. Almost none of the studies of extracurricular activities have used random assignment, experimental intervention designs to pin down more definitively the consequences of activity participation. Those that have, such as the evaluations of the Teen Outreach Program's service learning experience, are included in our review of program evaluations.

### After-School and Out-of-School Programs

Researchers studying after-school programs, whether in schools or in community organizations, have typically used two strategies: nonexperimental descriptive study strategies and experimental or quasi-experimental program evaluation strategies. In this chapter, we focus on two types of studies: nonexperimental studies of programs nominated as highly effective by the communities in which they reside and more formal evaluation studies that involve either experimental or quasi-experimental methods of evaluation. Although these latter methods are often considered the "gold standard" of program evaluation, they are quite expensive and difficult to implement. In addition, in our opinion, they often do not represent the best technique for studying community-based after-school programs. Given the controversy that rages regarding what constitutes legitimate evidence of program effectiveness, however, we feel compelled to say a little bit about this issue before reviewing the evidence from different methodologies.

In our opinion, the most appropriate method of studying after-school experiences depends on several factors. Most important, the method used depends on the question being asked. The method also depends on the nature of the "thing" being studied. As noted earlier, studies of these types of experiences have focused on at least four different levels: the individual across time, programs, organizations, and communities. Programs themselves are also composed of different specific types of activities. Similarly, organizations usually comprise a wide variety of programs and activities. They are also very heterogeneous themselves, including school-based after-school centers, parks and recreation centers and leagues, community centers, amateur sports leagues, faith-based centers, and the myriad places and opportunities developed by community-based and national youth organizations such as the YMCA, YWCA, 4-H, Boys' and Girls' Clubs, Girls Inc., Beacons, and the 21st Century Learning Centers. Community is the geographical and political place in which programs and organizations operate. Defining what constitutes a community is a complex and controversial task. The best method of investigation depends on which of these levels one wants to study.

Inherent in this levels perspective is the notion that "higher order levels" are composed of "lower order levels." For example, national organizations such as Boys' and Girls' Clubs and Girls Inc. comprise many different programs; programs are made up of activities, and activities can be broken down into specific activity components. Individuals usually select from the array of activities in both the program and the

organization, and they typically manifest a unique pattern of participation. Many funders and stakeholders are interested in whether the "organization" is working rather in than the more specific programs and activities, because they usually fund specific organizations rather than specific programs and rely on the organization staff to make decisions about the programs or activities to include.

However, the most comprehensive theories about programming effects typically focus on either the program level or the activities within the program. Not surprisingly, most experimental and quasi-experimental program evaluations involve the same focus, for two major reasons: (a) Programs and activities are simple enough to allow for explicit theories regarding the nature of proposed effects on youth development, and (b) programs and activities are small enough to make random assignment to treatment and control groups possible. They are also usually sufficiently well developed that manuals and essential materials can be designed and disseminated to organizations throughout the country. The strongest examples of such evaluations are reviewed in the meta-analyses of mental health intervention programs and selected positive youth development programs such as the Teen Outreach Program, Big Brothers/Big Sisters, and the Seattle Social Development Project (also known as SOAR).

Randomized experimental evaluations are much more difficult to conduct at the organization and community levels. For example, there are a variety of challenges to using experimental designs to evaluate large nationally visible organizations such as 4-H and Boys' and Girls' Clubs. First, national organizations differ in their local programming. Consequently, even if one could successfully implement a truly randomized trial evaluation design for specific sites, it is not clear that the information gained would generalize to other sites. In addition, since these organizations are complex and offer a varied assortment of programs, the level of evaluation needs to be quite general. For example, one could assess whether an organization provides the kinds of general environmental conditions outlined in our concluding section and then whether participation in the organization leads to increases in very general outcomes such as community-level high school graduation rates.

One might also evaluate the organizational characteristics needed to support high-quality programming for youth by randomly assigning some of the organizational sites to one form of management and other sites to different forms of management. Such information would be very helpful in furthering our understanding of the reasons why organizations and programs often fail owing to inadequate political, economic, and community social supports as well as why programs found to be effective in one setting are not effective in other settings. But this information will tell us little about the specific aspects of the social context that produce positive developmental results for the participating children and adolescents.

Even evaluating programs within organizations can be quite difficult. Most after-school and in-school nonacademic programs are voluntary. Although parents may try to insist that their children attend, their ability to enforce their desires on their children declines as the children move into and through adolescence. In addition, as noted earlier, many community organizations for youth include a diverse array of

programs from which to select. Often, young people's selections vary from week to week or day to day, making each individual youth's experiences quite unique.

Each of these program and organizational characteristics has implications for experimental program evaluation. For example, the voluntary nature of many community-based programs creates a problem with selection bias. When such programs are offered at school during the regular school hours, random assignment may be easier and more successful because the participants are more likely to attend regularly and complete the program. In contrast, the voluntary nature of joining and attending after-school community-based youth programs, particularly if they are situated in nonschool settings during nonschool hours, leads to more sporadic attendance and higher rates of dropping out. Consequently, researchers are faced with uncontrolled factors that influence attendance. In this case, rigid adherence to random assignment classification in analyzing one's results is likely to lead to underestimation of the program's effectiveness for those youth who are actually exposed to the program over an extended period of time.

Similarly, the diverse nature of many community programs for youth makes exact specification of the treatment problematic. Because individuals can select which parts of the programming to attend and how often, evaluators typically know little about each individual's exposure to various aspects of this programming. Such variation makes it difficult to determine which aspects of the programming are responsible for which developmental outcomes.

Finally, the evolving nature of many youth programs poses problems for evaluation. Experimental methods usually assume a static program. According to several non-experimental studies of youth programs, the most highly respected and well-attended programs are dynamic shifting, for example, in response to seasonal activity structures, changing clientele, changing staff, and information derived from ongoing reflective practice and self-evaluation as well as from the youth themselves (McLaughlin, 2000; McLaughlin, Irby, & Langman, 1994). It is difficult to design random assignment experimental evaluations that capture this dynamic aspect of programs considered to be highly successful by community members.

Given these concerns, it is not surprising that some of the most careful studies of extracurricular and other after-school and positive youth developmental programs involve either nonexperimental methods or mixed methods in which small experiments are embedded as part of an action research agenda. We summarize some of these efforts in our section on nonexperimental studies. It is also not surprising that some of the strongest experimental evaluations of nonacademic programs for youth have been conducted on school-based programs often offered during regular school hours. Interestingly, even though such evaluations often assess programs' effects on academic as well as nonacademic indicators of positive development, the programs are often listed as prevention programs. We discuss this issue later as well.

Studying organized, systematic community-wide efforts at increasing the provision and accessibility of quality experiences for youth is even more challenging. Nonetheless, there is a growing interest in efforts at this level. Both researchers and

policy advocates are coming to the conclusion that substantial and sustainable increments in the quantity and accessibility of high-quality after-school experiences for America's youth will require community-wide initiatives. We were struck with this new trend in our review of newly emerging programs. Many positive youth development advocates are now stressing the need for this approach to youth programming (e.g., Connell et al., 2000; Gambone, 1997; Greenberg, Domitrovich, & Bumbarger, 2001; Halpern, Barker, & Mollard, 2000; Walker, 2001). Individuals interested in whole-service schools also often advocate this perspective (e.g., Adelman & Taylor, 1997; Dryfoos, 1994, 1995; Holtzman, 1997; McMahon, Ward, Pruett, Davidson, & Griffith, 2000). It is unlikely that experimental randomized trial designs are appropriate for studying such community-wide initiatives. Instead, approaches are more closely linked to the new theory-based models of program evaluation (e.g., Connell et al., 2000; Gambone, 1997). We describe this approach next. However, we have not included research on these community-wide initiatives because they are beyond the scope of what we are trying to accomplish in this review.

### **Theory-Based Evaluation**

Given the difficulties in implementing random assignment evaluations of youth-serving programs and organizations, some evaluators have suggested an alternative: theory-based evaluation (e.g., Connell et al., 2000). These scholars claim that theory-based evaluation can be used to study the effectiveness of social programs. They argue that many social and physical scientists test their causal hypotheses by comparing obtained data with predicted patterns of data. The predicted patterns are derived from strong theory. They propose that a similar strategy may be more useful than randomized trials in studying the effectiveness of many social programs, particularly those based on strong and complex theories of change. Although this remains a controversial claim, we believe that this approach provides a very useful alternative to random assignment evaluation, particularly when more complex organizations and community-wide initiatives are the target of study. In addition, we believe that the general strategy of using strong theoretical models to guide program design and study is important for both nonexperimental and experimental studies of all forms of youth-serving programs, including school-based learning programs and extracurricular activities at school as well as community-based out-of-school programs.

Advocates of theory-based evaluation acknowledge the importance of substantive theory, quantitative assessment, and causal modeling, but they do not require experimental or even quasi-experimental designs. Instead, they focus on causal modeling derived from a well-specified theory of change. First, the researchers, usually in collaboration with the program developers, work out a comprehensive model of change that specifies all of the relations (both mediated and moderated) among the various contextual characteristics and youth "outcome" characteristics. Often, these theoretical models include several layers of hypothesized relations between different aspects of the context as well as between different aspects of the relation of context to youth outcomes.

These models lay out a predicted sequence of contextual changes that must occur before one can expect to see changes in youth "outcomes." Thus, the models propose which contextual features must change first in order to produce changes in other contextual features as well as which contextual features are likely to produce changes in which specific youth "outcomes." Finally, these theoretical models sometimes specify how characteristics of the young people themselves, as well as of the program personnel, are likely to affect the relations outlined in the general model. For example, the most comprehensive of such models hypothesize differential effectiveness of program characteristics for various groups of youth and program personnel.

Measures are developed and then collected on all of the causal links between contextual or program characteristics and "outcomes." In the best of such designs, these measures are collected over time so that the hypothesized mediational and moderational relations can be tested as the program is implemented. The researchers then use the data collected from these measures to conduct causal analyses, typically using sophisticated longitudinal data-analytic techniques. If the causal modeling analyses indicate that the obtained data are consistent with the predictions of the program's theory, the researchers are willing to conclude that the theory is valid and that the program is successful for the reasons outlined in the theory.

Even if time does not permit assessing all of the postulated causal links, information on the quality of initial program implementation is typically gathered, because implementation variables are usually the first constructs in the causal model of the program. Thus, even if the hypothesized youth outcome results are not initially obtained, the early data provide some evidence about the extent to which the implementation is proceeding as predicted by the theory. Then the developmental outcomes can be assessed at a later stage when sufficient time has passed for the proposed mediating mechanisms to have their full effect on the proposed outcomes. Very few of the studies we found used this approach at any more than a superficial level. We will know much more about the impact of the specific aspects of programs on specific indicators of positive youth development, including those assets linked to school achievement and lifelong learning, when theory-based approaches are used in both experimental and nonexperimental designs.

### EXTRACURRICULAR, SPORTS, AND LEISURE ACTIVITIES

The release of *A Matter of Time* by the Carnegie Corporation of New York (1992) focused attention on the role productive use of time might play in successful adolescent development and school achievement. It illustrated how much discretionary time adolescents have and how much of this time is spent on unstructured activities such as "hanging out" with friends, watching television, and listening to music. The authors argued that constructive, organized activities would represent a better use of adolescents' time because (a) doing good things with one's time takes time away from opportunities to get involved in risky activities, (b) one can learn good things while engaged in constructive activities (e.g., specific competencies, prosocial values



and attitudes), and (c) involvement in organized activity settings increases the possibility of establishing positive social supports and networks that can facilitate both current levels of school engagement and achievement and subsequent educational and occupational attainment.

Four lines of work provide support for these suggestions: classic sociology studies of the relation of extracurricular activities to school achievement, research emerging from the newer field of leisure studies, research in sports psychology, and recent work emerging from interdisciplinary studies of adolescent development. Several sociological studies conducted during the 1970s documented a strong link between adolescents' extracurricular activities and adult educational attainment, occupation, and income, even after social class and cognitive ability had been controlled (Elliott & Voss, 1974; Hanks & Eckland, 1978; Landers & Landers, 1978; Otto, 1975, 1976; Otto & Alwin, 1977). Some of these studies also documented a protective association between extracurricular activity participation and involvement in delinquent and other risky behaviors (e.g., Elliott & Voss, 1974; Hanks & Eckland, 1978; Landers & Landers, 1978). Almost all of this work relied on survey methods used primarily at the descriptive level. Consequently, although these studies provide strong evidence for a link between participating in extracurricular activities and the aforementioned characteristics, they tell us little about the reasons for this association.

Research within both leisure studies and adolescent development has focused renewed attention on the probable benefits for youth of participating in the kinds of constructive leisure activities associated with extracurricular programs. In these fields, researchers stress the difference between relaxed leisure (enjoyable but not demanding activities) and constructive, organized activities that both require effort and provide a forum in which to express one's identity and passion (Agnew & Petersen, 1989; Csikszentmihalyi, 1991; Csikszentmihalyi & Kleiber, 1991; Fine, Mortimer, & Roberts, 1990; Grieses, 1989; Haggard & Williams, 1992; Kleiber, Larson, & Csikszentmihalyi, 1986; Larson, 2000; Larson & Kleiber, 1993; Larson & Richards, 1989). Like the authors of *A Matter of Time*, these researchers predict more beneficial outcomes for participation in constructive leisure precisely because constructive leisure provides opportunities (a) to acquire and practice specific social, physical, and intellectual skills that may be useful in a wide variety of settings, including school; (b) to contribute to the well-being of one's community and to develop a sense of agency as a member of that community; (c) to belong to a socially recognized and valued group; (d) to establish supportive social networks of both peers and adults that can help in the present as well as the future; and (e) to experience and deal with challenges.

Support for these predicted benefits is evident in the work of the researchers cited in the previous paragraph as well as new research being conducted by interdisciplinary scholars interested in adolescent development. For example, Mahoney and Cairns (1997) and McNeal (1995) found that participation in extracurricular activities during high school is associated with declines in the odds over time of school dropout, particularly during the early high school years and for high-risk youth (see also Mahoney, 2000). Furthermore, this link is linearly related to the number of

years in which a youth participates in extracurricular activities (Eccles & Barber, 1999; Mahoney, Cairns, & Farmer, in press). Mahoney (1997, 2000) has also shown a connection between such experiences and reduced rates of criminal offending over time. In addition, adolescents involved in a broad range of activities that provide the opportunity for service report lower rates of substance use than their noninvolved peers (Youniss, McLellan, & Yates, 1999; Youniss, Yates, & Su, 1997). Finally, sports participation is linked over time to a lower likelihood of school dropout and higher rates of college attendance, particularly for low-achieving and blue-collar male athletes (Deeter, 1990; Eccles & Barber, 1999; Gould & Weiss, 1987; Holland & Andre, 1987; Howell & McKenzie, 1987; Kirshnit, Ham, & Richards, 1989; McNeal, 1995; Melnick, Vanfossen, & Sabo, 1988).

Participation in extracurricular activities is also linked to increases over time on such indicators of positive development as interpersonal competence, self-concept, high school grade point average, school engagement, and educational aspirations (Eccles & Barber, 1999; Elder & Conger, 2000; Lamborn, Brown, Mounts, & Steinberg, 1992; Mahoney et al., in press; Newmann, Wehlage, & Lamborn, 1992; Winne & Walsh, 1980). Again, these associations increase in strength with increasing numbers of activities. This is particularly true if one is involved in a leadership role. Similarly, involvement in high school extracurricular and service learning activities is predictive of such indicators of healthy adult development as higher educational achievement, better job quality at the age of 25 years, active participation in the political process and other types of volunteer activities, continued sport engagement, and better mental health (Barber, Eccles, & Stone, 2001; DeMartini, 1983; Glancy, Willits, & Farrell, 1986; Marsh, 1992; Youniss, McLellan, Su, & Yates, 1999; Youniss, McLellan, & Yates, 1997; Youniss, Yates, & Su, 1997). These relations hold even after the other obvious predictors of such outcomes are controlled, giving us some confidence that these effects do not simply reflect the selection factors that lead to participation in the first place.

Together, these studies provide good evidence that participating in extracurricular activities is associated with both short- and long-term indicators of positive development, including school achievement and educational attainment. However, they tell us less about the reasons for these associations. For the most part, the studies used either cross-sectional or longitudinal survey methods. These methods provide good evidence of an association but weak evidence of an actual causal inference and even weaker evidence regarding the actual features of the experience that might matter.

Because researchers using longitudinal designs typically assess change over time and include indicators of the most obvious third variables in their analyses, these studies provide stronger evidence that participation actually causes change. However, selection is still a concern. Evidence from recent studies suggests that there are both selection and participation effects. Youth who choose to participate in extracurricular activities are different from those who do not in ways that are predictive of better long-term developmental trajectories. These youth also appear to benefit from their participation (Barber et al., 2001; Mahoney et al., in press). More work needs to be done using experimental treatment designs as well as interrupted time series designs. Some of the

ata sets used in these studies have the information necessary at the individual level to conduct the latter type of analyses.

More problematic is the fact that few of the studies actually measured characteristics of the extracurricular activities themselves. Even the best longitudinal studies either did not collect measures of the activities themselves or collected very weak measures, making inferences about which specific aspects of the programs and activities might be responsible for change quite speculative. There is a presumption that such activity contexts provide the kinds of experiences that should promote positive development. But work in the field of sport psychology shows that some coaches and parents provide a more supportive context for sport engagement than others (e.g., Leff & Hoyle, 1995; Patrick et al., 1999; Pensgaard & Roberts, 2000; Roberts & Treasure, 1992; Smoll, Smith, Barnett, & Everett, 1993). We discuss this work in more detail later.

Similarly, high school sports participation has also been linked to higher levels of alcohol consumption and abuse during the high school years and to higher rates of truancy (Eccles & Barber, 1999; Lamborn et al., 1992). In addition, participation in activities in which a high proportion of the youth are involved in delinquent behavior is linked to increases in individual participants' involvement in such behavior (Dishion, McCord, & Poulin, 1999; Dishion, Poulin, & Burraston, 2001; Mahoney, Stattin, & Magnusson, 2001; Poulin, Dishion, & Burraston, 2001). Clearly, we need to know more about the specific characteristics of these programs that lead to positive as opposed to negative adolescent "outcomes."

Certainly, years of work on schooling demonstrate that certain types of classroom experiences are more effective than others in promoting learning as well as other aspects of positive development (e.g., see Eccles, Wigfield, & Schiefele, 1998; Mahr & Midgley, 1996). Although there are the beginnings of strong theoretical models regarding the specific characteristics of extracurricular activity settings that ought to matter as well as the mediating mechanisms through which these settings have their influence, more empirical work is badly needed to test these predictions. Recent studies are moving in this direction.

### **Recent Studies Focused on Mediating Mechanisms**

#### *Larson and Colleagues*

Larson and his colleagues (e.g., Larson, 1994, 2000; Larson & Verma, 1999) have shown that young people report feeling both more challenge and enjoyment (as opposed to boredom) in organized out-of-school activity settings than in classrooms. Several different theoretical systems lead to the hypothesis that beneficial consequences should be associated with involvement in settings that elicit such reactions (e.g., effectance motivation theory [Harter, 1978], flow theory [Csikszentmihalyi, 1991; Csikszentmihalyi, Rathunde, Whalen, & Wong, 1993], goal theory [Mahr & Midgley, 1996], self-determination theory [Deci & Ryan, 1985; Ryan & Deci, 2000], the sport commitment model [Scanlan, 1999, 2000, 2002; Scanlan, Carpenter,

Schmidt, Simons, & Keeler, 1993; Scanlan & Simons, 1995], stage-environment fit theory [Eccles et al., 1993]). Similar emotional reactions have been reported as critical to continued participation by adolescents involved in both sports and instrumental music activities in the qualitative studies of Eccles and her colleagues (e.g., Fredricks et al., 2002). Larson and his colleagues are now studying these predictions as well as conducting more qualitative studies of young people's experiences in organized activity settings.

### *Eccles and Barber*

Recent work by Eccles and Barber provides another example of an attempt to move beyond description to a theoretical analysis of the nature of experiences in extracurricular activities and the outcomes likely to result. In a series of analyses, these researchers assessed the links between involvement in a variety of extracurricular activities during the high school years and a range of indicators of both positive and problematic development during adolescence and young adulthood (Barber et al., 2001; Eccles & Barber, 1999). Their sample represented a socioeconomically diverse population of European and African American youth in southeastern Michigan. They began studying these youth when they were in the sixth grade; on average, the participants were 29 years of age in 2002.

Because these researchers were interested in the mechanisms that mediate the association between activity involvement and both positive and problematic adolescent development, they asked their participants two additional sets of questions, one focusing on identity and another focusing on the nature of one's peer group. The identity question asked the youth to select which of the five characters portrayed in the movie *Breakfast Club* they were most like. In the movie, these five characters labeled themselves "the jock," "the brain," "the criminal," "the princess," and "the basket case." The peer questions asked the participants to indicate what proportion of their friends had a series of characteristics related to being either academically oriented or involved in such risky behaviors as drinking and using drugs. The researchers hypothesized that activity involvement would influence behavior through its impact on identity formation and the social norms of one's peer networks.

In support of this prediction, the adolescents who participated in volunteer service and faith-based activities exhibited the most consistent pattern of positive outcomes: higher academic achievement in high school than one would predict based on family background characteristics and the individual's performance on a standardized academic achievement test administered in Grade 9 and lower rates of involvement in risky behaviors such as alcohol and drug use in high school and during their early 20s. They were also the group most likely to identify themselves as "brains" and the group that had the most friends who were academically oriented and the fewest who were engaged in risky behaviors.

A different pattern characterized youth involved in both team sports and school-spirit-related clubs and organizations. On one hand, these youth, both male and

female, did better academically both in high school and after high school than one would have predicted based on their family's income and education and their own performance on a standardized test of academic abilities administered in ninth grade. On the other hand, these youth also engaged in more alcohol consumption and abuse than their noninvolved peers during both high school and young adulthood, particularly while they attended college. When asked their identity type, these youth selected "jock" and "princess," two groups that also reported both high rates of alcohol consumption and high academic achievement. When asked about their peer group, these youth reported having high proportions of friends who were both academically oriented and involved in relatively high levels of alcohol consumption. This pattern of convergence explained a substantial amount of the variance associated with high rates of both drinking and academic achievement during the high school and college years.

The critical mediating role of peer affiliations in the link between extracurricular activities and youth outcomes has also been documented by Eder and Parker (1987), Kinney (1993), and Youniss et al. (1999). These researchers suggest that peer affiliations influence development, either positively or negatively, through the social norms associated with the peer group culture, through reductions in social alienation, and through acquisition of improved social skills. Such suggestions are quite consistent with what is believed to be true about peer influence more generally (e.g., Brown, 1990; Dishion et al., 2001; Kinney, 1993).

#### *Mahoney and Colleagues*

These researchers have been doing work linking extracurricular activities and out-of-school programs to both positive and negative adolescent outcomes. Like many such studies, their early work took for granted that extracurricular activities are voluntary, structured, challenging, and connected to the school (e.g., Mahoney et al., in press). They argue that these characteristics should increase participation and retention as well as enjoyment, which in turn will increase learning of interpersonal skills, positive social norms, membership in prosocial peer groups, and emotional and social connections to school. These latter assets should increase mental health, school engagement, school achievement, and long-term educational outcomes and should decrease participation in problem behaviors, provided that problem behaviors are not endorsed by the peer cultures that emerge in these activities. Most of their work (as cited earlier) provides strong evidence of an association between participation and reductions in problem behaviors.

In a recent study, Mahoney et al. (in press) used longitudinal data to test the hypothesis that participation leads to increases in college attendance through its impact on interpersonal skills and educational aspirations. The structural equation modeling results provided strong support of this hypothesis. The data also supported the hypothesis that participation affects educational aspirations and college attendance through increasing the participants' popularity with peers; this relation, however, was true only

for youth who already possessed good interpersonal skills. This work, then, provides preliminary evidence that extracurricular programs affect such outcomes as college attendance through their more immediate influences on adolescents' social skills and peer relationships. The work does not provide strong evidence regarding which particular aspects of the extracurricular activity context account for these effects.

Mahoney and his colleagues are studying the characteristics of leisure activities that are linked with both positive and negative youth outcomes. They have found that participating in highly structured and adult-supervised leisure activities is associated with less antisocial behavior than participating in low-structure leisure activities at youth recreation centers (Mahoney & Stattin, 2000). Also, they have found that participation in after-school activities is linked to lower levels of depressed affect primarily among those youth who perceive high social support from their activity leader (Mahoney & Stattin, 2002).

### *Sports Programs*

More systematic work on the context of youth-serving programs has been done in the field of sports psychology. Typically, these studies use natural variations across coaches and programs to compare participants' motivation, performance, and continued involvement in particular sport activities. As is the case with Larson's work, these studies demonstrate that continued involvement is linked to the experience of high levels of enjoyment and challenge and low levels of anxiety while engaged in the sport activity in question (e.g., Brustad, Babkes, & Smith, 2001; Carpenter & Scanlan, 1998; Scanlan, Stein, & Ravizza, 1991; Scanlan et al., 1993; Smith, 1986; Weiss & Petlichkoff, 1989).

A few of the studies in this area have used experimental designs to test specific hypotheses about important contextual features. Some of these studies focus on elite adolescent athletes; others focus on normative populations of youth who participate in the many community-based sports programs across the country. Few of the studies actually measure the association of participation in sports programs with other types of youth outcomes such as school performance or engaging in problem behaviors. As noted earlier, however, studies of extracurricular sports participation do suggest that such links exist.

In general, these studies show that youth develop better mental health, motivation, and values in sports programs that emphasize skill acquisition rather than winning (e.g., Roberts & Treasure, 1992) and stress the importance of coaches providing strong emotional support (e.g., Smoll et al., 1993). Furthermore, using an experimental design, Smoll and colleagues demonstrated that youth who work with a coach who has completed a 3-hour training program focusing on emotional support show greater increases in their self-esteem than youth working with coaches who have not had this training.

These studies also document the importance of strong perceived social support from coaches, family members, peers, and the audience (Gould, Eklund, & Jackson,

1991, 1993; Gould, Finch, & Jackson, 1993; Scanlan, 2002; Scanlan & Lewthwaite, 1986). In each of the studies, the opportunity to form strong and supportive peer relationships was a strong motivator (e.g., Scanlan, Carpenter, Lobel, & Simons, 1993).

These studies also provide strong correlational evidence of the importance of motivational scaffolding. Researchers interested in goal theory (e.g., Maehr & Midgley, 1996) stress the importance of mastery motivation as an individual characteristic and mastery motivational climates as classroom characteristics for optimal learning in the school context. These classroom characteristics include exposure to challenging activities in a climate of social acceptance and a focus on improvement and mastery rather than socially comparative performance. Sports psychologists have applied goal theory to the sports context and found strong evidence of similar dynamics at both the individual and contextual levels (e.g., Fox, Goudas, Biddle, Duda, & Armstrong, 1994; Scanlan, 2002; Stephens, 1998).

### *Summary*

There is converging evidence from several different types of studies suggesting that involvement in constructive nonacademic activities both at school and in the community facilitates continued school engagement and academic achievement as well as other aspects of positive development during adolescence and into the early adulthood years. A few studies provide evidence regarding the particular aspects of these extracurricular and community-based activities that might account for such associations, including provision of challenging learning opportunities in structured settings, provision of opportunities to form strong social bonds with peers and adults, and support for a mastery motivational orientation.

The findings of Eccles and her colleagues, as well as the work conducted by Mahoney and his colleagues and by Dishion and his colleagues on the potential negative and positive effects of peers, also suggest a strong role for social norms. All three of these teams have shown that problematic behaviors on the part of peer participants in organized activity settings are linked over time to increases in involvement in such behaviors by many of the participants. However, much more research is needed before we will fully understand the impact of participation in extracurricular activities on positive youth development.

### **NONEXPERIMENTAL STUDIES OF YOUTH PROGRAMS**

There have been a number of excellent nonexperimental studies of community-based programs for youth over the past 15 years, and there are several more in process. Probably the most comprehensive such study was conducted by Shirley Bryce Heath and Milbrey McLaughlin (e.g., McLaughlin, 2000; McLaughlin et al., 1994). Over the course of 10 years, these researchers used a variety of quantitative and qualitative methods to study approximately 120 youth-based organizations in 34 different cities and towns. They selected the organizations through nominations

from youth and other community members of organizations that “work.” Thus, they studied organizations that were widely regarded in their communities as successful by the community members themselves.

They also focused on organizations that serve a high proportion of youth living in high-risk neighborhoods or communities. Not surprisingly, then, the youth served in these organizations included a high proportion of those typically considered hard to reach and most likely to drop out of organized activity centers. McLaughlin and Heath used a variety of techniques to assess the influence of these centers on the participants, ranging from the young people’s own reports to comparisons of their responses on several quantitative measures with the responses of a nationally representative sample of comparable youth.

Overwhelmingly, the youth in these organizations reported that their participation had changed their lives. These organizations had provided a sanctuary in what many youth felt was a hostile and nonresponsive world. They reported learning essential skills as well as building trusting relationships with adults and other youth. The testimonies of these young people about their experiences in these centers are truly inspiring.

A comparison of the participants’ ratings of their experiences and feelings in these centers with identical ratings of their experiences and feelings in school was equally striking. Both the young men and the young women indicated that they were more likely to enjoy their time, to feel respected, to feel comfort and trust, and to feel supported at their center than at their school.

A similar picture of success is evident in the quantitative comparisons. On average, the youth in these programs exhibited better outcomes than comparable youth in a national sample (respondents from the National Educational Longitudinal Study) on several indicators of healthy development. They were more likely to report feeling good about themselves and being confident about their abilities to achieve their goals. They reported higher levels of self-worth, personal agency, and personal efficacy. They were more likely to report having received recognition for good academic performance at school and were 20% more likely to expect to go on to college. They were also more likely to be involved in their communities and to expect to continue to be involved in the future. Finally, in a follow-up study of 60 participants in three urban communities, the majority were in fact well on their way to what most would consider a successful transition into adulthood by their early 20s.

What did these organizations share that might help explain these positive youth outcomes? In *Community Counts*, McLaughlin (2000; see [www.PublicEducation.org](http://www.PublicEducation.org)) sums up their communality in terms of the concept of intentional learning environments. She notes that the organizations differed in “nearly every objective way possible” (p. 8); what they shared in common corresponded “to the core elements of an effective learning environment as described by learning theorists” (p. 9). Such environments have three major components: They are youth centered, knowledge centered, and assessment centered. With regard to being youth centered, these organizations



- responded to diverse talents, skills, and interests by providing a rich array of activities that involved opportunities to participate at all levels of expertise
- identified and built on the strengths of the participating youth by providing opportunities for them to do what they could best do and to learn new skills
- used developmentally and cultural appropriate materials that allowed youth to grow in terms of skill and leadership within the specific activities
- provided extensive personal attention from the adults involved
- stressed youth leadership and voice
- actively recruited youth using a variety of locally appropriate methods

These organizations were knowledge centered in that they

- had clear learning foci (i.e., they were “about something in particular”; McLaughlin, 2000, p. 10)
- had quality content and exemplary instruction
- used the principles of embedded curriculum so that a range of academic competencies and life skills were being taught within each type of activity
- used many different types of “teachers,” including the youth themselves

Finally, in terms of being assessment centered, the organizations had

- clearly articulated “cycles of planning, practice, and performance” (McLaughlin, 2000, p. 13)
- regular opportunities for feedback and recognition, often through public performances and other forms of celebration
- feedback focused on improvement and meeting individual specific objectives rather than competition and social comparison

In addition to these intentional learning environment characteristics, the organizations also stood out in the level of social support and care provided by the adults. The adults were passionate about the youth in their community. They were often available at all hours and regularly served as advocates for their members in a variety of situations. In this sense, they actively worked to expand their young people’s social capital. Consequently, the youth were able to establish trusting relationships with these adults in a way that they were typically unable to do with their teachers.

These organizations were also characterized by physical and psychological safety, by clear rules that were consistently and fairly enforced, by positive social norms regarding respectful and civil behavior, and by a strong sense of shared responsibility for the organization among both adults and youth. In many of the centers, an explicit policy was in place according to which members were expected to support each other and to treat each other with respect, which meant that hostilities between members that existed outside of the organization were not to be expressed in the centers.

McLaughlin et al. (1994) noted that such a collection of contextual features is not common across the range of after-school programs in most communities. Not surprisingly, then, these centers often had large waiting lists, while other nearby centers and programs were unable to fill their available slots.

Several other nonexperimental program evaluation studies have yielded a similar picture of programs that appear to be successful in terms of several criteria. For example, in their study of literacy programs for children, Spielberger and Halpern (2002) found that the most engaging programs (a) involve literacy activities that are personally useful, are culturally relevant, and provide a balance of seriousness and play (i.e., they use principles of embedded curriculum); (b) provide opportunities for performance that allow both the children themselves and their parents, teachers, and other community members to share in their accomplishments; (c) use a variety of literacy activities so that children with different interests and talents can be engaged; (d) have high expectations for all of the children in terms of their capacity to learn; (e) have genuine enthusiasm for literacy activities; (f) provide strong social support and create comfortable, safe places for literacy activities; and (g) make use of a variety of community resources and expertise in planning literacy experiences.

Similarly, more quantitative nonexperimental studies conducted by Vandell and her colleagues (on quality after-school child care programs; e.g., Pierce, Hamm, & Vandell, 1999; Posner & Vandell, 1994, 1999; Vandell & Posner, 1999; Vandell & Ramanan, 1991; Vandell & Shumow, 1999), by the UC Links program (on after-school programs; [www.uclinks.org/what/sum\\_report.html](http://www.uclinks.org/what/sum_report.html)), and by other scholars (e.g., Howes, Olenick, & Der-Kiureghian, 1987; Marshall et al., 1997; Pettit, Laird, Bates, & Dodge, 1997; Sheley, 1984) document the importance of intentional learning environments; warm, supportive, and reliable adult staff; opportunities for choice and youth leadership; respectful interactions among the youth themselves; developmentally and culturally appropriate materials and activities; and safe, well-equipped space. Many of the positive effects shown in these studies are especially marked for low income or at-risk youth.

Interestingly, some of the after-school child care programs produced negative as well as positive results. For example, Pierce et al. (1999) found that first-grade boys in after-school care programs with positive emotional climates evidenced fewer problem behaviors and better academic performance than boys in programs with more negative emotional climates. Pierce and colleagues also looked at program structure and found that boys who attended programs that allowed more autonomy and choice had better social skills than boys who attended more regimented programs. Finally, Vandell and Pierce (1999) found that the strength of the beneficial associations depends on the extent of actual participation.

In summary, these nonexperimental studies suggest that the characteristics listed in Table 1 are likely to be important for positive youth development. A similar set of characteristics was suggested as representing critical contextual features in the recent National Research Council report *Community Programs to Promote Youth Development* (Eccles & Gootman, 2002). The characteristics presented in Table 1

**TABLE 1** Contextual Features Likely to Support Positive Youth Development

- 
- Adequate provisions for physical and psychological safety
  - Developmentally appropriate levels of structure and adult supervision
  - Strong social support from adults and peers
  - Inclusive social networks and structures
  - Strong positive social norms for behavior
  - Intentional learning experiences designed to teach the skills necessary to do well in such social institutions as school and the workforce
  - Motivational practices that support a mastery motivation focus
  - Opportunities to make a real difference in and out of the organization—to experience leadership and mattering
- 

are also consistent with most major theories of positive developmental contexts, including Csikszentmihalyi's work on flow (e.g., Csikszentmihalyi, 1991; Csikszentmihalyi et al., 1993); Deci and Ryan's work on self-determination theory (e.g., Deci & Ryan, 1985; Ryan & Deci, 2000); Eccles and colleagues' work on stage-environment fit (e.g., Eccles et al., 1993); Masten's work on resilience (e.g., Masten & Coatsworth, 1998); Midgley, Maehr, and Ames's work on goal theory (e.g., Maehr & Midgley, 1996); and Scanlan's work on sport commitment (e.g., Scanlan, 2002; Scanlan & Simons, 1995; Scanlan, Simons, Carpenter, Schmidt, & Keeler, 1993).

### EXPERIMENTAL AND QUASI-EXPERIMENTAL STUDIES OF YOUTH PROGRAMS

We found tracking down experimental and quasi-experimental evaluation studies of in- and out-of-school programs for youth quite challenging, because many of the best evaluations are not published in journals. Instead, they are often published as reports to the foundations and organizations that funded the evaluations. Consequently, we relied on either independently commissioned reviews of these reports or meta-analyses to identify the best experimental and quasi-experimental evaluation studies. We then contacted the sources and worked with a combination of the reviews and the materials we were able to obtain from these reviews. In this section, we summarize the findings of six major reviews of experimental and quasi-experimental evaluation studies of youth programs: two meta-analyses and four reviews of program evaluations focused on prevention programs and youth development programs. These reviews appeared in either published, professionally reviewed journals or highly reputable government documents between 1997 and 2002. In the latter category, we selected only government documents involving rigorous and well-specified methods of review in order to reduce the potential biases associated with reviews conducted by groups with high stakes in positive or negative conclusions. Programs cited in at least two of these reviews or characterized as model programs in any single review are summarized in Table 2.

*(text continues on page 149)*

TABLE 2 Effective Programs for Children and Adolescents

Program name/sample description	Program description	Postprogram outcomes/follow-up
<p>Across Ages<sup>1,2</sup>  <i>n</i>=562; 47%M, 53%F;                      52.2%Bl, 9.1%Asn, 9%Lat,                      15.8%Wh; 6th grade</p>	<p>Place: School, Community                      Components: Individual                      Intensity/Duration: Mentoring (2 hrs/wk),                      community service (1 hr every other                      week), social problem solving (26 1-hr                      sessions) over school yr                      Explicit Features: Mentoring by older adults,                      classroom-based life skills training, commu-                      nity service activities, workshops for parents                      Implicit Features: Social Support, Inclusion,                      Social Norms, Learning Focus, Motivational                      Scaffolding, Leadership/Mattering</p>	<p>Evaluation: Experimental                      ↑: Positive attitudes toward school, the                      future, older people, knowledge of elders,                      and community service                      ↓: School absence</p>
<p>Adolescent Transitions Project<sup>1,3</sup>                      (1) <i>n</i>=158 from 143 families;                      M=83, F=75; 95%Wh,                      5%unspec; 10-14 yrs;                      6th-8th grade                      (2) Irvine et al. (1999) <i>n</i>=303                      families; 88%Wh; 61%M,                      39%F; 12 yrs old</p>	<p>Place: Unspecified                      Components: Individual, Family                      Intensity/Duration: 12 over 18 hrs                      Explicit Features: Youth self-regulation skills                      training (teen focus group), parent manage-                      ment skills training (parent focus group),                      consultant to improve parent-youth com-                      munication (teen/parent focus group)                      Implicit Features: Learning Focus, Social                      Support, Inclusion, Social Norms,                      Motivational Scaffolding,                      Leadership/Mattering                      (2) Replication of the Parent Focus compo-                      nent only</p>	<p>Evaluation: Experimental                      ↑: Social learning                      ↓: Negative engagement with family, conflict,                      negative family events, youth aggression                      Follow-up:                      (1) ↑: School behavior problems for teen                      focus group                      (2) ↓: Child antisocial behavior</p>

<p>Big Brothers/Big Sisters<sup>1,2</sup>  <i>n</i>=959; 60%Bl&amp;Hisp combined, 40%unspec; 62.4%M; ages 10–16; low SES</p>	<p>Place: Community            Components: Individual            Intensity/Duration: 9–12 hrs/mth for 1 yr            Explicit Features: Activities with mentor            Implicit Features: Social Support, Inclusion, Social Norms, Motivational Scaffolding</p>	<p>Evaluation: Experimental            ↑: GPA, parental trust            ↓: Hitting behavior, likelihood of initiating alcohol and drug use, skipping school, lying to parents</p>
<p>Bullying Prevention Program<sup>4</sup>            Grade: Norway: 4th–7th; <i>n</i>=2,500 in 42 schools; USA: 5th–8th; <i>n</i>=6,388</p>	<p>Place: School            Components: Individual, Family, School            Intensity/Duration: 9–12 hrs/mth for 1 yr            Explicit Features: 32-page booklet included information on the scope, cause, and effects of school bullying and detailed suggestions for reducing and preventing bullying. Abbreviated bullying info to families with school-age children. A 25-minute video with vignettes of bullying situations. Students completed a brief bullying questionnaire related to bullying to increase awareness and promote discussion of the problem of bullying            Implicit Features: Social Norms, Motivational Scaffolding, Learning Focus, Inclusion, Social Support</p>	<p>Evaluation: Quasi-experimental            ↑: Satisfaction with school life, climate of order and discipline in the classroom, positive social relationships, positive attitude toward school and schoolwork            ↓: Bullying, aggressive and antisocial behavior, 50% reduction in self-report of bullying and being bullied            Follow-up: (20mths): Effects maintained            US replication: Reduction in self-reported bullying, but not in being bullied</p>

(continued)

TABLE 2 (Continued)

Program name/sample description	Program description	Postprogram outcomes/follow-up
<p>Child Development Project<sup>1,3</sup>  <i>n</i>=1,645; 24 schools from 6 districts; 3rd-6th grades;                      11-12 yrs; 48%M, 52%F;                      39-54%Wh, 17-23%Bl,                      21-27%Hisp, 5-10%Asn,                      2-3%other</p>	<p>Place: School                      Components: Individual, Family                      Intensity/Duration: Integrated curriculum over school year                      Explicit Features: Cooperative learning, reading and language arts, developmental discipline, school community building, home activities                      Implicit Features: Inclusion, Social Norms, Motivational Scaffolding, Leadership/Mattering, Social Support</p>	<p>Evaluation: Quasi-experimental                      ↑: Peer social acceptance                      ↓: Alcohol use, vehicle theft, loneliness, and social anxiety                      Analysis based on high, moderate, low implementation:                      High implementation group: (1st yr) ↓: Marijuana use, vehicle theft, carrying weapons; (2nd yr) ↓: Skipping school + 1st yr findings</p>
<p>Children's Aid Society Carrera Program<sup>5</sup>  <i>n</i>=484; 45%M, 55%F; 56%Bl, 36%Hisp, 7%Bl/Hisp,                      2%other; 13-15 yrs old, low SES</p>	<p>Place: Community youth serving organizations                      Components: Individual                      Intensity/Duration: 5 days/wk during school yr plus special sessions in summer through high school; mean of 16 hrs of participation/mth                      Explicit Features: Sex education, increase academic competency, work-related intervention, art and sports component. Also, mental and physical health care including contraception                      Implicit Features: Learning Focus, Leadership/Mattering, Motivational Scaffolding, Inclusion, Social Support, Social Norms</p>	<p>Evaluation: Experimental                      Follow-up: 3 yrs                      ↓: Initiation of sex, pregnancy, births                      ↑: Condom plus effective contraception method for girls (↓ for boys)</p>

<p>Children of Divorce Intervention Program<sup>1,3</sup> (3 evaluations)</p> <p>(1)<sup>1,3</sup> M=42, F=33 from 4 suburban schools; 100%Wh; 4th-6th grade</p> <p>(2)<sup>3</sup> n=104; F=46.5%; 69%Wh, 23%Bl, 5%Hisp, 3%other; 23% below poverty level</p> <p>(3)<sup>3</sup> n=188; M=110, F=78 from 9 schools; 4th-6th grade; 56%Wh, 30%Bl, 10%Hisp, 3.6%Asn, 0.4%NatAm</p>	<p>Place: School</p> <p>Components: Individual</p> <p>Intensity/Duration: (1,2,3) Multiple sessions</p> <p>Explicit Features: (1,2,3) Skill building in problem solving, communications, decision making, anger and anxiety management; (2) self-esteem session, (3) enhanced materials and more activities</p> <p>Implicit Features: Social Support, Social Norms, Learning Focus, Motivational Scaffolding</p>	<p>Evaluation: (1) Experimental</p> <p>↑: Adaptive assertiveness, peer sociability, following rules, frustration tolerance</p> <p>↓: Anxiety, learning problems</p> <p>(2) Quasi-experimental</p> <p>↑: Coping skills, positive feelings about family, competence, adjustment, assertive, peer social skills, frustration tolerance</p> <p>(3) Quasi-experimental</p> <p>↑: Coping skills, positive feelings about family, adjustment, positive divorce-related attitudes</p> <p>↓: Anxiety</p>
<p>Creating Lasting Connections<sup>1,2</sup></p> <p>n=217 from 5 church communities; 77%Wh, 23%Bl; 12-14 yrs</p>	<p>Place: Church</p> <p>Components: Individual, Family</p> <p>Intensity/Duration: Youth (15 hrs); parents (55 hrs); volunteer service (18 hrs); follow-up and consultation support (1 yr)</p> <p>Explicit Features: Church community mobilization, parent and youth strategies to promote communication and self-management skills, follow-up case management service</p> <p>Implicit Features: Social Support, Inclusion, Social Norms, Learning Focus, Motivational Scaffolding, Leadership/Mattering</p>	<p>Evaluation: Experimental</p> <p>↑: Youth use of community services, related action tendencies, perceived helpfulness</p> <p>↓: Onset of substance abuse delayed as parents changed their substance use beliefs and knowledge</p>

(continued)

TABLE 2 (Continued)

Program name/sample description	Program description	Postprogram outcomes/follow-up
<p>Fast Track<sup>1,3</sup></p> <p><math>n=898</math> in 385 classrooms at 4 sites; 66%M, 34%F; 50%Bl, 50%other; 1st-3rd grade</p>	<p>Place: School</p> <p>Components: Individual, Family</p> <p>Intensity/Duration: 3 20-30-min sessions per week through school yr + child/parental skill building (3-yr duration)</p> <p>Explicit Features: PATHS curriculum + 1st grade parent and child skill building for at-risk children, 2nd/3rd grade monthly meetings of parent and child groups</p> <p>Implicit Features: Social Support, Social Norms, Leadership/Mattering, Motivational Scaffolding, Inclusion, Learning Focus</p>	<p>Evaluation: Experimental</p> <p>↑: Accepting authority, staying on task, appropriate emotional expression</p> <p>↓: Oppositional/aggressive behavior, conduct problems, special education assignment</p>
<p>Incredible Years: Parent and Teacher Training Program</p> <p><math>n=328</math> families from 14 Head Start centers; 45.6%F (124), 54.4%M (148); 272 mothers; 19.1%Bl, 18%Hispanic, 22.1%Asian, 1.5%Native American, 2.2%unspecified, 36.8%White; avg family income = \$11,600</p>	<p>Place: Head Start</p> <p>Components: Individual, Family</p> <p>Intensity/Duration: 3 20-30-min sessions per week through school yr + child/parental skill building (3-yr duration)</p> <p>Explicit Features: PATHS curriculum + 1st grade parent and child skill building for at-risk children, 2nd/3rd grade monthly meetings of parent and child groups</p> <p>Implicit Features: Social Support, Social Norms, Leadership/Mattering, Motivational Scaffolding, Inclusion, Learning Focus</p>	<p>Evaluation: Experimental</p> <p>↑: Accepting authority, staying on task, appropriate emotional expression</p> <p>↓: Oppositional/aggressive behavior, conduct problems, special education assignment</p>



<p>Life Skills Training<sup>1,4</sup>  <i>n</i>=4,466 in 56 schools; 91%Wh,  9%unspec; 7th–9th grade</p>	<p>Place: School  Components: Individual  Intensity/Duration: 2 sessions/wk for 15 wks  (Y1); 10 booster sessions (Y2); 5 booster  sessions (Y3)  Explicit Features: Self-regulation skills (decis-  sion making, problem solving, anxiety  coping), social skills, drug-related educa-  tion, resistance training  Implicit Features: Social Norms, Social  Support, Learning Focus, Motivational  Scaffolding</p>	<p>Evaluation: Experimental  ↑: Interpersonal skills, knowledge of smoking  and substance abuse consequences  ↓: Cigarette and marijuana smoking, alcohol  intoxication and polydrug use  Follow-up: End of 12th grade  ↓: Tobacco, alcohol, and marijuana use</p>
<p>Metropolitan Area Child Study<sup>1</sup>  (1) <i>n</i>=3,599; 40%Bl, 40%Hisp,  20%Wh; high-risk sample;  2nd/3rd &amp; 5th/6th grades  (2) Eron et al. (2002)  <i>n</i>=1,518 high-risk; 60.7%M;  47.6%AfAm, 36.8%Hisp,  15.5%non-HispWh;  33–100% free lunch program</p>	<p>Place: School  Components: Individual, Family School  Intensity/Duration: (1) 40 1-hr sessions over  2 yrs; <i>Yes/Can</i> curriculum  (2) Conditions: (a) general classroom  enhancement—teachers received 2 yrs of  biweekly seminars; (b) above + small  group meetings 1/wk for 28 wks over  2 yrs; (c) above + family intervention for  22 wks in 2nd yr  Explicit Features: (1,2) Teacher training pro-  gram, social cognitive competency train-  ing, behavior management, family  cohesiveness strategies</p>	<p>Evaluation: (1) Experimental  ↑: Prosocial behavior  ↓: Aggressive behavior in early intervention  group, but increased aggression for one  late intervention subgroup  (2) Longitudinal, quasi-experimental  ↓: Aggressive behavior in (c) for early inter-  vention (2nd, 3rd) in communities w/ ade-  quate resources (effect size .59 SD), greater  effect if 2nd exposure in 5th/6th grades  (effect size .65 SD); inner-city children in  (c) ↑ aggression (effect size .42 SD)  ↑: Achievement for (a) early intervention  (effect size = .83 SD)</p>

(continued)

TABLE 2 (Continued)

Program name/sample description	Program description	Postprogram outcomes/follow-up
Midwestern Prevention Project <sup>1,2,4</sup> <i>n</i> =4,153; 76.6%Wh, 19.2%Bl; 50.7%M; 6th–7th grade	(2) Conditions: (a) teacher training to promote emotional literacy, prosocial problem solving, self-regulation; (b) above + small group—prosocial beliefs/behavior; (c) Above + family intervention—family/communication skills, build support networks, weekly phone calls, homework assignments Implicit Features: Social Support, Social Norms, Learning Focus, Inclusion, Motivational Scaffolding, Leadership/Mattering	Evaluation: Quasi-experimental ↓: Monthly, weekly, and heavy use of cigarettes, marijuana, and alcohol Follow-up: 3 yrs ↓: Monthly, weekly, and heavy use of cigarettes, marijuana, and alcohol 5 yrs: Less monthly drug use, weekly cigarette smoking
	Place: School, Community Components: Individual, Family, School, Community Intensity/Duration: School program (10 hrs), homework activities with parents (10 hrs) Explicit Features: Parent education about parent-child communication skills, resistance skills training for youth, community organization, mass media coverage Implicit Features: Social Norms, Social Support, Learning Focus, Motivational Scaffolding, Leadership/Mattering	

<p>Penn Prevention Project<sup>2</sup></p> <p>(1) <i>n</i>=143; 5th/6th-grade students at risk for depression; 83%Wh, 11%Bl; 10–13 yrs old</p> <p>(2) Patterson &amp; Lynd-Stevenson (2001) <i>n</i> =66; 48%M, 52%F; 5th/6th grade in Australia</p>	<p>Place: School</p> <p>Components: Individual</p> <p>Intensity/Duration: 1.5 hrs/wk for 12 wks</p> <p>Explicit Features: Cognitive behavioral; taught coping strategies to counteract cognitive distortions, specific focus on explanatory style</p> <p>Implicit Features: Social Norms, Motivational Scaffolding, Learning Focus, Social Support</p>	<p>Evaluation:</p> <p>(1) Quasi-experimental</p> <p>↑: Improved classroom behavior</p> <p>↓: Depressive symptoms, less likely to attribute negative events to stable, enduring causes (mediator)</p> <p>Follow-up: 6 mths</p> <p>↑: Parents reported improvements in children's home behavior</p> <p>↓: Depressive symptoms</p> <p>12, 18, 24 mths</p> <p>↓: Depressive symptoms mediated by more optimistic explanatory style</p> <p>(2) Quasi-experimental</p> <p>Results from U.S. evaluation not replicated in Australia at end of program or at follow-up</p>
<p>Promoting Alternative Thinking Strategies (PATHS)<sup>1,3</sup></p> <p><i>n</i>=200; 65%Wh, 21%Bl, 11%Asn, 7%Fil, 7%NatAm; 6–11 yrs (1st–3rd grade)</p>	<p>Place: School</p> <p>Components: Individual</p> <p>Intensity/Duration: 3 20–30-min sessions per week through school yr</p> <p>Explicit Features: Enhance emotional intelligence, self-control, social competence, positive peer relations, and interpersonal problem-solving skills</p>	<p>Evaluation: Experimental</p> <p>↑: Self-control, understanding of emotions, frustration tolerance, effective conflict-resolution strategies, thinking and planning skills</p> <p>↓: Anxiety/depressive symptoms, conduct problems, aggression</p> <p>Follow-up:</p>

(continued)

TABLE 2 (Continued)

Program name/sample description	Program description	Postprogram outcomes/follow-up
Project Northland <sup>1,4</sup> <i>n</i> = 1,901 from 20 schools; 94%Wh, 4.5%NatAm; 6th-8th grade	Implicit Features: Social Support, Social Norms, Learning Focus, Inclusion, Motivational Scaffolding  Place: School Components: Individual, Family, Community Intensity/Duration: Weekly activities and/or training over 3 yrs Explicit Features: Youth skills and parent competence training, community organization Implicit Features: Social Norms, Social Support, Learning Focus, Motivational Scaffolding, Leadership/Mattering	(1 yr) ↑: Emotional understanding and interpersonal problem-solving skills ↓: Depression/sadness symptoms, conduct problems (2 yr) ↓: Externalizing behavior, conduct problems  Evaluation: Experimental ↑: Parent-youth communication, knowledge and attitudes for resisting peer influence, self-efficacy ↓: Tendency to use alcohol, use of alcohol in both the past week/month, frequency of the combination of alcohol and cigarette use, peer influence scores
Quantum Opportunities <sup>1,2,4,5</sup> <i>n</i> = 170; 48%M, 52%F; 75%Bl, 14%Wh, 7%His, 1%Asn, 2%other; 9th-12th grade; low SES	Place: Community youth serving agencies Components: Individual Intensity/Duration: Education-related activities (250 hrs), development activities (250 hrs), service activities (250 hrs) each year for 4 yrs	Evaluation: Experimental ↑: High school graduation rates, college or postsecondary school attendance, honors and awards, positive attitudes and opinions about life and future, volunteer community service work

↓: Trouble with police, high school dropout, number of children

Explicit Features: Education activities, peer tutoring, community service activities, mentoring, life and family skills, incentives: hourly stipends and bonuses for completing program components  
Implicit Features: Social Support, Inclusion, Social Norms, Learning Focus, Motivational Scaffolding, Leadership/Mattering

Evaluation: Experimental (effects for community service group)  
↓: Sexual activity, initiation of intercourse  
Follow-up (3 yrs):  
↓: Initiation of intercourse, sex in previous month

Reach for Health and Community Youth Service Learning  
n= 195; 41%M, 59%F; 71%Bl, 26%Hisp, 3%other; low SES

Place: School  
Components: Individual  
Intensity/Duration: Health education (Reach for Health) curriculum plus 3 hrs/week for 30 weeks community service  
Explicit Features: Health education program—focus on substance use, violence and sexual behavior. Community service in 2 locations such as senior citizen homes, nursing homes, health centers, child day care centers

Implicit Features: Social Norms, Social Support, Inclusion, Motivational Scaffolding, Learning Focus, Leadership/Mattering

(continued)

TABLE 2 (Continued)

Program name/sample description	Program description	Postprogram outcomes/follow-up
<p>Reducing the Risk<sup>1,5</sup></p> <p>(1) <math>n=758</math>; 47%M, 53%F; 62%Wh, 20%Lat, 9%Asn, 2%NatAm, 2%Bl, 5%unspec; 10th grade</p>	<p>Place: School</p> <p>Components: Individual, Family</p> <p>Intensity/Duration: 15 class periods plus unspecified parent/child time</p> <p>Explicit Features: Sex education program—focus on sexual antecedents<sup>2</sup>; cognitive-behavioral, teacher and peer role modeling, parent involvement, emphasis on avoiding unprotected sex either by abstinence or using protection</p> <p>Implicit Features: Social Norms, Motivational Scaffolding, Learning Focus, Social Support</p>	<p>Evaluation: Quasi-experimental (6-mth postintervention)</p> <p>↑: Knowledge and communication with parents about contraception and abstinence, changes in normative belief (18th mth postintervention)</p> <p>↓: Initiation of intercourse, ↑: contraceptive use for females and lower-risk youth, ↓: unprotected intercourse for sexually inexperienced at pretest</p>
<p>Responding in Peaceful and Positive Ways<sup>1,5</sup></p> <p>(1) <math>n=579</math>; 96%Bl, 4%unspec; 6th grade from 3 urban schools</p> <p>(2) <math>n=602</math>; 50%M; 96%Bl; 11–12 yrs old; 6th grade</p>	<p>Place: School</p> <p>Components: Individual</p> <p>Intensity/Duration: 25 over school yr</p> <p>Explicit Features: Social/cognitive skill-building curriculum to promote nonviolent conflict resolution and positive communication; activities included team building and small group work, role playing, and relaxation techniques</p> <p>Implicit Features: Social Support, Social Norms, Learning Focus, Inclusion, Motivational Scaffolding</p>	<p>Evaluation: Experimental</p> <p>(1) ↑: RIPP knowledge and use of peer mediation, ↓: weapon carrying, in-school suspensions</p> <p>Follow-up: ↑: Knowledge and use of peer mediation, impulse control (boys) problem solving (girls); ↓: Violent behavior, anger suppression, frequency of hitting teacher, school suspensions, drug use, skipping school</p> <p>(2) ↓: In-school suspension, weapon carrying (after controlling for pretest group differences and attrition effects)</p>

<p>Safer Choices<sup>5</sup>  <i>n</i>=3,058 in 22 schools; 48%M, 52%F; 30%Wh, 27%Hispanic, 17%Bl, 18%Asn, 7%other; 9th grade; urban and suburban areas; varied SES</p>	<p>Place: School  Components: Individual  Intensity/Duration: 25 over school yr  Explicit Features: Social/cognitive skill-building curriculum to promote nonviolent conflict resolution and positive communication; activities included team building and small group work, role playing, and relaxation techniques  Implicit Features: Learning Focus, Social Support, Social Norms, Motivational Scaffolding, Leadership/Mattering, Inclusion</p>	<p>Evaluation: Experimental  ↑: Condom and contraception use at most recent intercourse  ↓: Frequency of sex without condoms, number of sexual partners without condoms</p>
<p>Seattle Social Development Project<sup>1,3,4,5</sup>  <i>n</i>=643 from 18 schools; 52%M, 48%F; 44%Wh, 26%Bl, 22%Asn; 56% quality for school lunch program, 1st-5th grade</p>	<p>Place: School  Components: Individual, Family, School  Intensity/Duration: 7 sessions 1st/2nd grade; 5 in 2nd/3rd, 5 in 5th/6th, 4 in 6th  Explicit Features: Teacher training—classroom management, cooperative learning, interactive teaching; parent training—improve monitoring of child behavior, behavioral management, communication skills, teacher-parent relationship, build child resistance skills for drug use, social competence training for children</p>	<p>Evaluation: Quasi-experimental  Greatest effects for full intervention group (1st-5th) compared to late intervention group (5th-6th) (Post 2nd grade)  ↓: Aggression and externalizing behavior in Wh M only, self-destructive behaviors in Wh F only (5th-grade posttest)  ↑: Proactive family management, family communication, family cohesion, attachment/commitment to school</p>

TABLE 2 (Continued)

Program name/sample description	Program description	Postprogram outcomes/follow-up
Social Competence Program for Young Adolescents <sup>1</sup> n=421 from 4 schools; low/middle income families; M=210, F=211; Wh=178, Bl=167, Hisp=72, other=4; 5th-8th grades	Place: School Components: Individual, Family, School Intensity/Duration: 16, 45 min each over 12 weeks; teacher and aide training, consultation and coaching Explicit Features: Social competence promotion, family involvement Implicit Features: Social Support, Inclusion, Leadership/Mattering, Learning Focus, Social Norms, Motivational Scaffolding	Follow-up: (end of 6th grade) ↓: Time with deviant peers (17, 18 yrs old) ↑: Attachment/commitment to school, self-reported achievement (no GPA, achievement test differences) ↓: School misbehavior, violent delinquent acts, alcohol use in past yr, sexual intercourse, multiple sex partners
		Evaluation: ↑: Peer involvement, social acceptance, problem-solving, use of conflict resolution strategies, positive solutions ↓: Aggressive and passive solutions



Stay SMART<sup>2,3</sup>  
n = 273; 75%M, 25%F; 45%Wh,  
42%Bl, 14%Hisp; mean age  
13.6 yrs; low SES urban areas

Place: Boys and Girls Clubs of America  
Components: Individual  
Intensity/Duration: 12 sessions  
Explicit Features: 9 sessions of life skills  
training (coping and resistance training);  
3 sessions on postponing sexual involve-  
ment (discussions of sex in media, partner  
pressure to have sex, consequences of sex,  
role playing)  
Boosters: 5 sessions at 1 yr; 4.5 hrs at 2 yrs  
(to reinforce resistance skills and knowl-  
edge and encourage older participants to  
be positive role models)  
Implicit Features: Learning Focus, Social  
Norms, Motivational Efficacy

Success for All<sup>1</sup>  
n = 110 from 23 schools; K-5th  
grade; primarily Bl; 75-96%  
eligible for free lunch program  
in 1st grade

Evaluation: Quasi-experimental  
↑: Reading competence  
↓: Retained in grade

Place: School  
Components: Individual, Family  
Intensity/Duration: Daily, 8-wk assessments  
Explicit Features: Cognitive competence,  
reading achievement, tutoring, parenting  
skills workshops  
Implicit Features: Social Support, Learning  
Focus, Inclusion, Motivational Scaffolding

(continued)

TABLE 2 (Continued)

Program name/sample description	Program description	Postprogram outcomes/follow-up
Summer Training and Education Program (STEP) <sup>2,4,5</sup> n=4,800 from 5 urban areas; low SES; lagging behind academically; 48%M, 52%F; 49%Bl, 19%Asn, 18%Hisp, 14%Wh/other; 14-15 yrs old	Place: School, Community Components: Individual Intensity/Duration: 6-8 weeks during summer; half-time jobs (90 hrs), half-day academic classes (90 hrs), 2 mornings/wk in life skills training Explicit Features: Employment and academic classes, life-skills training, classroom time as well as work time Implicit Features: Social Norms, Learning Focus, Motivational Scaffolding	Evaluation: Experimental ↑: Reading and math test scores, knowledge tests of responsible social and sexual behavior (summer effects only, no effect for school year or long term)
Teen Outreach Program (TOP) <sup>1,2,3,5</sup> n=695 in 25 schools; 86%F; 17%Wh, 68%Bl, 13%Hisp, 2%other; 10th grade	Place: School or Community Components: Individual Intensity/Duration: (school year) 45 hrs volunteer service, weekly classroom discussions and activities Explicit Features: Small group classroom discussions of values, decision making, communication skills, parenting, life options and volunteer experiences; volunteer service in school or community Implicit Features: Social Support, Inclusion, Social Norms, Learning Focus: Knowledge, Motivational Scaffolding, Leadership/Mattering	Evaluation: Experimental ↓: School failure and suspension, teen pregnancy

<p>Valued Youth Partnership'  n=194; 61/69%Hispanic, 2/0%Wh,  37/37%unspec; 12 yrs</p>	<p>Place: School  Components: Individual, School, Family,  Community  Intensity/Duration: 30 sessions over school  yr, 4 hrs of tutoring/week  Explicit Features: Peer tutoring, stipends,  leadership/mattering training, parent and  business community involvement  Implicit Features: Social Support, Social  Norms, Learning Focus,  Leadership/Mattering, Motivational  Scaffolding</p>	<p>Evaluation: Quasi-experimental  ↑: Reading grades, positive self-concept,  positive attitudes toward school  ↓: School dropout rates</p>
<p>Woodrock Youth Development  Project<sup>1,2</sup>  n=367; 53.1%M, 46.9%F;  44.4%Lat, 19.9%Wh,  11.4%Bl, 11.2%Asn,  9.3%other, 1.9%NatAm;  6-14 yrs</p>	<p>Place: School  Components: Individual, family, school,  community  Intensity/Duration: Weekly classes and activ-  ities, daily mentoring, home visits and  contacts  Explicit Features: Social competence promo-  tion, life skills, human relations classes to  develop resiliency skills, peer tutors, home-  work assistance, extracurricular activities  (weekend retreats, after-school clubs, crisis  intervention, summer program), parent  training and involvement</p>	<p>Evaluation:  ↑: Positive race relations, school attendance  ↓: Drug use for past year (younger subgroup)  and past month (older and younger sub-  groups)  Wrong direction outcome on attitudes  toward drug use in older subgroup</p>

(continued)

TABLE 2 (Continued)

Program name/sample description	Program description	Postprogram outcomes/follow-up
	Implicit Features: Social Support, Inclusion, Social Norms, Motivational Scaffolding, Leadership/Mattering	

*Note.* M/F: gender; ethnicity: African American (Bl), Asian (Asn), Latino/Hispanic (Lat), White (Wh), Native American (NatAm), Filipino (Fil); place: where program takes place; components: levels targeted by program; explicit features: program features described by evaluators; implicit features: program features implied by program description; ↓: decrease; ↑: increase. Adapted from Table 6-1, p. 150 in Eccles & Gootman (2002). Program reviews: <sup>1</sup>Catalano et al., <sup>2</sup>Roth et al., <sup>3</sup>Greenberg et al., <sup>4</sup>Blueprints (<http://www.colorado.edu/cspv/blueprints/Default.htm>), <sup>5</sup>Kirby et al.

After briefly describing the techniques used and the unique findings of each of these reviews, we summarize the consistent findings across the reviews in terms of the categories of supportive social contexts outlined in Table 1. We refer to these features as implicit features in Table 2. In this summary section, we add the results from recently published experimental evaluation studies and provide examples of some of the programs with the most consistent evidence of positive effects. We obtained and reviewed the materials and reports for each of these example programs.

### **Meta-Analyses**

#### *Durlak and Wells*

Durlak and Wells (1997, 1998) conducted two meta-analytical reviews of 177 primary and 130 secondary prevention mental health programs that involved youth less than 19 years of age and were completed before 1992. Primary prevention programs intervene with normal populations to prevent problems from developing; secondary prevention programs target youth either at risk for problems or already exhibiting problems. Most of the primary prevention programs targeted children between and 7 and 11 years of age. Age distribution information was not provided in the case of the secondary prevention programs. Only programs with a control group of some type were included in these two meta-analyses. Randomized designs were used in 61% of the primary prevention program evaluations and 71% of the secondary prevention program evaluations. The majority of these programs took place in schools (72.9% of the primary prevention programs and 93.4% of the secondary prevention programs) during normal school hours. Durlak and Wells indicated that the intervention procedures and goals for the primary prevention programs were described in very general terms, making it difficult to determine which specific program components might explain the reported effects.

In general, the results suggest that preventive mental health programs based on well-established principles of clinical intervention can be effective across a variety of psychological outcome measures for periods of up to 2 years following the intervention exposure. They are particularly effective in increasing competencies such as assertiveness, communication, and cognitive skills; enhancing feelings of self-confidence; and reducing such problems as anxiety, behavior problems, and depressive symptoms. The most effective programs worked directly with individuals using techniques based on social learning theory (such as modeling and/or reinforcing appropriate behaviors) and other direct instructional approaches focused on educational and interpersonal problem solving.

Secondary prevention programs involving strategies based on cognitive-behavioral therapies were especially useful in reducing problem outcomes. In contrast, school-based primary prevention programs that focused on changing the psychological and social aspects of the classroom environment through increasing either interactive instructional techniques or effective classroom management techniques were

more effective in increasing competencies than in reducing problems. Efforts to change parenting practices through parental training were not effective.

Durlak and Wells (1998) also noted that some school programs actually produced increases in rates of problem behaviors. Recently, Dishion et al. (2000) concluded that such iatrogenic effects (effects in which the problem behaviors of the experimental group increase) are common when programs target and include a large proportion of youth who are already heavily involved in problem behavior. Thus, in terms of the contextual features listed in Table 2, these programs were most successful when they included intentional learning experiences, intentional scaffolding, strong social supports from adults, and positive social no-

*Hattie et al.*

Hattie, Marsh, Neill, and Richards (1997) conducted a meta-analysis of the effects of adventure programs. Common features of such programs include the following: wilderness or back-country settings; groups of less than 16; mentally and/or physically challenging objectives requiring effort, persistence, self-reliance, and cooperation; intense social interactions related to group problem solving and decision making; trained nondirective leaders; and an average duration of 2–4 weeks. Thus, these programs contain several of the contextual features we outlined in the earlier section on nonexperimental studies.

Outward Bound, one of the most popular adventure programs, consists of conditions involving activities such as rock climbing, canoeing, rafting, backpacking, sailing, ropes courses, and cross-country skiing. Given the physical requirements of the expeditions, participants acquire physical fitness and skills. However, it is not the physical skills that are the primary goal of these programs. The physical and mental challenges are the vehicles through which participants discover their strengths, manage their weaknesses, and use this knowledge, along with group cooperation, to master the outdoor challenges.

Hattie and colleagues stressed the challenge of finding good evaluations of adventure programs. Evaluations that went beyond anecdotal evidence often had methodological designs; evaluations using pretests/posttests or comparison groups often failed to reveal statistically significant differences, perhaps owing to the low statistical power of studies with small sample sizes. Because of the low statistical power of individual studies, the authors chose to conduct a meta-analysis based on effect sizes rather than summarize statistically significant findings.

The authors chose studies for the meta-analysis based on sample size, use of controls, methodology descriptions, and the quality of instruments used in the studies. Although they did not specify the exact criteria they used to judge quality, they categorized studies as being of low, medium, or high quality; they eliminated studies that they categorized as low quality. They also did not include school-based outdoor education programs, because such programs typically are of very short duration and lack challenging experiences. Ninety-six studies published between

and 1994 were included in their analysis; 53 were evaluations of Outward Bound (many from the Australian National School). The total sample size across all 96 studies was 12,057 (72% male and 28% female); the mean age was 22.28 years (range: 11–42 years). Average program duration was 24 days, with 72% of the programs lasting between 20 and 26 days.

The overall mean effect size immediately following the program was .34, with a follow-up overall mean effect size of .17 at an average of 5.5 months after the program. Many postprogram positive effects were maintained over time; some increased over time, the most notable of which involved decision-making skills, academic self-concept, values, and reduced aggression (see Table 3). The adventure programs had their greatest immediate effects on such psychological, emotional, and cognitive characteristics as self-control, confidence in one's abilities to be effective, decision making, school achievement, leadership, independence, assertiveness, emotional stability, social comparison, time management, and flexibility. Longer programs (more than 20 days) were more effective than shorter programs. Although a meta-analysis based on studies with significant methodological limitations is subject to criticism, the results provide additional support for the importance of such programs in terms of positive youth development and for the set of contextual characteristics outlined in Table 1. This claim is discussed more fully in our conclusion.

### **Prevention Programs**

Three of the program reviews we considered focused on what are typically called prevention programs. These programs often take place in schools, and in some cases they occur during formal school hours. As can be seen from Table 2, the specific programs included in these reviews overlap with the programs selected in the youth development program reviews. This overlap suggests that the distinction between what is considered prevention and what is considered positive youth development is not all that clear in practice. Advocates of a positive youth development perspective have stressed the fact that preventing negative outcomes does not mean that youth are fully prepared (Pittman, Irby, & Ferber, 2000). Central to this distinction is the need for all programs to move beyond deficit-based goals if they are to support positive development as well. Interestingly, in practice, it appears that most prevention programs attempt to meet both of these goals and that this is particularly true of the most consistently successful programs.

### *Greenberg and Colleagues*

Greenberg and colleagues (2001) reviewed 34 mental disorder prevention program evaluations for children and adolescents using a more conventional review process rather than meta-analysis. Their search concentrated on peer-reviewed journal databases as well as government reports, meta-analyses, reviews, Internet sources (e.g., Centers for Disease Control and Prevention), and relevant books. Of an

TABLE 3 Adventure Program Mean Effects on Outcome Variables

Outcome variable	Postprogram	Follow-up
Leadership	.38	.15
Conscientiousness	.46	-.28
Decision making	.47	.64
Leadership—general	.33	.16
Leadership—teamwork	.42	.16
Organizational ability	.44	.08
Time management	.46	.21
Values	.20	.32
Goals	.05	
Self-concept	.28	.23
Independence	.47	.27
Physical ability	.08	.37
Peer relations	.28	.20
General self	.28	.33
Physical appearance	.38	.32
Academic	.17	.30
Confidence	.33	.14
Self-efficacy	.31	.21
Family	.25	.10
Self-understanding	.31	.16
Well-being	.24	-.09
Academic	.46	.21
Academic—direct	.50	.30
Academic—general	.45	.13
Personality	.37	.14
Assertiveness	.42	.10
Reduction in aggression	.33	.72
Achievement motivation	.36	.15
Emotional stability	.49	.11
Femininity	.10	
Internal locus of control	.30	-.04
Maturity	.32	-.01
Neurosis reduction	.31	.24
Masculinity	.26	
Interpersonal	.32	.17
Behavior	.34	.01
Cooperation	.34	.31
Interpersonal communication	.13	.10
Relating skills	.26	.01

*(continued)*



TABLE 3 (Continued)

Outcome variable	Postprogram	Follow-up
Recidivism	.55	.10
Social competence	.43	.20
Adventuresome	.38	-.06
Challenge	.39	.08
Flexibility	.42	.08
Environmental awareness	.24	
Physical fitness	.40	-.26

Note. Adapted from Hattie et al. (1997, Table 13).

initial sample of 130 programs, 34 met the following criteria: randomized experimental design or quasi-experimental design with a comparison group, pretest and posttest measures, written manual specifying the theory and procedures used in the program intervention, clearly defined sample with adequate information about participants' behavior and social characteristics, and evidence of positive mental health outcomes. Follow-up assessments were preferred but not required. Many of the programs evaluated were school based, in part because experimental control is more feasible in this context.

Programs were categorized into three groups based on their target populations: broad unselected populations (universal prevention), youth already at risk for conduct disorders, and youth at risk for internalizing behaviors. Universal prevention programs produced either significant declines or slower increases in aggression, depression, anxiety, impulsiveness, cognitive skills, and/or antisocial behavior. Greenberg and colleagues concluded that several features were characteristic of effective universal prevention programs. For example, the content of effective programs focused on increasing social and emotional competence through cognitive skill development. Also, effective programs included efforts to intervene with schools, families, or both. The most effective programs usually lasted at least one school year and involved regular meetings to reinforce new attitudes and behaviors. These conclusions are consistent with those reached by Durlak and Wells (1997) in their meta-analysis of primary prevention programs in two ways: the focus on skill building as an important outcome and the focus on school-based interventions as effective vehicles for change. These conclusions differ from those of the Durlak and Wells report in one important way: Durlak and Wells concluded that intervention programs aimed at parents were not effective in either increasing children's skills or decreasing their involvement in problem behaviors.

Ten of the programs reviewed by Greenberg et al. (2001) targeted populations at risk for externalizing behaviors or conduct disorders. These programs ranged in focus from interventions aimed at individuals to interventions aimed at the parent-child

relationship and interventions aimed at multiple contexts. Prevention or amelioration of externalizing behaviors and conduct disorders is especially desirable in that early conduct disorders often evolve into delinquency, substance abuse, and adult mental disorders, as well as school failure and school dropout. Greenberg et al. concluded that programs focusing only on either the children themselves or their parents involved smaller effects and that these effects were more likely to fade over time than the effects revealed among multicomponent programs. The effective multicomponent programs targeted the school, the family, and the community as well as the child, parents, teachers, and peers. Activities designed to build skills and competencies, particularly social and academic skills, were common features of successful programs. We describe one of these programs, the Adolescent Transitions Program, in our concluding comments. This program targeted both at-risk adolescents and their parents and was effective in lowering rates of problem behaviors and family conflict.

The third set of programs reviewed included programs that focused on children at risk for internalizing disorders such as depression and anxiety disorders. Of the 10 effective programs in this category, 2 reduced depressive symptoms, 1 reduced anxiety symptoms, and 1 reduced risk of suicide. These programs focused on improving young people's cognitive and behavioral coping skills so that they could more effectively deal with stressful periods in their lives. The other 5 programs were effective in helping youth deal with childhood stresses such as divorce and bereavement. Social support and instruction in specific problem-focused coping strategies were common characteristics of the effective programs.

The studies in the Greenberg et al. (2001) review provide strong support for the importance of skill building/competency promotion in preventing mental health disorders in children and adolescents. In a closer examination of individual programs (see Table 2), other implicit features emerge as likely to be important. For example, social norms for appropriate behavior and cognitions are inherent in programs targeting conduct disorders as youth are learning about appropriate social interactions with peers, with adults, and in the school environment. Likewise, knowledge building increases parents' ability to recognize early manifestations of problem behaviors; knowledge-building activities also help parents learn appropriate family management skills to support their children. Social support is implied in programs offering direct skill-building opportunities to youth as well as in programs that encourage caring parent-child relationships. Furthermore, motivational scaffolding is evident in the descriptions of the competency-building activities of effective programs. Concrete skills, such as how to cope with interpersonal conflict, are taught, and there are many opportunities for individuals to be successful in the learning process. Teaching strategies, including role-plays and written assignments, offer opportunities for individuals to receive positive feedback with an improvement focus.

Two of the features listed in Table 1, inclusion and leadership/mattering, were not as obvious in the program descriptions provided by Greenberg et al. (2001). However Greenberg et al. concluded that programs of longer duration are more effective than programs of shorter duration. Because longer duration interventions tend to include

the same group of individuals, they may be creating opportunities for inclusion even though this is not a specific program goal. Another reason why these features may not be as obvious is the lack of specificity in identifying and evaluating program characteristics, a flaw in most of the evaluation studies reviewed. A third explanation is that mental health promotion may not be as dependent upon these two program characteristics as other prevention and promotion areas. Given the evidence supporting all of the contextual characteristics in other effective programs, we believe that the mental health promotion field could benefit from assessing whether programs provide for inclusion, leadership, and mattering and add these elements if they are absent.

### *Blueprints Model Programs*

The Center for the Study and Prevention of Violence at the University of Colorado in Boulder published a series of "Blueprints" describing program interventions effective in preventing violence. There is not a published, peer-reviewed violence prevention review of individual programs as comprehensive as the one that appears online. The best site for this review is <http://www.colorado.edu/cspv/blueprints/Default.htm>. Among the 450 delinquency, drug, and violence prevention programs reviewed, Blueprints highlighted 11 model programs that had statistically significant deterrent effects on delinquency, drug use, and/or violent behavior and also met most of the following criteria: experimental design with random assignment or a strong quasi-experimental design, at least one additional site replication involving an experimental design and demonstrated effects, and evidence that the deterrent effect was sustained for at least 1 year posttreatment.

Why are these programs successful? Elliott and Tolan (1999) looked for evidence that changes in risk or protective factors mediated changes in violent behavior. However, most of the evaluations had either not collected the necessary data to analyze the causal processes or had not reported these analyses. Furthermore, because these evaluations focused on entire program packages rather than specific components, Elliott and colleagues concluded that it was impossible to determine which particular aspects of the programs were responsible for the significant deterrent effects. Nonetheless, the programs do provide models of what can be done in communities to decrease rates of violence.

What characteristics did these programs share? Teaching life skills and providing strong adult social supports were common features of all of the programs. Mentoring was explicitly evaluated in one program. The other programs were more global in their orientation and included one or more of the following features: comprehensive educational services, mental health services, and development activities designed to help youth learn various life skills and develop confidence in themselves and financial incentives for attendance. Of the 11 model programs, 4 provided comprehensive, community-based, multifaceted programming; 5 provided family therapy aimed at involving families in changing those aspects of the young person's setting (i.e., peers, school, family, community) that contribute to the problem behavior.

These authors left unanswered a very important question: Are some characteristics more appropriate than others depending on the developmental stage of the individual? Using many of the same programs reviewed by Elliott and his colleagues, three other recent reviews have addressed this question as well as elaborating on the specific characteristics of effective programs. Samples and Aber (1998) reviewed school-based violence prevention programs and concluded that four school grade groupings were relevant to violence prevention programs: preschool (ages 2–5 years), elementary school (ages 6–11 years), junior high/middle school (ages 12–14 years), and high school (ages 15–18 years). These authors summarized what has been learned from the developmental and program evaluation literatures in terms of preventing violence.

In the preschool years, effective programs target the development of self-regulation and both social and cognitive competencies in children. In addition to the individual level, successful programs involve parents in the interventions to improve family functioning and increase parenting skills. Successful interventions reach the multiple contexts surrounding individuals. In elementary school, the limited evidence available suggests that the focus should be on social norms and interpersonal skill development, especially negotiation strategies. In junior high/middle school, changing classes with an assigned cohort and receiving instruction in small, personalized classrooms help youth form a stable peer group. These school strategies fall into the contextual feature categories of increasing social support and inclusion and possibly, depending on the teacher, encourage more opportunities for efficacy owing to the presence of small, inclusive groups.

Other school violence prevention researchers have made similar recommendations. Laub and Lauritsen (1998) described the importance of programs that help youth build social capital (social support) in their families, schools, and neighborhoods. Programs must also support development in recognizing and dealing with violent events. Fagan and Wilkinson (1998) concluded that role-playing strategies used by instructors to help youth break down and analyze the stages of violent situations (motivational scaffolding) are effective in violence prevention as well.

*Kirby (1997, 2001)*

Kirby (1997, 2001) reviewed evaluations of primary prevention programs designed to reduce sexual risk-taking behavior and teen pregnancy. The program evaluations met the following criteria: completed in 1980 or later, experimental or quasi-experimental design, minimum sample size of 100 in combined experimental and control groups, 12–18-year-olds as target group, conducted in the United States or Canada, and measurement of program impact on sexual or contraceptive behavior or pregnancy or birth rates. The earlier of the two reviews, *No Easy Answers* (Kirby, 1997), included only peer-reviewed publications. The new edition, *Emerging Answers* (Kirby, 2001), also includes unpublished studies involving rigorous evaluations and reviews studies published since the 1997 report.

In both reviews, Kirby divided programs into three groups based on whether they focused primarily on sexual behavior antecedents (i.e., age, gender, pubertal timing, attitudes and beliefs about contraception), nonsexual behavior antecedents (i.e., poverty, parental education, parental support, drug and alcohol use), or a combination of both. Sexual antecedent programs included curriculum-based sex education programs and other programs in the school or community designed to improve reproductive health care or access to contraceptives. In the paragraphs to follow, we summarize the conclusions from the more recent report in terms of what works in reducing teen pregnancy and risky sexual behavior.

Kirby identified 10 characteristics common to effective sexual antecedent curriculums, many of which match the contextual features listed in Table 1 as important for positive youth development. Examples of motivational scaffolding can be seen in several characteristics. For example, successful programs focused on a small number of behaviorally oriented goals, such as delaying initiation of intercourse or using condoms. Encouraging concrete behaviors in manageable numbers should increase young people's sense of personal efficacy about achieving the objectives. Effective programs also used a variety of teaching methods designed to make the curriculum content interactive and personally relevant. In addition, the behavioral goals, teaching methods, and informational materials were developed to be compatible with the age, level of sexual experience, and cultural background of the youth, and adequate time was given to complete activities, thereby encouraging mastery of the material.

Effective curriculums also had an intentional learning focus, incorporating both knowledge building and skill building. The programs built knowledge by providing basic and accurate information about the risks associated with sexual activity and about protective methods for avoiding pregnancy and sexually transmitted diseases. Skill building was accomplished through activities teaching youth how to identify and deal with social pressures about sexual behavior, including recognizing situations that may lead to sex. Effective programs also taught youth resistance skills by providing information about these skills, demonstrating them, and allowing them to be practiced through role-playing and written exercises (teaching strategies that also overlap with effective motivational scaffolding).

Positive social norms were conveyed through clear and consistent messages to the youth about correct sexual choices rather than providing pros and cons regarding choices. For example, abstinence programs provided clear messages that abstinence from sex is the correct choice. Contraceptive use programs stressed condom and other contraceptive use as the right choice and emphasized unprotected sex as the wrong choice.

Social support, including reinforcement of the social norms established in the program, came from leaders who believed in the program's objectives and who had received training in the implementation of the program. Lastly, effective programs incorporated theoretical knowledge about what is effective in reducing health-related risky behavior. For example, program goals targeted beliefs, attitudes, social norms, efficacy, and skills appropriate to achieving the desired behavior.

Contextual features not explicit in effective curriculum-based programs were opportunities for inclusion in social structures as well as opportunities for youth to experience leadership, mastery, and mattering. These characteristics were much more apparent in the non-sexual-antecedent category of successful programs. Non-sexual-antecedent programs included service learning, vocational education, and employment programs. These programs focused on improving education and life options as the means to reduce pregnancy and birth rates. The vocational education programs offered a combination of academic and vocational education and support services. However, although the vocational programs were quite intense, they were not very effective in decreasing pregnancy rates among disadvantaged youth. The vocational programs reviewed included the Summer Training and Education Program (STEP), the Conservation and Youth Service Corps, the Job Corps, and JOBSTART.

In contrast, there was strong evidence of positive effects for the service-learning programs. These programs provided opportunities for unpaid service time in the community as well as structured time for training, preparation, and reflection. Participants in the most extensively evaluated programs (the Teen Outreach Program and Reach for Health) reported lower rates of pregnancy than the control group during the school year in which they participated in the program intervention and in the few follow-up assessments currently available. Teen Outreach Program participants were less likely to fail in school as well. The service learning programs offered extensive opportunities for leadership, mattering, and contributions to one's community. Such opportunities were not typically offered in the vocational programs. It is likely that these types of opportunities for mattering also contribute to feelings of inclusion in one's community as well as teaching the positive social norms valued by the community.

The most promising program concentrating on both sexuality and positive youth development was the Children's Aid Society Carrera Program (Philliber, Kaye, Herrling, & West, 2000). Among the girls in this program, initiation of sex was delayed, contraceptive use increased, and pregnancy and births decreased for up to 3 years; there were no changes in risk-taking behaviors among boys, however. In addition, girls acquired more computer skills and job experience and were more likely to have visited a college. The Carrera Program includes sex and family life education, life skills training, academic help and counseling, work-related counseling and training, self-expression through the arts and athletics, and comprehensive mental and physical health services.

The programs concentrating on nonsexual antecedents of adolescent sexual behavior most closely exemplified the contextual characteristics related to social norms, social support, inclusion, leadership, and mattering. Interestingly, although these programs also were likely to provide skill and knowledge building opportunities as well as motivational scaffolding, these characteristics were not as central to goals as they were to the goals of programs targeting sexual antecedents. *Emerging Answers* (Kirby, 2001) identified programs in both categories that had positive effects on teen sexual behavior. These results suggest that not all contextual features are critical for positive effects. One other surprising observation made by Kirby is that programs

focused on sexual antecedents had positive effects on risky sexual behavior but did not reduce teen pregnancy. In contrast, the programs focused on nonsexual antecedents of teen pregnancy reduced both risky sexual behavior and teen pregnancy. Although far more information is needed, one might speculate that positive youth development programs offer possibilities for alternative life choices that encourage avoiding a teen pregnancy that could limit life choices.

### **Positive Youth Development Programs**

Over the past 10 to 15 years, increasing attention has been focused on the need for programs that stress promoting positive development rather than preventing problems (Public/Private Ventures, 2000). Many traditional youth-serving organizations, such as 4-H, Boys' and Girls' Clubs, and scouts, have always taken this perspective. Schools, of course, are also based on an orientation toward promotion rather than prevention. Despite the long history of both of these types of organizations, relatively little attention has been given to assessing their effectiveness in promoting positive youth development beyond the academic domain. Instead, a great deal of interest has focused on designing and evaluating programs aimed at preventing such negative developmental outcomes as school failure, school dropout, teen pregnancy, delinquency, and drug and alcohol consumption. In response to this research policy and funding climate, a growing group of youth advocates, foundations, and researchers have stressed the need for more programs and more program evaluations explicitly focused on promoting positive youth development. The results of the first generations of such evaluations are now becoming available.

#### *Catalano, Hawkins, and Colleagues*

In the mid-1990s, Catalano, Hawkins, and their colleagues were commissioned by the U.S. Department of Health and Human Services to review evaluation studies of positive youth development programs (see Catalano, Berglund, Ryan, Lonczak, & Hawkins, 1999). The authors solicited information on promotion/prevention programs from a wide variety of sources and collected more than 100 reports. From these, they first selected the 77 programs involving some form of systematic evaluation. From this set, they then selected the 25 "successful" programs that had included a control or strong comparison group, collected measures of behavioral outcomes, and claimed to be attempting to promote such positive youth development objectives as social bonding; psychological resilience; cognitive, emotional, social, behavioral, and moral competence; self-efficacy and self-determination; a clear and positive identity; optimism; spirituality; and prosocial values.

All 25 programs claimed to be promoting competence, self-efficacy, and prosocial norms; 76% stressed social bonding, and 86% provided opportunities for prosocial involvement and recognized positive behavior. The other major constructs (positive identity, self-determination, belief in the future, resiliency, and spirituality) were present in less than half of the programs. Eighty-eight percent

had a school component, 60% had a family component, and 48% had a community component.

We can look for clues about the relative importance of specific contextual features by exploring the positive development characteristics prominent in the positive youth development review. As just noted, all 25 successful programs provided opportunities to develop competence in age-appropriate social, emotional, cognitive, behavioral, and moral skills. Ninety-six percent focused on building social or cognitive behavioral skills; 73% focused on decision-making and self-management skills; 62% focused on coping skills; and 50% focused on refusal-resistance skills. Acquiring such competencies should lead to increases in sense of self-efficacy. Descriptions of the ways in which both competencies and a sense of self-efficacy were facilitated by the programs also suggest that these programs provided intentional learning opportunities and strong mastery motivation scaffoldings.

Finally, all of the programs stressed positive social norms, defined as "healthy standards and clear beliefs." Programs delivered prosocial norm messages through adult and peer expectations and/or information about how to counteract negative peer influences. The prosocial norm definition included resistance training. The evaluations described in this review suggested that a learning focus on skill building, motivation scaffolding to increase sense of self-efficacy, and promotion of social norms are critical ingredients in effective positive youth development programs.

Two other characteristics were identified as salient in many of the successful programs; 76% of the programs stressed social bonding with adults and peers, and 86% provided opportunities for community involvement and recognized positive behavior. The prevalence of such opportunities in successful positive youth development programs provides evidence for the importance of leadership and mattering. Youth in many of these successful programs were provided opportunities to contribute to their "community" and were valued and recognized for those contributions.

#### *Roth, Brooks-Gunn, and Colleagues*

Roth, Brooks-Gunn, Murray, and Foster (1998; see also Roth & Brooks-Gunn, 2000) reviewed more than 60 evaluations of prevention and promotion intervention programs for adolescents. Of the 60 programs reviewed, 15 were selected for inclusion based on the following characteristics: positive youth development focus, experimental or quasi-experimental design, and focus on youth not currently demonstrating problem behaviors (see Table 2). Roth and colleagues both reviewed the materials they found for each program and talked directly with the program administrators in order to gather more complete details.

Roth and colleagues (1998) defined youth development programs as "developmentally-appropriate programs designed to prepare adolescents for productive adulthood by providing opportunities and supports to help them gain the competencies and knowledge needed to meet the increasing challenges they will face as they mature" (p. 427). They then grouped these programs into three categories based on



how closely they matched a youth development framework: (a) positive-behavior-focused, competency/asset-enhancing programs; (b) problem-behavior-focused, competency/asset-enhancing programs; and (c) resistance-skills-based prevention programs.

Roth and colleagues categorized 6 of the 15 programs as positive-behavior-focused, competency/asset-enhancing programs. These programs offered a wide range of opportunities to develop positive psychological and social assets, skills, and competencies. Some of these programs also explicitly focused on providing caring relationships between youth and adults (e.g., mentoring programs). All 6 programs showed positive changes in attitudes and/or behaviors and improvements in competencies in areas such as educational achievement, school attendance and engagement, and interpersonal skills. Programs reaching out to more of the contexts in which the adolescents lived had more positive outcomes.

The problem-behavior-focused, competency/asset-enhancing programs focused on building competencies and assets as well, but the goal of these programs was reducing participation in problem behaviors. Four of these programs focused on reducing drug, alcohol, and tobacco use; one targeted reducing school dropout rates; and one focused on reducing school dropout and preventing teen pregnancy. Competency promotion in these programs focused on resistance skills training. Again, Roth and colleagues concluded that programs targeting multiple contexts, providing relational support, and enhancing youth competencies were most successful.

Roth and colleagues concluded that resistance skills-based prevention programs were least consistent with a positive youth development perspective. The three such programs that they reviewed promoted skill building through assertiveness training, resistance to peer pressure, skill development, and/or planning for the future. All three programs showed declines in problem behaviors. Caring adult relationships emerged as an important component of each of these programs. Roth and colleagues also concluded that more comprehensive programs with longer durations were the most successful.

### Summary

Although many of the programs included in all of these reviews used a rigorous experimental or quasi-experimental design, few used a well articulated theory of change to guide program design, program implementation, selection of outcomes, or specification of the mediating and moderating conditions that might connect program characteristics to youth outcomes. There was very little attempt to theoretically link the program characteristics with the outcomes being assessed. Outcomes varied across studies and were quite idiosyncratic within each evaluation. Consequently, we do not know whether the programs might have affected other outcomes. Also, null findings were not reported, leaving us with little information about areas in which programs might not have an effect.

Few programs included high-quality implementation-evaluation techniques. Consequently, it is difficult to determine why most of these programs either succeeded

or failed to support positive youth development, and, in the case of specific outcomes, it is often impossible to say what works. In addition, there was little overlap between the measures collected in most of the evaluations summarized in these reports and characteristics of settings outlined earlier. This reflects in part the scarcity of well-validated measures of these contextual characteristics; it also reflects in part the disconnection between research and practice traditions.

Despite these weaknesses, there is considerable convergence across the reviews on what works in general. Furthermore, there is considerable convergence in the findings of these experimental and quasi-experimental program evaluation studies and the findings of the nonexperimental studies of both extracurricular and leisure activities and youth organizations discussed earlier. Even though few of these studies explicitly looked at the contextual characteristics suggested in Table 1, the findings are quite consistent with these suggestions. We turn to this comparison in our concluding section.

## CONCLUSION

We now turn to a more general discussion of the relation between studies of youth activity settings and programs and contextual characteristics we hypothesized to be important in Table 1. Mapping this framework of contextual features likely to promote child and adolescent development onto the youth-serving programs just reviewed, as well as the programs described in the earlier sections on extracurricular and leisure activities and nonexperimental studies, was a challenge. We know from the evaluations that such programs can be effective in promoting healthy development; we know much less about why. Programs typically consisted of several components and had varying characteristics that were usually not well measured. Consequently, there is rarely sufficient information in these reports to reach firm conclusions about which particular component or combination of components was responsible for any significant effects. Nonetheless, in this section we summarize our conclusions regarding the most likely contextual characteristics needed to support healthy development.

### Developmentally Appropriate Structure

Many developmentalists stress the importance of developmentally appropriate contexts (e.g., Eccles et al., 1993). Few of the programs we reviewed provided information with which to determine whether this is true in youth-serving programs. Unfortunately, the best evidence is provided by the fact that youth drop out of these programs as they mature into adolescence (McLaughlin, 2000). In contrast, the success of programs that provide opportunities for adolescents to take on leadership roles as they mature and become more expert in the program areas provides descriptive evidence of the importance of programs responding in developmentally appropriate ways to the growing maturity of their participants. The programs studied by

McLaughlin and her colleagues provide numerous examples of how programs effectively use this strategy to retain adolescent participants.

The results of some of the longest lasting violence prevention programs also provide support for the importance of this component of good programs. Because some of these studies implemented experimental designs that included multiple age cohorts, they were able to document at what age particular programs were most effective. The Metropolitan Area Child Study (Eron et al., 2002; Huesmann et al., 1996) involved a multiyear, multicontext aggression prevention program aimed at children in either the early (Grades 2 and 3) or late (Grades 5 and 6) elementary school years. The program used skills and motivational training with all children in their classrooms, enhanced skill and motivational training, attempted to change peer social norms regarding acceptability of aggression among at-risk students in pull-out sessions, and used a family intervention to help parents of high-risk children recognize and reinforce prosocial behavior, improve peer group monitoring skills, improve family communication patterns, and provide general emotional and social support.

Schools were randomly assigned to one of four conditions (no intervention, universal classroom intervention, universal classroom intervention combined with pull-out experience for at-risk children, and all interventions). The children were exposed to these treatments over a 2-year period. The universal treatment was provided by the teachers in conjunction with intensive teacher training and support for implementation. Graduate students with advanced training provided the pull-out experiences once a week for 28 weeks, spread over 2 years. Trained clinicians provided the family intervention during the second year of the program, once a week for 22 weeks. Like most such programs, this program had major attrition problems over the course of the evaluation.

The results were quite mixed. The strongest positive impact on decreasing aggression occurred among boys who received the full set of interventions early in their elementary school years. The pull-out intervention actually led to increases in aggressiveness among boys who received the intervention late in their elementary school years. In one school district, the youth who received both the early and the late interventions showed increased aggression across all 6 years of participation. The results were similar for school achievement. Only those youth exposed to the universal classroom intervention early in their elementary school years showed increases in academic achievement; control students showed decreases in achievement. There were no effects on school achievement for the youth exposed to the more intense child or family interventions at either time period, and there were no effects of the universal treatment for those given the intervention in their late elementary school years.

Clearly, these results suggest that the developmental timing of a program is critical. In the early adolescent years, intensive exposure to aggressive peers, even in a pull-out program designed to reduce aggression, is likely to produce increases in aggressive behaviors. This finding is consistent with those reported by Dishion and his colleagues (see earlier discussion).

### **Social Support From Adults and Peers**

Social and emotional support was a major implicit component of all of the programs investigated in both the nonexperimental and experimental studies we reviewed. Although mentoring activities are the most salient example of an effort to provide increased social and emotional support, most of the programs provided youth with some form of supportive contact with nonfamilial adults. In many programs, although "mentoring" was not explicitly stated as a program goal, adult-youth contact took the form of mentoring.

One of most carefully conducted experimental evaluations focused on a program specifically based on mentoring principles, namely, the evaluation of Big Brothers/Big Sisters (Grossman & Tierney, 1998). In this program, adult volunteers, referred to as big brothers or big sisters, are matched with a child, known as the little brother or little sister, with the hope that a caring and supportive relationship will develop. Professional staff match big brothers/big sisters and little brothers/little sisters based on factors such as shared interests, geographic proximity, and preferences for same-race matches, and there is a preference to match youth who have been waiting the longest. Orientations are conducted with youth and volunteers, and training is provided for volunteer mentors. Big Brothers/Big Sisters staff members supervise the matches between youth and volunteers by contacting all parties within 2 weeks of the initial match and then having monthly telephone contact with the volunteer for the first year of the program.

Big Brothers/Big Sisters staff members also contact the youth at least four times the first year. The matched pairs of mentors and youth spend 3–5 hours together each week for at least a 1-year period. Activity goals are identified in the initial interview with the child and parent/guardian; these goals are then used by a caseworker to develop an individualized case plan to help the matched pair develop a mutually rewarding relationship with regular contact.

According to telephone interviews with 1,101 mentors in 98 mentoring programs, youth focus groups, and youth interview data (Herrera, Sipe, & McClanahan, 2000), the matched pairs with the closest and most supportive relationships had more than 10 hours of contact per month, involved shared interests, and shared in decision making regarding activities. The most supportive relationships were between mentors and children of elementary school age. The positive effects of Big Brothers/Big Sisters included increases in grade point averages and parental trust as well as decreases in hitting behavior, skipping school, and lying to parents. Minority males were less likely to report initiation of alcohol and other drug use. Only self-reported measures were used in the evaluation.

### **Inclusive Social Networks and Social Organizational Arrangements**

We hypothesized that healthy development is promoted by fostering a sense of belonging through inclusive social structures. This theme was evident in many of the programs investigated via both nonexperimental and experimental methods. It was a central component of the programs studied by McLaughlin and Bryce Heath, and

It was also a critical component of the Quantum Opportunities Program (QOP), a program experimentally evaluated by Hahn, Leavitt, and Aaron (1994). Instilling a sense of belonging is at the core of the QOP mission. If participants stop attending QOP activities, program staff members track them down to find out what is wrong, to assure them they are still part of their QOP family, and to coax them back to the program. This attitude of refusing to give up on youth was considered by the evaluators (Hahn et al., 1994) to be a crucial component of the program.

The QOP (Hahn et al., 1994) is designed to provide adolescents from families receiving public assistance and living in high-risk neighborhoods with education, service, and development activities. Youth are paid to participate in the program, which begins in the ninth grade and continues through high school graduation. Participants receive 250 hours of education activities (e.g., taking part in computer-assisted instruction and peer tutoring) in order to enhance their basic academic skills. They also participate in 250 hours of developmental activities ranging from cultural enrichment to personal development, acquiring life/family skills, planning for college or advanced technical/vocational training, and job preparation. Finally, participants provide 250 hours of service in activities such as assisting in community service projects, helping with public events, and working as volunteers in various community agencies.

The centrality of inclusion in QOP is evident in its use of a family metaphor in guiding its programming. The program is explicitly designed to act as an extended family. Program staff track down youth when they skip school, follow them to new homes and neighborhoods and even prison, provide educational opportunities, and monitor their health and well-being much as a family cares for a child. The support system includes caring adult mentors and peers standing by the youth for a period of 4 years. The youth are given clear limits for behavior but are not expelled from the program regardless of their behavior. Finally, youth are placed into small groups of 25 to promote group bonding throughout the 4 years.

In the primary evaluation of this program, QOP youth, relative to the youth in the control group, were more likely to graduate from high school and attend college or other postsecondary schools; received more honors and awards; had more positive attitudes and opinions about life, including their futures; and were more likely to volunteer time to community service work (Hahn et al., 1994). They were less likely to drop out of school, had fewer children, and were in less trouble with the police than members of the control group.

Fostering inclusion in the early elementary years also has positive long-term results, as demonstrated by the Seattle Social Development Project. This project, a universal intervention for elementary school children developed by Hawkins, Catalano, and colleagues, is grounded in their social development theory (see Catalano & Hawkins, 1996). According to this theory, strong social bonds to family and school serve as protective factors against problem behaviors such as school misconduct and delinquency. The program is designed to foster strong social bonds in the early school years, including feelings of attachment and commitment to the school and school values, which in turn are predicted to protect against future problem behaviors.

One instantiation of this project began in 1981 with students entering the first grade in eight Seattle schools located in high crime areas. Teachers in the intervention group were trained in proactive classroom management, interactive teaching, and cooperative learning (Abbott et al., 1998). The intervention also included voluntary parent training focused on improving family management skills. In comparison with the control group, the student participants in the Seattle Social Development Project had greater school attachment, commitment, and achievement; less school misbehavior; and fewer delinquent acts and less alcohol use at follow-up (when they were 18 years of age) (Hawkins et al., 1992; Lonczak et al., 2001; O'Donnell et al., 1995). Greater effects were found for the full intervention group (first to fifth grade) than for the late intervention group (fifth and sixth grades). The positive long-term effects on youth participating in the project suggest the importance of fostering inclusion in the early school years to set children on a more positive trajectory through their high school years.

### **Strong and Clear Social Norms**

Messages about social norms are a common feature of most of the programs reviewed. Many of the programs explicitly indicated that they promoted positive social norms to the youth. One program stands out for its efforts to influence social norms by casting a wide net that includes school, family, and community at large. The Midwestern Prevention Program (MPP; Chou et al., 1998; Pentz et al., 1989) is a comprehensive, community-wide intervention with the goal of preventing adolescent consumption of cigarettes, alcohol, and marijuana. The program is based on the theory that all environmental forces must work together to both reinforce resistance skills taught in school prevention curricula and promote community-wide norms regarding abstinence. The MPP consists of five components: (a) a school curriculum component with continuing school-based boosters for youth, (b) a media component, (c) a parent education and organization component, (d) a community organization component, and (e) a local policy change component regarding tobacco, alcohol, and other drugs.

One of the five components is implemented each year, except for the mass media component, which occurs throughout the 5 years of the program. The mass media component consists of an average of 31 news clips, commercials, and talk shows spots during the first 3 years of the program; the number of such media events decreases to an average of 10 per year in the fourth and fifth years. The media events are designed to educate the community on baseline drug use and the goals and intervention strategies of the program. Skill demonstrations and public recognition of participating students are also part of the mass media component.

In the first year of the program, students participate in a 10-session school curriculum teaching resistance to and counteraction skills for drug use influences and including prevention practice homework activities with parents. In the second year, participants receive a 5-session booster school program to maintain previous prevention skills during the transition to high school. Also in the second year, parents are trained in parent-child communication and prevention practice support skills. Parents

are also involved in a parent-principal committee that meets regularly to review school drug policy and to provide parent-child communication training for parents.

In the high school years (Years 3–5), community organizations create task forces against drug use in the community. Tobacco and alcohol policy changes are targeted in the fourth and fifth years. All components involve regular meetings of respective stakeholders (e.g., community leaders) to review and refine programs. Through these five program components, the MPP delivers a strong anti-drug message to the youth in the community. In the Kansas City evaluation (Pentz et al., 1989), the program was effective in reducing use of cigarettes, marijuana, and alcohol at the 1-year follow-up, and cigarette use was also reduced at the 2-year follow-up. In Indianapolis (Chou et al., 1998), the program produced effects through the first follow-up period (6 months) for all three substances, and decreased alcohol use was also found at the 1.5-year follow-up.

Another program with both social norms and inclusion as central themes is the Bullying Prevention Program, which fosters inclusion by instilling clear social norms regarding intolerance of bullying behavior in the school setting. This 2-year school-based universal prevention program was developed and evaluated in Norway as part of a national campaign against bullying (Olweus, 1991, 1994a, 1994b). It focuses on reducing bullying problems by increasing awareness and knowledge of the problem, involving teachers and parents, establishing clear rules against bullying behavior, and providing support and protection for bullying victims. Thus, the intervention targets changes at the school, class, and individual levels that are designed to increase students' sense of inclusion and belonging in school through the reduction of bullying.

Prior to program implementation, each school administers the Bully/Victim Questionnaire, developed by Olweus, to determine the severity of the school's bullying problem by age and gender as well as to pinpoint physical locations where bullying incidents are likely to occur. At the school level, a bullying prevention committee composed of school administrators, teachers, counselors, parents, and students provides an infrastructure to support the intervention through coordinating activities, disseminating information to families and the community at large, and organizing adult supervision on the school grounds at nonclassroom times such as lunch and break periods.

In the classroom, trained teachers help students agree on specific rules about bullying and facilitate discussions about the problem. The rules target direct bullying (open attacks) as well as indirect bullying, such as intentional exclusion of specific individuals from peer groups and propagation of negative rumors. The following are examples of Bullying Prevention Program rules: "We will not bully other students"; "We will try to help students who are bullied"; and "We will make it a point to include all students who are easily left out." Teachers also lead weekly meetings to discuss bullying events during the week and review rules and consequences to foster a positive, inclusive classroom environment. At the individual level, interventions target individual bullies and include support for their victims. Teachers take the lead in finding solutions to the problem, and the parents of the bullies and victims are part of the discussions.

In the first evaluation of the Bullying Prevention Program in Norway, Olweus, Limber, and Mihalic (1999) reported a 50% reduction in student reports of bullying relative to preintervention baseline. The results were maintained at the 20-month follow-up. In addition, they found reductions in other antisocial behaviors, such as vandalism, fighting, theft, alcohol use, and truancy. Students also reported improvements in social relationships, discipline at school, and more positive attitudes toward school. The U.S. replication in South Carolina (Olweus et al., 1999) modified the program by establishing schoolwide rules against bullying behavior and involved the community in anti-bullying efforts. Students reported a decrease in bullying other children but not in being bullied (relative to the control group). Skilled involvement of teachers and other school staff is considered crucial for the success of the program.

### **Intentional Learning Experiences**

Many programs provided opportunities for learning and skill building. This was the single most common aspect of the programs reviewed in the nonexperimental section. McLaughlin provides several excellent examples of this feature in her 2000 report. Most striking is the use of intentional learning strategies by athletic coaches:

Many coaches work academics into topics of great interest to their young athletes, such as nutrition and weight training. One year a basketball team had six-week units of study on the following topics: finances of the National Basketball Association, physics in the sport of basketball, and neurophysiology. Each of these units included original research, problem sets, discussion of ethics, and decision-making. For example, the unit on the NBA covered costs of health insurance, uniforms, travel, income from ticket sales, taxes on players' salaries, and using probability theory to illustrate the youngsters' chance of making it to the NBA. The neurophysiology unit discussed steroids, heart rate under exertion and under heat dehydration, and myths surrounding "chocolate highs" and "carbohydrate loading." (McLaughlin, 1990, p. 12)

The Life Skills Training (LST) program is a good example of the use of intentional learning experiences from the experimental evaluation studies. This program was designed to address substance abuse. It includes two aspects of intentional learning experiences: knowledge building and life skills building. The curriculum provides youth with factual information about cigarettes, alcohol, and marijuana, including discussions of common myths and misconceptions. The immediate and short-term effects of using these substances are stressed in order to provide experiences that match the cognitive developmental stage of early adolescence. For example, class experiments demonstrate the immediate effects of cigarette smoking on heart rate and head steadiness.

The knowledge building phase of the intervention is followed by the life skill building phase, in which youth develop informed decision-making skills and the social and personal skills needed to implement these decisions. In addition, youth learn self-control skills, anxiety management skills, self-improvement skills, and communication and other general social skills, as well as assertive verbal and nonverbal skills to help counteract peer pressure. The 3-year LST curriculum includes 15 sessions taught in the



first year of the program, followed by 10 and then 5 booster sessions in Years 2 and 3, respectively. LST is typically implemented in middle schools in Grades 6–8 and in junior high schools in Grades 7–9.

Multiple studies have shown the program to be effective even with only the first-year intervention component (Botvin, 1998, 2000). These effects, however, are enhanced by the booster sessions. For example, studies have shown that the first year of LST reduced smoking by 56% to 67% without any additional booster sessions; however, smoking was reduced by as much as 87% when students received booster sessions (Botvin, Baker, Filazzola, & Botvin, 1990; Botvin, Baker, Dusenbury, et al., 1995).

The effects also appear to be long lasting (Botvin et al., 2000). Data collected 6.5 years after the initial pretest indicated that students who received life skills training during junior high school reported less use of illicit drugs than controls, implying that illicit drug use may be prevented by targeting the use of gateway drugs such as tobacco and alcohol. These results suggest that adolescents benefit from repeated reinforcement of knowledge and skill building in order to more fully internalize what they have learned. What program characteristics mediate these effects? Botvin (2000) summarizes work from several studies on mediating variables. Changes in perceived social norms, refusal skills, and risk taking mediate the effect of life skills training on tobacco, alcohol, and/or marijuana use.

Similar to LST, the Adolescent Transitions Program (Andrews, Soberman, & Dishion, 1995; Dishion & Kavanagh, 2000; Irvine, Biglan, Smolkowski, Metzler, & Ary, 1999) also targets skill building. However, unlike LST, it is a multilevel family-centered intervention. The three levels correspond to universal, selected, and indicated family designations. All families are targeted in the universal level, at-risk families in the selected level, and families with youth currently having problems in the indicated level. A family resource room is established in the school in the universal level of the intervention to create an infrastructure for collaboration between school and parents and to encourage good parenting practices. The space also becomes the setting for delivery of the other intervention levels. Brief home visits during the summer and parent self-assessments using videotaped examples and rating forms are also tools for parents at the universal level of the intervention. Youth participate in a 6-week health curriculum in the fall of the school year that promotes school success, reduced substance use, and reduced conflict. Students are graded on completing the homework with their parents.

The selected intervention helps parents accurately identify a child at risk and provides resources to help reduce risk factors and promote adjustment. In the next level, indicated intervention, parents are provided with professional support targeting family management practices. The Family Management Curriculum, based on the work of Patterson and colleagues (see Dishion & Kavanagh, 2000), consists of 12 weekly parenting group sessions of 90 minutes each. Family management skills are taught and reinforced through exercises, background knowledge, role-plays, and group discussion. The main skill focus is use of incentives for behavior change, limit setting

and monitoring, and family communication and problem solving. Evaluations of the Adolescent Transitions Program have shown reductions in parent-child conflict and in the use of coercive strategies by parents, reductions in teacher ratings of high-risk antisocial behavior, and reductions in youth reports of substance use in the year following the program (Andrews et al., 1995; Dishion & Kavanagh, 2000).

### **Motivational Scaffolding**

Another important contextual feature we looked for in programs was the opportunity for youth to develop a strong sense of personal efficacy and mastery motivation. Research in the field of educational psychology (see Eccles et al., 1998) suggests that acquisition of these assets is supported by the following learning context characteristics: focus on mastery rather than competitive performance, feedback focused on improvement, provision of challenging materials with many opportunities to demonstrate improvement and mastery of these materials, minimizing social comparison of current levels of competencies, and high mastery expectations for all participants. Adventure programs, such as Outward Bound, fit this description very well.

In their meta-analysis of adventure programs, Hattie and colleagues (1997) identified the key components of such programs. They take place in a back-country setting away from young people's typical environment, small groups are assigned mentally and physically challenging tasks to accomplish together, the duration is 2–4 weeks, group members are often involved in problem-solving and decision-making interactions, and the group is led by a trained, nonintrusive leader. The tasks, such as hiking a specific distance, provide demanding challenges for the group requiring cooperation, effort, determination, and self-reliance. Participants plan meals, prepare for the expedition, maintain the equipment, and plan and problem solve throughout the program. Initially, the leader's role is to build physical skills and group cooperation and communication skills, but as the program progresses the group operates largely independent of its leader and takes responsibility for all aspects of the expedition. The successful extracurricular activities, particularly the sports activities, also exemplify this contextual feature.

### **Opportunities to Experience Mattering and Leadership**

Providing opportunities for youth to experience mattering, leadership, and challenge are common features of many of the organizations and programs investigated with both nonexperimental and experimental methods. Opportunities for community service provide the clearest examples. Several of the organizations reviewed provide such opportunities in activities ranging from direct service to the elderly and children to neighborhood clean-up projects. These organizations stand out as well in the extent to which the youth themselves are allowed to play a leadership role in selecting and overseeing these service activities. Many of the organizations also provide extensive opportunities for the youth to play leadership roles in the organizations themselves. Youth are expected to take "responsibility for the orga-

nization." Opportunities to move up in leadership and responsibility as the youth gain in both their maturity and expertise provide additional examples of the ways in which these programs provide their youth with a genuine sense that they matter to the organization.

Opportunities to offer meaningful service in one's community represent another effective way to provide adolescents experiences of mattering and leadership. This approach is exemplified in the Teen Outreach Program (TOP; Allen et al., 1990, 1994, 1997; Philliber & Allen, 1992). TOP, a national volunteer service program, is designed to both help adolescents understand and evaluate their future life options and develop life skills and autonomy in a context featuring strong social ties to adult mentors. Interestingly, even though its primary stated goal is prevention of teen pregnancy and risky sexual activity, neither of these outcomes are an explicit part of the programming. For example, less than 15% of the "official" curriculum deals with sexuality, and even these materials are often not used because of overlap with information offered in the school or because of conflicts with community values.

The three program components are supervised community service, classroom-based discussions of service experiences, and classroom-based discussions and activities related to social-developmental tasks of adolescence. Participants choose their volunteer activities with the assistance of trained staff who help match individuals' interests and skills with community needs. Examples of volunteer activities include aid work in hospitals and nursing homes, participation in walkathons, and peer tutoring. The TOP sites offer a minimum of 20 hours per year of volunteer service for each participant. In the evaluated programs, participants averaged 45.8 hours of volunteer service during their 9 months of involvement.

The TOP curriculum provides a framework for classroom meetings that include structured discussions, group exercises, role-playing exercises, guest speakers, and informational presentations. These discussions are designed to help students prepare for, and learn from, their service experiences by dealing with topics such as lack of self-confidence, social skills, assertiveness, and self-discipline. Trained facilitators lead discussions of such topics as values clarification, management of family relationships, and handling of close relationships. Participants are encouraged to discuss their feelings and attitudes.

Several evaluation studies have been done on TOP (e.g., Allen et al., 1990, 1994, 1997; Philliber & Allen, 1992). Although little direct attention is given to the program goals, the desired results of reductions in rates of pregnancy, school failure, and school suspension have been achieved in all evaluations. We can only guess as to the reasons for the program's success; however, community service appears to be a key component. The students who performed more volunteer service were at lower risk for course failure while they were involved in the program. Also, implementation quality of the TOP curriculum did not significantly influence program outcomes (Allen, Philliber, & Hoggson, 1990), suggesting that it is the community service and possibly the mentoring components that are most important.

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