Editor's Comments:

Readers of our Summer Issue will be pleased with the variety of feature articles, program articles and innovative evaluation techniques shared by our authors. As we begin our third year of publication we welcome you to submit your manuscripts to patricia.dawson@oregonstate.edu

Articles of specific interest include:
- **Feature Articles** - Informational, explanatory, or critical analysis and interpretation of major trends or comprehensive reviews. Articles include clear implications for youth development practice and programming and may be grounded in original research or new research from the relevant disciplines.
- **Program Articles** - Discuss programs and outcomes or describe promising programs and pilot projects that have clear implications for youth development research, practice and programming. These programs and projects are grounded with a strong research-based or theoretical framework.
- **Research and Evaluation Strategies** - Describe innovative methodologies and strategies in the collection and analysis of quantitative or qualitative research and evaluation data.
- **Resource Reviews** - Present analyses of materials, such as books, curricula, videos, other audio/visual materials, data management software, and Web sites.

Publication Committee

Contents

Feature Articles

Ferrari, Theresa M.; Arnett, Nate; Cochran, Graham

There is widespread concern that youth lack the skills essential for job success and are entering the workplace unprepared. To address issues of workforce preparation, Extension educators at an urban 4-H education center created the Job Experience and Training (JET) program, a work-based learning program for teens. JET is conducted over a six-month period, culminating in an eight-week summer work experience in collaboration with a local park district. Supervisors and teens completed a performance appraisal measure based on SCANS workforce skills at two points during the program. Both teens and supervisors provided written comments addressing teens' strengths and areas for growth, as well as comments on their satisfaction with the program itself. Overall, the experience appears to have produced improvements in teens' workforce skills, as evidenced by their own self-assessment and that of their supervisors. We conclude with implications for conducting work-based learning programs.

Nystrom, Robert J.; Prata, Adriana; Ramowski, Sarah

Public health benchmarks are indicators for well-being and health status that help inform program planning and policy development. In Oregon, recent efforts by a group of state agencies and community partners led to the adoption of a Positive Youth Development (PYD) benchmark by the Oregon Progress Board in 2006. In this paper, we describe the process of creating the state benchmark and present research evidence showing strong relationships that link high levels of PYD to reduced levels of risk behaviors and increased levels of positive, healthy behaviors among Oregon youth. The creation of this benchmark allows better planning, development and monitoring of PYD programs by state agencies, schools and community partners. In addition, results reinforce the finding that the promotion of programs that boost one or more elements of PYD may help reduce risky behaviors and improve positive, healthy behaviors among adolescents.

Wright, Robin; John, Lindsay; Sheel, Julia; Spinner, David

Data from the Edmonton Arts & Youth Feasibility Study (EAYFS) was used to ascertain the feasibility of engaging street youth in a structured community-based arts program and an outcome-based evaluation. The study engaged 23 street youth in a ten-week multi-media arts program focused on developing prosocial communication, team-building, and problem-solving skills. Results have shown that street youth are highly interested in artistic endeavors; will

participate to the best of their circumstances; and will provide reliable data. The youth and staff reported improved art skills, problem-solving capacity, and prosocial communication as well as a decrease in drug use, depression, loneliness, and a greater sense of enjoyment about life. Strengths of the program included the arts media, the non-judgmental environment, and the support from staff. The study suggests that community-based arts programs for street youth could be subjected to a rigorous outcome-based evaluation.

Youth Assets and Sexual Activity Among Hispanic Youth [Article 080301FA004]

Rodine, Sharon; Marshall, La Donna; Oman, Roy F.; Tolma, Eleni; Aspy, Cheryl B.; Vesely, Sara K.; Fluhr, Janene

Hispanic females, ages 15-19, experienced the highest birth rates and smallest decline in birth rates over the past decade compared to youth of other racial/ethnic groups. This study's purpose was to investigate relationships among a series of protective factors, or youth assets, and sexual activity in the Hispanic/Latino youth population. Data were collected from Hispanic youth and their parents (N=232 youth/parent pairs) in randomly selected households using in-person, in-home interview methods. Independent variables were nine youth assets; "never had sexual intercourse" was the dependent variable. Data were analyzed using logistic regression analysis. Three assets were found to be significantly associated with whether or not Hispanic/Latino youth ever had sexual intercourse. Odds of never having had sexual intercourse were at least three times higher for youth with the Peer Role Models, Use of Time (religion), or Responsible Choices assets, compared to youth without these assets. Further Hispanic youth asset/risk behavior research is merited.

A Case of a Partnership Academy Small Learning Community Model on Student Outcomes [Article 080301FA005]

Folan, Sheila; Trexler, Cary J.

Many students are experiencing disconnect from their large, seemingly impersonal high schools. This case study research explored a post-high school class cohort's perceptions of an academy environment. The study examined the nature of its connection to academic, behavioral and post-secondary effects by utilizing a treatment group of academy students and a comparison group of non-academy students. The study found that students within academies experienced a greater sense of high school community than non-academy students. Differences were also found in post-secondary endeavors including greater participation by academy students in college, the workforce and career/technical areas.

Program Articles

Overnights Encourage Girls' Interest in Science-Related Careers
[Article 080301PA001]

Christman, Kimberly A.; Hankemeier, Sara; Hunter, Jennifer; Jennings, Johnna; Moser, Debbie; Stiles, Sandy

With sell-out crowds and phenomenal research results, Science Siesta and Advanced Science Siesta are programs designed to change the traditional perceptions that girls have about science and science-related careers. Through hands-on science activities (in and out of the lab), and through working with local female scientists, girls who range from fourth to eighth grade are provided valuable opportunities to combat the stereotype that "girls can't do science." This article addresses the need to engage girls in science and explains "how-to" meet that need through the Science Siesta programs.

Model Youth Programs: A Key Strategy for Developing Community-University Partnerships Using a Community Youth Development Approach [Article 080301PA002]

Anyon, Yolanda; Fernández, María

Universities across the nation face the charge of enhancing their intellectual capital as a learning institution while also contributing to the greater social good. While there is great potential for university-community partnerships to generate lessons for youth workers and policy makers, create powerful new knowledge for the academic field, and provide transformative experiences for community members, partnerships often fail to produce such meaningful results. In the San Francisco Bay Area, community residents who have been involved in such unsuccessful initiatives frequently perceived that university partners spent insufficient time learning about the community context, prioritized research objectives over community needs and did not make long-term commitments. Despite these challenges, community-university partnerships can be useful strategies for advancing the field of youth development by strengthening research and practice in local contexts.

This paper presents how the design and implementation of model youth programs served as an effective strategy in developing a partnership between a university-based center and two local communities over a 5-year period. It also describes essential lessons that other communities, research institutions or universities may use to launch, implement, expand and sustain their own successful partnerships to build local capacity to implement youth development practices, promote positive outcomes for young people, and generate knowledge about the impact of youth development approaches.

Applying the Framework: Positive Youth Development and Restorative Practices
[Article 080301PA003]
Riestenberg, Nancy
This article compares the framework of positive youth development and school connectedness with the practices of restorative measures applied to harm and rule violations in schools. Formal school discipline practices of in- and out-of-school suspension have the unintended outcomes of increases in maladaptive behaviors, with drawl or avoidance of school staff, stigma among peers and poor academic achievement, among others. Restorative practices provide accountability for harm, as well as the opportunity to guide youth in their development, regardless of their experience as an offender, victim or bystander. Stories illustrate the strengths of this approach. Recommendations for school and youth programs regarding restorative measures will include suggestions for future research and evaluation.

Research and Evaluation Strategies

Process Evaluation and Continuous Improvement in Community Youth Programs
[Article 080301RS001]
Trachtenberg, Jennifer V.; Kosutic, Iva; Sanderson, Jessica A.; Anderson, Stephen A.; Sabatelli, Ronald M.
A method of using process evaluation to provide improvement plans in order to promote community youth programs is described. The core elements of this method include the following: (1) collection and analysis of baseline data, (2) feedback provided to programs describing their strengths and limitations, (3) programs provided with assistance in preparing improvement plans in regard to their baseline data, and (4) follow-up evaluation assessed program changes based on their improvement plans and baseline data. A case study of an inner-city neighborhood youth center is used to demonstrate this method.

Evidence to Support the Use of the Retrospective Pretest Method to Measure Dietary and Physical Activity Behavior and Self-Efficacy in Adolescents [Article 080301RS002]
Shilts, Mical Kay; Smith, Dorothy; Ontai, Lenna; Townsend, Marilyn S.
This study compared the retrospective pretest-posttest method to the traditional prospective pretest-posttest method assessing adolescents' dietary and physical activity, self-efficacy and

behaviors. Participants were 7th and 8th grade students at a rural K-8th grade elementary school in Northern California (n=188). All participants completed an evaluation instrument (traditional pretest), followed by a 9-lesson dietary and physical activity intervention. Upon completion of the intervention, participants completed a second and identical evaluation instrument which served as a traditional posttest. The following day, participants completed another evaluation tool, this time formatted as a retrospective pretest. Analysis included sample t tests comparing the means of each method. Participants (n = 154) with a mean age of 13 ± .7 years old were included in the analyses (52% female). Paired sample t tests reported non-significant differences between the two methods for dietary behavior and dietary self-efficacy, yet significant differences were found for physical activity behavior ($p <$ .05) and physical activity self-efficacy ($p < .01$). We conclude that the retrospective pretest-posttest method was as good a measure of dietary self-efficacy and behavior as the traditional prospective pretest-posttest method and may be better at attenuating response-shift bias when assessing physical activity self-efficacy and behavior.

Measuring the Influences of Youth Participation in Ohio 4-H Camps
[Article 080301RS003]

Homan, Greg; Hedrick, Jason; Dick, Jeff

Findings from a multi-component 4-H camp marketing and enrollment study of Ohio 4-H camps are highlighted. Significant influencers on the camp enrollment decision (parents, other adults, peers, siblings, and the respective camper) are evaluated as well as the effectiveness of various marketing techniques. The data found in this study indicates that the decision to enroll in camp is most influenced by the respective 4-H camper; however parents are also a strong factor in the choice to participate in 4-H camps. Alumni parents report significantly higher influence in the camp enrollment decision than those parents who are not alumni of 4-H. Personal methods of promoting camps were rated the most effective in reaching potential camp audiences.

Preparing Teens for Success:
Building 21st Century Skills through a 4-H Work-Based Learning Program

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Preparing Teens for Success:
Building 21st Century Skills through a 4-H
Work-Based Learning Program

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Abstract: There is widespread concern that youth lack the skills
essential for job success and are entering the workplace unprepared. To
address issues of workforce preparation, Extension educators at an
urban 4-H education center created the Job Experience and Training
(JET) program, a work-based learning program for teens. JET is
conducted over a six-month period, culminating in an eight-week
summer work experience in collaboration with a local park district.
Supervisors and teens completed a performance appraisal measure
based on SCANS workforce skills at two points during the program. Both
teens and supervisors provided written comments addressing teens'
strengths and areas for growth, as well as comments on their
satisfaction with the program itself. Overall, the experience appears to
have produced improvements in teens' workforce skills, as evidenced by
their own self-assessment and that of their supervisors. We conclude
with implications for conducting work-based learning programs.

Introduction

Preparing youth for the workforce is a major concern in U.S. society. In the last 30 years, the
skills required for youth to succeed in the economy have changed radically, but the skills
emphasized in schools have not changed at the same pace (Levy & Murnane, 2006; Murnane &
Levy, 1996; Partnership for 21st Century Skills, 2003; SCANS, 1991). Thus, there is widespread
concern that youth lack the skills essential for job success and are entering the workplace
unprepared (Business-Higher Education Forum, 2003; Casner-Lotto & Barrington, 2006). The
concern about youth work readiness comes not only from the business community – those on
the receiving end of employees entering the workforce – but of those who work directly with
youth to prepare them for a successful future.

Youth development professionals are interested in providing positive development supports and opportunities to meet youths' needs, including those to be successful in the workforce. Helping youth develop life skills and navigate the journey to successful employment has been a program focus at Adventure Central, a comprehensive youth program based at an urban park facility, for the past five years. Adventure Central is a unique partnership with Ohio State University Extension, 4-H Youth Development and Five Rivers MetroPark in Dayton, Ohio. This article describes Adventure Central's Job Experience and Training (JET) program, one such program designed to address the need for youth development opportunities to enhance workforce skills. We discuss how principles of youth development can be applied to workforce preparation programs. Next, we describe the specific components of JET and report our initial evaluation results of the program. We conclude with implications for conducting work-based learning programs.

Background

It is clear from the literature that programs to address 21st century skills are urgently needed. Developing applied skills for the workforce is vitally important for all youth. However, numerous obstacles, such as the rising demand for technical skills and the emphasis on applied skills in the 21st century, translate into serious challenges for workers of color, particularly in urban communities (Moss & Tilly, 2001). Urban minority youth face career development challenges including the extent to which there are opportunities for exposure to role models, to obtain work experiences as teens, and the support available in making career decisions (Constantine, Erickson, Banks, & Timberlake, 1998). Furthermore, it may be challenging for younger teens to find income-earning opportunities. As they get older, teens may be in a position of needing to choose between working or participating in a youth organization. Consequently, it has become increasingly important to provide youth with:

a. opportunities to develop the basic skills and competencies necessary to succeed in the workplace, and
b. experiences, information, and guidance that will lead to good decisions and plans for the future.

In the past 10 years there has been an increased emphasis on the school-to-work transition. While much of the attention is focused on what should be taught in schools, out-of-school time programs have an important role to play. In fact, out-of-school and after-school programs have been suggested as the ideal place to focus on developing skills needed for the 21st century workforce (Schwarz & Stolow, 2006). There is an urgent need to understand the types of strategies, programs, and resources that will result in the most positive outcomes for today's youth as they prepare for productive futures. Thus, we hope our experience with the JET program will provide helpful insight.

JET Program Model:
Applying Youth Development Principles to Workforce Preparation Programs

Effective workforce preparation programs must make an effort to incorporate youth development principles. Practices that enhance positive youth development and workforce preparation are complementary (Ferrari, 2003). The skills needed for success in the workforce–such as communication, interpersonal skills, and problem solving–can be described more broadly as life skills. They are the skills needed not only on the job, but also for success in life and for active participation as a citizen in the community. We believe that this approach ensures that work experiences are also developmentally appropriate learning experiences.

A positive youth development approach is based on the premise that youth are resources to be developed (Hamilton, Hamilton, & Pittman, 2004; Lerner, 2005; Witt & Caldwell, 2005). There is general agreement that certain key features characterize positive developmental settings (Eccles & Gootman, 2002). When these features are in place, it is more likely that young people's developmental needs will be met. Key among these features is the involvement of supportive adults. Adults walk a fine line as they offer the appropriate balance of guidance as young people take on new responsibilities (Eccles & Gootman, 2002; Larson, Hansen, & Walker, 2005). Such relationships are critical in providing a safe and supportive environment for youth to take on new challenges and develop their skills. Furthermore, these relationships allow youth to develop human capital, meaning they accumulate personal resources that have value within a workforce setting (Entwisle, Alexander, & Olson, 2000). Thus, the program model is one that engages youth and adults as partners with the common goal of workforce preparation.

Because some research indicates that adolescent employment may have negative effects (Marsh & Kleitman, 2005), opening doors to high quality jobs through experiences that build applied skills and expand young people's view of career opportunities is critical. However, many jobs available to teens do not provide opportunities for important qualities such as initiative to develop life skills (Bryant, Zvonkovic, Raskauskas, & Peters, 2004; Greenberger, Steinberg, & Ruggerio, 1982). Researchers concur that opportunities to hold meaningful roles and carry out real responsibilities are important to adolescents, as they are critical to the development of both initiative and identity (Eccles & Gootman, 2002; Kroger, 2000; Larson, 2000). Workforce preparation programs should seek to incorporate these elements.

Another perspective underlying positive developmental settings is that of experiential learning. Youth development programs that are organized around real work experiences will afford the opportunity to learn cooperation and teamwork through hands-on experiences. There is support in the literature that the best way to learn is through actual experience (Cafarella, 2002; Carlson & Maxa, 1998). Part of the experiential learning process is engaging in reflection, a strategy that facilitates transfer of learning from one setting to another (Caferella, 2002; Gardner & Korth, 1997; Gilbert & Trudel, 2005). Therefore, workforce preparation programs should incorporate active learning strategies.

Our conception of workforce preparation programs is not simply about getting a job, nor is the focus to prepare youth for getting specific jobs. Although they share some common features with youth employment programs and can incorporate some of the same practices (Partee, 2003; Partee & Halperin, 2006), there appear to be some notable differences. Of the model programs reviewed by the American Youth Policy Forum (Partee, 2003; Partee & Halperin, 2006), most target older youth (at least 16, with most 18 and older), target high school dropouts, are designed to transition youth to full-time employment, or are residential in nature. Some, but not all, focus on vocational trades. This is not to say that one type of program is superior to the other, but that each seeks to accomplish different goals with a different target audience.

The goal of workforce preparation programs as we define them here is that the work experience is a learning experience. They are designed to introduce young people to the world of work and to develop the workforce skills necessary for success through active participation in work experiences. Specifically, we define this component of workforce preparation as *work-based learning.* Work-based learning is one of five components that are part of a model developed by the Ohio 4-H Workforce Preparation Initiative (Cochran et al., 2006).

We define work-based learning as a structured experience that meets the following criteria:

1. Youth perform real work that provides a meaningful service.
2. Youth are supervised and their performance is evaluated.
3. Program strategies emphasize making the work experience a learning experience (e.g., need for reflection to complete the experiential learning cycle).
4. The work experience may be paid or unpaid but is clearly viewed as real work.

While the work is important, as it provides the real-world context for skill development, it is viewed as the means to the end of positive youth development. This approach is consistent with ecological theory, which contends that individuals benefit when they receive support to negotiate transitions as they assume new roles (Bronfenbrenner, 1979). Assuming a new role as an employee is a major transition for adolescents (Hansen & Jarvis, 2000), and therefore workforce preparation programs aim to support this transition by preparing for it in advance. It is also appropriate for younger teens who are making their first forays into the world of work and are not ready for full-time employment.

In conclusion, youth development programs provide support and opportunities for youth as they transition through key phases of their life, including the school-to-work transition. Although it has become normative for adolescents to work part-time while they are attending school, the job experiences available to them may not be quality ones. Out-of-school programs have the opportunity to help youth make connections with what they are learning in school with what employers require for success in the world of work (Pittman, Irby, Yohalem, & Wilson-Ahlstrom, 2004).

Program Description: Adventure Central

An important aspect of JET is understanding that it is embedded within the context of a comprehensive youth development program at Adventure Central. Overall, the program at Adventure Central has been successful in developing a core program based on a foundation of principles of positive youth development described above. Serving as a hub for out-of-school time programming, Adventure Central brings the 4-H experience into an urban environment for youth in kindergarten through age 18 during out-of-school hours.

The program at Adventure Central includes after-school, summer day camp, parent engagement, and teen programming. The program content focuses on such topics as technology, gardening, science and nature, health and nutrition. An emphasis is placed on hands-on, experiential activities utilizing research-based curriculum. There is an emphasis on meeting a variety of developmental needs, on serving a wide range of ages, and on providing positive youth development opportunities that see youth as part of a family and in the context of the larger community. Youth describe themselves as "connected" at Adventure Central (Ferrari & Turner, 2006). In addition, there is an embedded curriculum that addresses developing personal qualities, such as respect and responsibility, and life skills, such as leadership, teamwork, and communication, as well as an emphasis on building relationships with peers and adult role models (the program is described in more detail in Cochran, Arnett, & Ferrari, 2007).

Workforce preparation programming has been implemented at Adventure Central, in various forms, for the past five years. Based on an understanding of the literature and daily experience of working with youth, it became clear that a program to address workforce skills would benefit teens at Adventure Central, and thus the Job Experience and Training (JET) program was born.

In essence, JET is a program-within-a-program, because it is able to build on the existing after-school programming and relationships between the youth participants and Adventure Central adult staff. While it could be argued that youth learn workforce skills simply through their participation in 4-H, JET takes a more intentional approach to developing these skills. In addition, applying youth development principles to creating workforce preparation programs would address the challenges identified in the literature. We believe it is this intentional focus and conscious application of youth development principles that is the strength of the JET model.

JET Program Description
Having provided some background on the principles underlying JET, we now turn to a more specific description of the program. The JET program has two major goals:

    a. to develop meaningful job skills in teens, and
    b. to provide a service to the public.

JET is open to youth at Adventured Central between the ages of 12 to 18. It is conducted over a period of six months, culminating in an eight-week summer work experience. Teens participate in an application and interview skills session. An informational open house is held to explain the program components. Interested youth complete an application and participate in an interview for a work experience in one of the following six areas: Youth Education, Nutrition, Clerical, Parks and Conservation, Information Technology, or Outdoor Recreation. Through this process 20 teens have been selected to participate each year. Participants are selected as Teen Assistants (volunteer positions receiving gift cards as incentives) or Teen Apprentices (employees paid minimum wage). A small number of Teen Apprentice positions provide an opportunity for increasing responsibility and reward; determination is based on past performance and current performance in the interview process, taking their age and labor laws into account.

MetroParks facilities serve as placement sites. Adventure Central's focus on science and nature, as well as the connection to the larger MetroParks system, provides an ideal chance to expose youth to new career options. Adults at each participating worksite agree to serve as supervisors. A series of training opportunities (teens alone, supervisors alone, and teens and supervisors together) are conducted with the aim of making the work experience a learning experience. At the beginning of the summer work experience a one-day orientation for all teen and adult participants reviews youth-adult partnerships, experiential learning, work expectations, and the performance appraisal process. A variety of instructional strategies are used. All JET participants complete self-directed learning journals and attend team meetings every two weeks to enhance the experiential learning process. A celebration is held to culminate the end of the work experience.

JET Program Evaluation
Continuous monitoring and evaluation ensures that the programs at Adventure Central are aligned with best practices in youth development. Furthermore, evaluation is critical in an era of program accountability (Witt, 2005). The purpose of the JET evaluation was two-fold. The first objective was to determine if the goals of the program were reached, that is, that the youth gained workforce skills. A performance appraisal process was selected as we believed it represented an authentic means to evaluate this objective. We believed a combination of teen self-assessment and supervisors' feedback, both in numerical ratings and open-ended responses, would give us the most useful information. Secondly, we wanted to be sure that both teens and the adult worksite supervisors found the program worthwhile (i.e., the teens performed a public service for the park, and it was worth their time and effort to participate).

Regarding the first objective, a literature search yielded no instruments that adequately addressed JET's program evaluation needs. Thus, we created a performance appraisal measure to provide an assessment of workplace skills which were defined by SCANS (1991) competencies and foundation skills. The areas evaluated included basic skills, thinking skills, and personal qualities as well as abilities to productively use resources, process information, demonstrate interpersonal skills, understand systems, and use technology. The resulting measure had 30 items (see Table 1). The four-point response scale ranged from *strongly disagree* (1) to *strongly agree* (4). This measure was assessed for face validity by two youth development specialists. To gain their perspective, we also asked youth an open-ended question about the most important thing they gained from being in the JET program.

To address the second objective, we asked teens for their suggestions in an open-ended question collected at the time they completed their final self-assessment. We also developed open-ended questions to elicit the worksite supervisors' feedback about the experience from their perspective. The questions addressed the overall experience, their satisfaction with the support provided by Adventure Central staff, the training provided, the use of the performance appraisal process, and their suggestions for improvement.

Procedure

As part of preparing for the summer work experience, expectations of worksite supervisors regarding use of the performance appraisal measure were communicated. Supervisors rated the teens at Week 2 and again at the conclusion of the program (Week 8). Teens also completed the concluding assessment with their supervisor. Both teens and supervisors provided written comments addressing overall strengths and areas for growth. In addition, as part of their reflection process at the conclusion of the summer work experience, teens provided two ratings of their skills in the SCANS areas using a retrospective pre-post format (Rockwell & Kohn, 1989). Finally, supervisors' feedback regarding program satisfaction was collected in a series of interviews held in the month following the program's completion. Although data were collected for two years, due to its similarity, only data from Year 2 are presented.

Results

After careful consideration, we determined that reporting means scores for skill areas within the performance appraisal instrument was not in keeping with the overall purpose of the performance appraisal process. First and foremost, the performance appraisal was a tool to assess the individual's growth throughout the work experience. We felt that mean scores would mask these individual changes. We determined that we could best characterize the nature of the changes by examining the frequency distribution of the responses, along with responses to the open-ended questions. The open-ended responses from supervisors and teens were analyzed for themes and we have used representative quotes to illustrate these themes here. In the following sections we use the themes derived from qualitative data to frame the results in relation to the workforce skills gained by participants, drawing both from the numerical ratings on the performance appraisals (Tables 1 and 2) as well as from the open-ended responses. Then we present the teens' perceptions of what they learned the most as well as teens' and supervisors' overall perception of the program, including their suggested changes.

Table 1
JET Teen Participants' Retrospective Pre-Post Performance Appraisal
(N=20)

	SCANS Competencies and Foundation Skills	Beginning (Wk. 2) f (%)				End (Wk. 8) f (%)			
		1	2	3	4	1	2	3	4
1	Uses time wisely.		15	60	25		5	10	85
2	Uses materials and space efficiently.			45	55			10	90
3	Meets scheduled deadlines.		15	35	50			15	85
4	Demonstrates self-motivation.		15	35	50			10	90
5	Is prepared for routine tasks and duties.			50	50		5	5	90
6	Works well with clients.	5	15	0	80		5	5	90
7	Is a team player.			25	75			5	95
8	Works well with people of diverse backgrounds.			20	80		5	5	90
9	Displays a positive attitude.		5	35	60			10	90
10	Acquires and organizes information appropriately.		10	40	50			10	90
11	Asks questions to clarify information. (N=19)	10	16	37	37		5	32	63
12	Is able to communicate information learned to others.		5	35	60		5	20	75
13	Understands the organization and their place in it. (N=19)	5	10	47	37			21	79
14	Offers suggestions for improvements in the workplace when appropriate.	5	0	55	40			15	85
15	Uses technology when appropriate.			55	45			25	75
16	Maintains and troubleshoots equipment issues. (Wk. 2 N=19)		11	21	68		5	5	90
17	Asks questions when encountering new technologies.		10	40	50			21	79
18	Communicates well in writing.	10	5	30	50		10	30	60
19	Is a good listener. (Wk 2 N=19)		5	37	58		5	5	90
20	Communicates well verbally.		10	35	55			5	95
21	Demonstrates good decision making.		10	30	60			30	70
22	Acquires and applies new knowledge.		10	30	60			15	85
23	Demonstrates creative thinking.			35	65		5	10	85
24	Adapts to change positively. (Wk 2 N=19)		16	21	63			15	85
25	Demonstrates responsibility.		5	30	65			10	90
26	Takes and applies constructive criticism.		10	25	65			15	85
27	Maintains proper work appearance.			15	85		5	10	85
28	Is respectful.			10	90			10	90
29	Problem solves before going to supervisor.	5	15	35	45			15	85
30	Asks for help when needed.		20	15	65			20	80

Rating scale: (1) strongly disagree, (2) disagree, (3) agree, (4) strongly agree

Table 2
Adult Worksite Supervisors' Performance Appraisal of JET Teen Participants

SCANS Competencies and Foundation Skills	Beginning (Wk. 2) f (%)				End (Wk. 8) f (%)			
	1	2	3	4	1	2	3	4
1 Uses time wisely.		10	58	32		10	60	30
2 Uses materials and space efficiently. (Wk 2 N=18)		6	67	28		5	65	30
3 Meets scheduled deadlines. (Wk 2 N=18)		6	83	11		5	55	40
4 Demonstrates self-motivation.		5	68	26		15	40	45
5 Is prepared for routine tasks and duties.		5	79	16		5	65	30
6 Works well with clients.			74	26			60	40
7 Is a team player.		5	68	26			50	50
8 Works well with people of diverse backgrounds. (Wk 2 N=17; Wk 8 N=19)			94	6			47	53
9 Displays a positive attitude.		11	47	42		10	45	45
10 Acquires and organizes information appropriately. (Wk 2 N=18 Wk 8 N= 19)			83	17			90	10
11 Asks questions to clarify information. (Wk 2 N=12; Wk 8 N=19)			67	33		11	63	26
12 Is able to communicate information learned to others. (Wk 2 N=13; Wk 8 N=16)			77	23			69	31
13 Understands the organization and their place in it. (Wk 2 N=3; Wk 8 N=13)				100			92	8
14 Offers suggestions for improvements in the workplace when appropriate. (Wk 2 N=10)			80	20			80	20
15 Uses technology when appropriate. (Wk 2 n=14; Wk 8 N=18)			86	14		6	78	17
16 Maintains and troubleshoots equipment issues.		5	68	26			65	35
17 Asks questions when encountering new technologies. (Wk 2 N=16; Wk 8 N=18)			63	37			61	39
18 Communicates well in writing. (Wk 2 N=7; Wk 8 N=15)			71	29			80	20
19 Is a good listener. (Wk 2 N=18)		5	67	28		10	50	40
20 Communicates well verbally.		16	47	37		5	60	35
21 Demonstrates good decision making. (Wk 2 N=18)		6	72	22		10	55	35
22 Acquires and applies new knowledge. (Wk 2 N=16)			81	19			75	25
23 Demonstrates creative thinking. (Wk 2 N=13)			61	39		10	55	35
24 Adapts to change positively. (Wk 2 N=17; Wk 8 N=19)		6	59	35			58	42
25 Demonstrates responsibility. (Wk 8 N=19)		5	58	37		5	53	42
26 Takes and applies constructive criticism. (Wk 2 N=10; Wk 8 N=19)			60	40		5	68	26
27 Maintains proper work appearance. (Wk 8 N=19)		5	58	37			74	26
28 Is respectful. (Wk 2 N=18; Wk 8 N=19)			44	66			47	53
29 Problem solves before going to supervisor. (Wk 2 N=13; Wk 8 N=19)			92	8			68	32
30 Asks for help when needed. (Wk 2 N=16; Wk 8 N=19)		6	56	38			68	32

Week 2 N=19 unless otherwise noted. Week 8 N=20 unless otherwise noted.
Rating scale: (1) strongly disagree, (2) disagree, (3) agree, (4) strongly agree

Workforce Skills

Overall, the experience appears to have produced improvements in youths' workforce skills, as evidenced by their own self-assessment and that of their supervisors. Most of the supervisors agreed that the teens demonstrated workforce skills and personal qualities; there were very few "disagree" ratings. When reviewing their comments several themes were evident, and the results are organized by these themes.

1. Teens and supervisors were able to identify areas of strength.

At the outset, teens' perceived their strengths to be in the areas of interpersonal relationships, being respectful, and maintaining a proper work appearance (80% or more rated themselves "strongly agree" in these areas). The supervisors noted the teens' respectful behavior and positive attitude. Many strengths were identified by the end of the program. In addition, their comments reflected an understanding of these strengths (Table 3).

Table 3
Workforce Skills Identified as Strengths

Examples of Teen Self-Assessment	Examples of Supervisor Assessment
"I think that I work well with all sorts of people."	"She was self-motivated and eager to help. She gave her input and worked as a team member."
"I think that the decisions I make are good ones; I think I apply knowledge fast."	"Very conscientious and reliable; conducts herself in a professional manner; works very well independently."
"I have learned to come up with ideas on the spot."	"She is a natural leader, fast-paced worker, self-motivated, and a good decision maker."

Note. Strengths identified at end of program (Week 8).

2. In early appraisals, youth and supervisors were able to identify areas where teens needed to improve.

Teens rated themselves lower in the areas of resources, particularly using time wisely; asking questions; problem solving; and understanding the organization as a system. Less than half rated themselves "strongly agree" in these areas, as well as there were several who disagreed or strongly disagreed that they had these skills. Overall supervisors' ratings were lower; for all but one item (respect), less than half of the supervisors gave ratings of "strongly agree." Their comments illustrate examples of areas for improvement (Table 4).

Table 4
Workforce Skill Areas Identified as Needing Improvement

Examples Identified by Teens	Examples Identified by Supervisor
"I can be more prepared than I usually am."	"Spends a lot of time talking to others and not getting the job done."
"I think I must work on my adapting skills. I don't like it much when things change at the last minute."	"Work more on showing up for work on time."
"I need to work on being more respectful."	"Would like to see her take a little more initiative in leading games."

3. Many areas for improvement noted by teens and supervisors in the early performance appraisal had strengthened by the end of the program.

From the teens' perspective, they experienced gains in workforce skills. The most growth appeared to be in the areas of demonstrating self-motivation, organizational systems (understanding the organization and their place in it as well as making suggestions to improve the organization), wise use of resources (e.g., time and materials), asking questions to clarify information, listening and verbal communication skills, demonstrating responsibility, and problem solving. In some cases, youths' comments indicated something had clicked in the process (Table 5).

Table 5
Examples of Improvements Identified by Teens

"There have been a few times when I haven't been well prepared or ready on time, but I think I have made a very big improvement thanks to my supervisor."
"Over the last couple of weeks I have really figured out my place in the program. Now I must apply myself 100%."
"There have been many times when I have had a problem with trouble shooting, but I think I have gotten the hang of it."
"Adapts to change positively was kind of challenging, working with one specific co-worker, but I learned how to adapt to his personality and appearance; if I had to do the JET program again I would like to do it with him again."

Supervisors rated teens as gaining the most in the areas of meeting scheduled deadlines, working well with people of diverse backgrounds, being a team player, and problem solving. The comments in Table 6 illustrate these improvements by comparing supervisors' comments that were made at Week 2 with those at Week 8.

Table 6
Comparison of Supervisors' Early and Late Performance Appraisals of Workforce Skills

Week 2	Week 8
"Can stand to sharpen his constructive criticism outlook. Instead of getting offended, take what is being said in a positive way."	"Very good job! He has worked on his constructive criticism issue a lot."
"Spends a lot of time talking to others and not getting the job done."	"Tries to use time more wisely by being more active in children's activities."
"He needs to work on his decision making skills a little. Instead of walking around or playing, find something to do in your work area."	"His decision making ability has improved. He has been working more than he has been walking away."

Note: These responses reflect the supervisors' assessment for the same teen from Week 2 to Week 8.

4. **In some cases, supervisors' and/or teens' final assessments indicated there was additional room for improvement.**

While it was not as apparent from the numerical ratings, the open-ended responses from both supervisors and teens provided insight into areas and improvement for continued growth. As evidenced from the comments in Table 7, supervisors noted a positive area along with a suggestion for improvement.

Table 7

Areas for Identified for Continued Improvement

Examples Identified by Teen	Examples Identified by Supervisor
'I need to ask for more feedback from co-workers and supervisors."	"His listening skills are good and he learns quickly; would like to hear him speak louder when interacting in public."
"I need to make better decisions and communicate more with my supervisor."	"Does a very good job on his duties; my biggest concern is time management. He spends more time than he should not focused on the task at hand."
"I need to work more on showing a positive attitude."	"Needs to think more when saying things to certain people but is usually respectful."

5. **Although youth tended to rate themselves higher on the self-assessment, youth and supervisors generally agreed on the nature and direction of performance.**

Although supervisors' numerical ratings were overall positive, they tended to rate the teens' with more "agree" than "strongly agree" ratings. Responses in Table 8 demonstrate the general agreement between the teens' and supervisors' assessment of the teens' job performance.

Table 8

Comparison of Teen and Supervisor Comments Regarding the Teens' Work Performance

Teen	Supervisor
"I agree [with the supervisor's rating] because I do not think I use my time wisely sometimes."	"Gets relaxed and engages in other activities, however, time management has vastly improved."
"There have been many times when my teen co-worker has been very dysfunctional which made me mad and want to yell at him a lot of times but he is much better and so am I."	"Has shown a lot more leadership when it comes to dealing with her co-worker."
"May get off task a few times."	"May have gotten off task but in the last weeks she improved greatly."
"I think I work well with my teammates."	"Is a very great team player. Has a great attitude."
"I think I listen to the kids well and show them respect."	"Ability to communicate with others is outstanding."

Note. Supervisor responses are matched with those of the corresponding teen participant.

What Teens Learned the Most

In an open-ended question, we asked teens to indicate what they learned the most through their participation in JET. We sorted their comments into three overall themes (Table 9). Many of the teens mentioned specific workforce skills or personal qualities that they learned. Other comments were more general, relating to what they learned through the work experience as a whole, rather than a particular workforce skill. A few comments related to specific aspects of the job, such as particular content knowledge gained.

Table 9
What Teens Learned Most from Participation in JET

Theme	Representative Responses
Teens learned specific workforce skills.	"Responsibility is the most important thing I gained being in the JET Program." "I have learned how to make a change if I need to learn something new." Communication "is the key and teamwork can help you solve lots of things."
Teens learned about the world of work more generally.	"To learn how a job works and what you have to deal with." "The most important thing I learned was getting the opportunity to have a real job and fill out an application and take an interview."
Teens learned knowledge related to specific jobs.	"Work with plants." "The most important thing I gained being in Adventure Central's JET Program is working outside."

Finally, the following comment from one teen illustrates the wide range of benefits that were possible.

> "Good communication skills, to enjoy my work, interviewing skills, adapting to new environments, to use initiative, to ask questions, and to be respectful as well as be all I can be."

Overall Program Assessment

When asked about their overall assessment of JET, most of the teens offered a positive comment ("it was a great program"), said they would not change anything, or did not have a specific program change to suggest. The areas where they recommended changes were related to money (more of it), having different program hours (a one-week break, choice of hours), and adding more worksites so there would be more choices and more teens could work.

The supervisors' comments reflected that their involvement in JET was definitely worth the effort. Supervisors noted that the teens "added a nice dynamic" and "really filled a gap" at their work location. Beyond these general comments, there were three themes derived from the supervisors' feedback. First, supervisors identified areas they needed to address at their worksite to better accommodate the teens, such as better planning and support (see Table 10).

Table 10
Supervisors' Suggestions for Accommodating Teen at Worksites

1. Planning ahead for the teens' arrival and ensuring that the rest of the staff were knowledgeable about the program's goals
2. Making sure the teens received the necessary orientation and training to do their job (e.g., learning plant names)
3. Making sure the teens had a range of experiences (e.g., greeting the public, helping with a program)
4. Adjusting the teens' hours to be able to include them in crew meetings

In addition, the supervisors identified ways that Adventure Central staff could help make JET a better experience. This included providing additional training and sharing ideas from other sites about how the staff members at these sites have worked with teens. Finally, supervisors identified unanticipated ways in which they had benefited from the teens' presence on the job. For example, one of teens attended a planning meeting for an event and gave her honest feedback about the plan. Based on this experience, the supervisor realized they could learn how to better serve the teen age group by asking for the teens' input. Another supervisor noted that the experience of having teens at their worksite forced them to stop and think about why things are done a certain way. They were forced to improve their communication, especially on details that might otherwise be taken for granted. It was as if they were seeing their own work through new eyes. Teens' presence in the workplace also gave other staff members the opportunity to gain experience in supervising and delegating work to someone else. The experience made them realize that they all needed to work together to be prepared to have the teens as part of their staff. Thus, there was a reciprocal benefit to their involvement in JET. This perception appeared to strengthen their feelings as to the value of the program.

Discussion

This article describes the Job Experience and Training (JET) program, a work-based learning program that is part of the comprehensive 4-H youth development program at Adventure Central in Dayton, Ohio. We described important components of a workforce preparation program based on youth development principles. We also provided a description of the specific context of the program, because it is an important part of understanding the process by which the program outcomes are produced.

The first objective of the evaluation was to assess the workforce skills gained by teen participants. By their self-assessment and that of their worksite supervisors, youth did develop workforce skills in many areas. The skills reported were those deemed important by employers in recent publications (e.g., interpersonal relationships, professionalism and work ethic, communication, and problem solving; Casner-Lotto & Barrington, 2006; Partnership for 21st Century Skills, 2003). The findings from the present study become especially relevant when considered in relation to the disagreement regarding the developmental benefits of adolescent employment. The interconnection between the work setting and the youth development program of Adventure Central represents a "merged" context that appears to provide support during the work experience but is not typical of adolescent employment opportunities (Hansen & Jarvis, 2000, p. 419).

However, not all JET participants improved in the same areas or to the same degree. In part, this is due to pre-existing differences, as well as to their particular experiences on the job.

Within a youth development framework, the fact that participants identified areas for improvement was viewed as a positive sign, not a negative one. If JET were simply a work experience, then success might be viewed as receiving a superior rating from a supervisor. However, because the program model is that of work-based *learning,* this learning must take place in a supportive environment where adults provide the appropriate scaffolding for skill development. This approach demonstrates the benefit of infusing principles of positive youth development into workforce preparation programming.

The present results illustrate the usefulness of a performance appraisal process as a way to evaluate the development of workforce skills. Our approach is consistent with that taken by Blalock and Strieter (2006), who also used the SCANS skills and competencies as the basis for their instrument. As practiced in JET, the performance appraisal process has advantages over self-report instruments because it also gathers input from worksite supervisors who observe teens while they are practicing the skills. We found that although teens tended to rate themselves somewhat higher, their assessment were similar in nature to that of their adult counterparts.

It is important to reiterate that, first and foremost, the performance appraisal was designed to be a useful program tool. The teens knew from the beginning what the expectations were and the process allowed them to reflect on what they learned in their work experience. By having supervisors complete appraisals two weeks into the experience, it was hoped that they would be able to see areas of strength and areas needing improvement. We concluded there is some fine-tuning needed with the performance appraisal process. Specifically, there is a need to emphasize with supervisors the importance of the early assessment. We noted that some supervisors did not complete this first assessment so there was no point for comparison at the program's conclusion. There are several possible explanations. We suspect that is some instances, the supervisors rated the youth highly at the beginning to be "nice," without recognizing the appraisal process was meant to be a tool for setting goals and for documenting growth and improvement; this was a problem also encountered in other programs (Blalock & Strieter, 2006). It could be that the particular job tasks did not enable youth to demonstrate skills in a particular area. Alternately, it is possible that supervisors did not have a chance to observe the teens demonstrating these particular skills. Changing the anchors on the rating scale from agree/disagree to outstanding, satisfactory, shows improvement, needs improvement, not applicable/not observed (Blalock & Strieter, 2006) might be one way to facilitate this different view. We also have considered adding specific skills that are unique to each worksite in addition to the more generic workforce skills, as Blalock and Strieter (2006) have suggested.

Our second major objective was to determine if supervisors and teens found the program to be worthwhile. Both groups indicated their support of the program. Most of the teens appeared satisfied with the program, and they did not have many suggestions for changes. Supervisors rated the program as a positive experience. They also offered ways that they could better prepare for teens in the workplace. In addition, they noted unanticipated benefits to having teens as employees.

In combination with workforce skill development, information on teen and supervisor satisfaction provides us with valuable information regarding what is working well and provides the basis for making any necessary changes in the program structure, educational strategies, and content. For example, because getting buy-in from all staff members at a worksite is important to the quality of the experience for both the teens and the adults involved, Adventure Central staff members have begun to do training at each of the park sites in anticipation of the

next round of summer placements. Adjustments such as these will ensure that the program continues to be successful in meeting the needs of all those involved.

Although adolescent employment has been the topic of previous research, much of it has focused on the number of hours worked per week, with little attention paid to the quality of the work experience (Markel & Frone, 1998) or the developmental opportunities it affords (Greenberger et al., 1982). There has been limited documentation of workforce preparation programs as we define them, thus the study presented here extends the literature in this area.

Implications

JET is an example of a program that incorporates principles of youth development and workforce preparation. Although the JET program was focused on parks-related careers, the model could be applied in many different career areas. It is important to note that because JET is embedded within the comprehensive youth development program at Adventure Central, the teens had the security afforded by a safe environment, which had been documented in past studies (Ferrari, Paisley, Turner, Arnett, Cochran, & McNeely, 2002; Ferrari & Turner, 2006; Paisley & Ferrari, 2005). This is an important consideration for anyone interested in replicating a similar program.

Our continued reading in the area of workforce skills, combined with discussion as part of a larger workforce preparation initiative in our organization, has led us to consider moving from the categorization used in SCANS (1991) to a more contemporary one. Building on the foundation skills and competencies identified by the U. S. Department of Labor more than 15 years ago, recent publications have used the terms *learning skills* (Partnership for 21st Century Skills, 2003) and *applied skills* (Casner-Lotto & Barrington, 2006). Although we will likely adapt our performance appraisal measure to reflect this new terminology, it will not change the nature of our program. We would encourage others to review these publications, as well as those by the Business and Higher Education Forum (2003) and Levy and Murnane (2006), to provide a foundation in current conceptualizations of workforce skills.

Because after-school programs have been suggested as an ideal place to focus on developing skills needed for the 21st century workforce (Schwarz & Stolow, 2006), the information gained from our experience with JET has implications for designing and evaluating additional work-based learning programs for teens that take place in an after-school context. As well, because work often conflicts with teens' participation in out-of-school time programs (Pittman, Yohalem, Wilson-Ahlstrom, & Ferber, 2003), it makes sense to keep teens engaged by offering work-based learning programs within the context of a comprehensive after-school program. Although many communities have summer work programs that focus on paying teens to do work, they typically place youth in low-skill jobs. Our approach was to provide a meaningful, guided experience that allows youth to reflect on and learn from their work experience gaining skills that will transfer to other settings.

Components for Replication

Based on our experience, within the context of a positive youth development philosophy expressed earlier, some key ingredients are needed for success. These recommendations are in alignment with those shared by Brown and Thakur (2006). Among the components needed for replication are the following:

1. Establish partnerships for worksite placements. Successful workforce preparation initiatives require strong community partnerships—a collaboration of all stakeholders.

The strength of these partnerships is based on relationships and communication, both of which require an investment of time that pays dividends in the long term.

2. Ensure a strong commitment from adults serving as worksites supervisors. The program will not work well without the support of the site-based supervisor. It is important to involve those adults who view youth as resources. They need to be willing to invest the time needed to develop a plan for involving teens as well as mentoring teens in a work setting by providing guidance and constructive feedback.

3. Include skill-building sessions to set up teen participants for success with job applications and interviews.

4. Have clear expectations and duties for all participants, both teens and adults.

5. Gather enough information to make good matches between teens and worksite placements. Ensure a balance between enough challenge and enough opportunities for success.

6. Use performance appraisal and self-assessment strategies, including reflection. Written reflections in journals, participating in performance appraisals, and facilitated group discussions help to make the work experience a learning experience. This process puts responsibilities on teens for their own learning, but gives them structure to do so.

7. Engage in continual monitoring to ensure everything is on target. Planning, supervision, support, feedback, and on-going communication throughout the course of the project are necessary.

8. Seek grant funding or partnerships to fund salaries or incentives for youth.

9. Evaluate the process and the outcomes of the program.

10. Communicate results to stakeholders.

The evaluation results presented here demonstrate that JET was successful as a work-based learning program. Successful work-based learning programs empower young people to be an active participant in their future by taking control of their own learning and experiences. Given the concerns expressed about the need for young people to develop workforce skills, we feel the JET program is a good model for engaging teens in meaningful service to the public and developing workplace skills and competencies that they can apply now and in the future.

References

Blalock, L.B., & Strieter, L. (2006). The SCANS Skills and Competencies Checklist: An assessment tool for youth work readiness programs. *Journal of Youth Development, 1*(1), Article 0601RS002. Available at: http://www.nae4ha.org/directory/jyd/jyd_issues.aspx

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.

Brown, D.E., & Thakur, M.B. (2006). Workforce development for older youth. *New Directions for Youth Development, 111,* 91-104.

Bryant, B., Zvonkovis, A., Raskauskas, J., & Peters, C. (2004). *Clarifying the world of work for our youth: Vocations, careers, and jobs.* Davis, CA: University of California, Center for Youth Development. Retrieved from http://fourhcyd.ucdavis.edu/publications/pubs/focus/pdf/MO04V9N1.pdf

Business-Higher Education Forum. (2003). *Building a nation of learners: The need for changes in teaching and learning to meet global challenges.* Retrieved from http://www.bhef.com/includes/pdf/2003_build_nation.pdf

Caffarella, R.S. (2002). *Planning programs for adult learners* (2nd ed.). San Francisco, CA: Jossey-Bass.

Carlson, S., & Maxa, S. (1998). Pedagogy applied to nonformal education. *The Center*, Winter 1998, 48-53. Retrieved from the University of Minnesota's Center for 4-H Youth Development website: http://www.fourh.umn.edu/resources/center/PDF/Center-Story9.pdf

Casner-Lotto, J., & Barrington, L. (2006). *Are they really ready to work? Employers' perspectives on the basic knowledge and applied skills of new entrants to the 21st century U.S. workforce.* New York: The Conference Board. Available at: http://www.conference-board.org/pdf_free/BED-06-Workforce.pdf

Cochran, G., Arnett, N., Cox, K., Ferrari, T.M., Hall, L., Harris, W., & McNeely, N.N. (2006). *Workforce preparation overview.* Columbus: Ohio 4-H Youth Development.

Cochran, G., Arnett, N., & Ferrari, T.M. (2007). Adventure Central: Applying the "demonstration plot" concept to youth development. *Journal of Higher Education Outreach and Engagement, 11*(4), 55-75.

Constantine, M.G., Erickson, C.D., Banks, R.W., & Timberlake, T.L. (1998). Challenges to the career development of urban racial and ethnic minority youth: Implications for vocational intervention. *Journal of Multicultural Counseling and Development, 26*(2).

Eccles, J., & Gootman, J.A. (Eds.). (2002). *Community programs to promote youth development*. Washington, DC: National Academy Press.

Entwisle, D.R., Alexander, K.L., & Olson, L.S. (2000). Early work histories of urban youth. *American Sociological Review 65(2),* 279-297.

Ferrari, T.M. (2003). Working hand in hand: Community youth development and career development. In F. A. Villarruel, D. F. Perkins, L. M. Borden, & J. G. Keith (Eds.), *Community youth development: Programs, policies, and practices* (pp. 201-223). Thousand Oaks, CA: Sage.

Ferrari, T.M., Paisley, J.E., Turner, C.L., Arnett, N., Cochran, G., & McNeely, N.N. (2002). *An evaluation of the presence of 4-H critical elements in Adventure Central programming.* Poster session presented at the National Association of Extension 4-H Agents annual conference, Norfolk, VA.

Ferrari, T.M., & Turner, C.L. (2006). Motivations for joining and continued participation in a 4-H Afterschool program. *Journal of Extension, 44*(4), Article No. 4RIB3. Available at: http://www.joe.org/joe/2006august/rb3.shtml

Gardner, B.S., & Korth, S.J. (1997). Classroom strategies that facilitate transfer of learning to the workplace. *Innovative Higher Education, 22*(1), 45-60.

Gilbert, W.D., & Trudel, R. (2005). Learning to coach through experience: Conditions that influence reflection. *The Physical Educator, 62*(1), 32-43.

Greenberger, E., Steinberg, L.D., & Ruggerio, M. (1982). A job is a job is a job…or is it?: Behavioral observations in the adolescent workplace. *Work and Occupations, 9*(1), 79-96.

Hamilton, S.F., Hamilton, M.A., & Pittman, K. (2004). Principles of youth development. In S. F. Hamilton & M. A. Hamilton (Eds.), *The youth development handbook: Coming of age in American communities* (pp. 3-22). Thousand Oaks, CA: Sage.

Hansen, D.M., & Jarvis, P.A. (2000). Adolescent employment and psychosocial outcomes: A comparison of two employment contexts. *Youth and Society, 31*(4), 417-436.

Kroger, J. (2000). *Identity development: Adolescence through adulthood*. Thousand Oaks, CA: Sage.

Larson, R.W. (2000). Toward a psychology of positive youth development. *American Psychologist, 55*(1), 170-183.

Larson, R., Hansen, D.M., & Walker, K. (2005). Everybody's gotta give: Adolescents' development of initiative within a youth program. In J. Mahoney, J. Eccles, & R. Larson (Eds.), *After-school activities: Organized activities as contexts of development* (pp. 159-183). Hillsdale, NJ: Lawrence Erlbaum.

Lerner, R.M. (2005). *Promoting positive youth development: Theoretical and empirical bases.* White Paper prepared for the Workshop on the Science of Adolescent Health and Development, National Research Council/Institute of Medicine. Washington, DC: National Academy Press.

Levy, F., & Murnane, R.J. (2006). Why the changing American economy calls for twenty-first century learning: Answers to educators' questions. *New Directions for Youth Development, 110,* 53-62.

Markel, K.S., & Frone, M.R. (1998). Job characteristics, work-school conflict, and school outcomes among adolescents: Testing a structural model. *Journal of Applied Psychology, 83*(2), 277-287.

Marsh, H.W., & Kleitman, S. (2005). Consequences of employment during high school: Character building, subversion of academic goals, or a threshold? *American Education Research Journal, 42*(2), 331-369.

Moss, P., & Tilly, C. (2001). *Stories employers tell: Race, skill and hiring in America.* New York: Russell Sage Foundation.

Murnane, R.J., & Levy, F. (1996). *Teaching the new basic skills: Principles for educating children to thrive in a changing economy.* New York: Free Press.

Paisley, J.E., & Ferrari, T.M. (2005). Extent of positive youth-adult relationships in a 4-H Afterschool program. *Journal of Extension* [On-line], *43(2)*. Article No. 2RIB4. Available at: http://www.joe.org/joe/2005april/rb4.shtml

Partee, G.L. (2003). *Preparing youth for employment: Principles and practices of five leading United States youth development programs.* Washington, DC: American Youth Policy Forum. Available at: www.aypf.org

Partee, G.L., & Halperin, S. (2006). *Preparing youth for careers, lifelong learning, and civic participation: Principles and characteristics of six leading United States youth development programs.* Washington, DC: American Youth Policy Forum. Available at: www.aypf.org

Partnership for 21st Century Skills. (2003). *Learning for the 21st century.* Washington, DC: Author. Retrieved from http://www.21stcenturyskills.org/images/stories/otherdocs/P21_Report.pdf

Pittman, K.J., Irby, M., Yohalem, N., & Wilson-Ahlstrom, A. (2004). Blurring the lines for learning: The role of out-of-school programs as complements to formal learning. *New Directions for Youth Development, 101*, 19-41.

Pittman, K., Yohalem, N., Wilson-Ahlstrom, A., & Ferber, T. (2003). *Policy commentary #2: High school after-school: What is it? What might it be? Why is it important?* Washington, DC: The Forum for Youth Investment. Retrieved from: http://www.forumfyi.org/Files//ostpc2.pdf

Rockwell, S.K., & Kohn, H. (1989). Post-then-pre evaluation. *Journal of Extension* [On-line], *27*(2). Available at: http://www.joe.org/joe/1989summer/a5.html

Schwarz, E., & Stolow, D. (2006). Twenty-first century learning in afterschool. *New Directions for Youth Development, 110,* 81-99.

Secretary's Commission on Achieving Necessary Skills (SCANS). (1991). *What work requires of schools.* Washington, DC: U.S. Department of Labor. Retrieved from http://wdr.doleta.gov/SCANS/whatwork/whatwork.pdf

Witt, P.A. (2005). Developing quality after-school programs. In P. A. Witt & L. L. Caldwell (Eds.), *Recreation and youth development* (pp. 301-327). State College, PA: Venture Publishing.

Witt, P.A., & Caldwell, L.L. (2005). 10 principles of youth development. In P. A. Witt & L. L. Caldwell (Eds.), *Recreation and youth development* (pp. 3-23). State College, PA: Venture Publishing.

Measuring Positive Youth Development: The Development of a State Benchmark

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Measuring Positive Youth Development:
The Development of a State Benchmark

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Abstract: Public health benchmarks are indicators for well-being and health status that help inform program planning and policy development. In Oregon, recent efforts by a group of state agencies and community partners led to the adoption of a Positive Youth Development (PYD) benchmark by the Oregon Progress Board in 2006. In this paper, we describe the process of creating the state benchmark and present research evidence showing strong relationships that link high levels of PYD to reduced levels of risk behaviors and increased levels of positive, healthy behaviors among Oregon youth. The creation of this benchmark allows better planning, development and monitoring of PYD programs by state agencies, schools and community partners. In addition, results reinforce the finding that the promotion of programs that boost one or more elements of PYD may help reduce risky behaviors and improve positive, healthy behaviors among adolescents.

Introduction

Youth development research has historically been presented and discussed under several different monikers – prevention science, risk and protective factors, developmental assets, and resiliency to name a few. The majority of this research focuses on the degree to which certain factors (individual, attitudinal, familial, social and environmental) are related to healthy development and the manifestation or mitigation of risk behaviors among youth (Resnick, Bearman, Blum, et al., 1997; Resnick, Harris & Blum, 1993; Roth & Brooks-Gunn, 2003). The literature contains several different definitions for what constitutes "positive youth development" (PYD) and how it may impact youth.

In this paper, we present Oregon's efforts to define and adopt a state benchmark for PYD. No standard definition of PYD exists; here we use a comprehensive definition of PYD to mean supports, services and/or skills that promote healthier youth attitudes and abilities. Our

working definition reflects the broad theoretical and strength-based principles, thinking or knowledge base within the ongoing evolution of the field of Positive Youth Development.

Throughout 2005, a group of state agencies and community partners met and developed a measure for PYD. The measure consisted of six questions included on the Oregon Healthy Teens (OHT) Survey, the state's annual health survey of youth in 8th and 11th grades. The six individual questions were asked on the 2006 statewide survey, and results were analyzed in order to create a unique PYD measure and adopt a state PYD benchmark. Finally, the Oregon Progress Board (an independent state planning and oversight agency) adopted the benchmark at the end of 2006.

We start by discussing previous efforts and frameworks for benchmarking in general, as well as Oregon's efforts to develop benchmarks in order to plan, implement and monitor public health programs that benefit adolescents. Second, we review the development and current state of PYD literature and discuss how our measurement constructs were derived from PYD mainstream theory. We then present the methodology employed for the choice and refinement of measures, and the first data collection efforts and results. And finally, we analyze the data.

Given PYD theory as described in detail in the literature review, we expected that, if our measures are valid, we should find strong associations linking high levels of PYD to small levels of risk behaviors and high levels of positive, healthy behaviors. We selected ten major health behavior areas, such as nutrition, physical activity, substance use, and grade performance, and analyzed the association between PYD and health behaviors; results fully validated our expectations. We then presented the creation of three alternative state PYD benchmark measures, tested the three benchmarks against the various health areas, and justified the final choice of the benchmark. We conclude by discussing the policy implications of the newly adopted PYD Oregon state benchmark.

History of Oregon Benchmarking

Numerous frameworks for the development, publication and use of statistical indicators of the health status and well being of populations are in use in the United States and abroad. Healthy People 2010, the U.S. Department of Health and Human Services' comprehensive, nationwide health promotion and disease prevention agenda is a well-known example of such an effort (2005). Indicators of health status are attracting attention among officials at all levels of government as well as among the private-sector executives making decisions about such issues as where to locate or relocate operations and the availability, education and health of their prospective workforce (Alaska Division of Public Health, 2006; Johnston, Wheeler, Deuser, et al., 2000; Metzler, 2006).

The state of Oregon began in 1989 to devise indicators of well being, calling them benchmarks, which started as part of a long-term project and strategic plan (*Oregon Shines*) to improve the economy of the state initiated by then-governor Neil Goldschmidt. The introduction of the benchmarks in 1990 included targets for 2000 and 2010 for such health indictors as infant mortality, childhood immunization, teen pregnancy, and youth substance abuse along with others related to jobs, economy and environmental quality. The Oregon Progress Board (OPB), a public body whose members are community, business, and government leaders, was created by the state legislature to manage the benchmarking process. In 2001, under the leadership of Governor John Kitzhaber, the legislature acted on making the board a permanent part of state government, moving it into the state's central administrative department and giving it responsibility for developing state agency performance guidelines.

Oregon has experienced both the success and failure of benchmarking. Over time, individual benchmarks have been added, deleted or revised and continue to be refined along with the system of reporting results. In 1993 there was a high of 273 benchmarks that were attempted to be monitored. For the 2005-2007 biennium, 90 benchmarks were followed within the categories of Economy, Education, Civic Engagement, Social Support, Public Safety, Community Development and Environment. The effort demonstrates that although benchmarking (or any other use of indicators) can bring health problems into better focus, it cannot cause problems to be solved. Indicators are tools that can be used to inform policy and support or stimulate local-level change; they are not substitutes for effective policymaking.

Despite its challenges, Oregon's strategic planning approach to public health, using a comprehensive, statewide process and societal-level indicators of well being, is widely recognized as an innovative, successful program, having won a prestigious innovation award from the Kennedy School of Government (Oregon Department of Administrative Services, 2002). One of the factors that distinguished the Oregon process from similar data-gathering efforts in other states at the time is its comprehensiveness. Health indicators were considered an integral part of a broad system, based on outcomes, of monitoring progress toward a desirable future. Good health is essential to a wide range of Oregon's goals, including a strong economy and safe, caring communities.

In 2005, Oregon continued its penchant for innovation and began looking at the feasibility of developing a statewide PYD benchmark for school-aged youth utilizing the Oregon Healthy Teens Survey as the primary surveillance tool. This effort grew out of a synthesis of common interest among three state agencies: the Oregon Progress Board, State Public Health Division (Adolescent Health), and the Oregon Commission on Children & Families. The Progress Board had recognized that their intended 'well-being' (benchmark) measures for school-aged youth typically only represented risk factors or negative behaviors (e.g. tobacco use, alcohol use, unintended pregnancy, suicide) and had discussed wanting to adopt a 'positive' measure for youth. Adolescent Health recognized that PYD and its emerging evidence base and growing national recognition represented an important conceptual framework for the design of statewide adolescent health programs. However, there was no state-level surveillance data to help establish the relationship between PYD and those important public health issues typically defined only by risk behaviors. The Commission had an active PYD program in some counties funded by a grant effort and was trying to put a stronger state-level framework supporting the integration of PYD into public policies and practices.

Literature Review: Positive Youth Development

Positive Youth Development formally emerged as an alternative approach to reducing problem behaviors in youth during the early 1990's. However, its roots date back to the early 1970's when the first research on the concept of resiliency emerged. Werner and Smith (1977) published a groundbreaking longitudinal study documenting the positive effects of certain internal and external factors on "high-risk" youth (e.g., those experiencing family instability, poverty) as they developed into adults. A combination of four factors distinguished those that experienced positive outcomes from those who were impacted by teen pregnancy, health issues, and violence: an easy-going nature, strong language and analytical skills, having a social network and outside interests, and a close connection to a parent or other role model. These were deemed "resiliency" factors. This was the precursor to a formal shift in thinking from exclusively treatment to problem prevention, an effort that took hold in the early 1970's. At this

stage, much of the focus was on single-issue prevention (i.e., juvenile crime, alcohol use, drug use, etc.).

During the 1980's, however, this single focus strategy was coming under pressure as research emerged that many of these behaviors were interconnected not only with each other but also with other social and environmental factors. Building on Werner & Smith, the concept that some factors protected against risk (e.g., connectedness to school) and others increased one's susceptibility to risk (i.e., single-parent household) among youth was cemented in the early 1990's in several different studies (Coie, Watt, et al., 1993; Hawkins, Catalano and Miller, 1992; Resnick, Harris & Blum, 1993). The concept of connectedness has been shown to be especially protective against negative outcomes, even overruling negative factors such as unstable family composition (Hawkins, Catalano and Miller, 1992).

The positive effects of a high level of connectedness among youth has been shown to have lasting effects, even four years later, reducing risk behaviors and negative outcomes (Scales, Benson, & Mannes, 2006). This framework of risk and protective factors emerged as the backbone of PYD theory (Bernat & Resnick, 2006). Many of the protective factors that were highlighted in the risk/protective literature are also reflected in PYD. There is a saying in the field - "Problem-free is not fully prepared" – that reflects the idea that simply preventing behaviors by minimizing risk factors is not sufficient to raise healthy youth. Instead, it is extremely important to focus on encouraging and promoting those positive, protective factors that have been demonstrated to be associated with better outcomes for youth. This investment in youth "developmental nutrients" is associated with better outcomes both in the present and future (Benson, Scales, Hamilton, et al, 2006).

There is ample evidence that youth who possess a few or more of these protective factors can overcome negative risk factors to prevail with positive outcomes. The exact mechanics of this seem to vary and are as yet unknown. But the literature does suggest that even youth who are characterized by multiple risk factors will be far less prone to be involved with violence if they also have protective factors such as adult connectedness and spirituality (Resnick, Bearman & Blum, 1997).

The literature contains many articles written about specific youth factors, whether framed as risk and protective factors, PYD characteristics, or simply desirable and undesirable behaviors (Boles, Biglan & Smolkowski, 2006.). As described in the methods section, however, Oregon's research effort decided on six questions that represent five Positive Youth Development constructs to measure among 8th and 11th graders. The five constructs are:

1. competence (belief in individual ability to do something well),
2. confidence (feeling of empowerment and control over the future),
3. health (self-reported physical and emotional health status),
4. support (caring relationship with teacher or other adult), and
5. service (volunteering in community).

The practical reasons for this choice are described later. The scientific basis for these choices, however, is widely supported in the literature.

One of the main issues in making this type of decision is narrowing down the list of potential variables to consider, since there is evidence to support many different potential measures. This dilemma is common to most research focusing on this area (Carter, Spitalny, & Marsh, et al., 2006; Sabaratnam & Klein, 2006). The literature is supportive of a number of PYD, or

protective, factors as being potentially protective against risk behaviors and helpful in supporting positive behaviors. (Roth, Brooks-Gunn, Murray, et al., 1998) In a review of evaluations of PYD programs deemed effective, Catalano, Berglund, Ryan, et al. (2004) developed a list of 14 PYD constructs that various effective programs were found to have promoted. The constructs include different elements of promoting competence (e.g., social, moral, emotional), fostering a sense of self-determination, providing recognition for positive behavior, and providing opportunities for pro-social involvement. In other research, PYD constructs are described along five or six levels: Competence, Confidence, Connections, Character, Caring and Contribution (Roth & Brooks-Gunn, 2003; Nicholson, Collins & Holmer, 2004). This is very similar to the constructs chosen for this particular study.

Recently, Boles, Biglan & Smolkowski (2006) have completed research that questions the strength of association between levels of PYD and better youth outcomes. This research must be given special consideration by the authors of this paper because it draws on the same data source – Oregon Healthy Teens – as the one used here. Boles, et al. found that negative behaviors are more likely to co-occur with other negative behaviors than positive behaviors are with the absence of negative behaviors. However, positive behaviors were shown to be associated with lesser risk in some areas of substance use and antisocial behavior. Based on their data, Boles and his colleagues asserted, "efforts to promote PYD may have limited impact in preventing youth problem behaviors." However, Boles' exclusive focus on items that measure behavior leaves out several important dimensions of PYD such as attitudes/beliefs, connectedness and self-perceived health status. Only one of the positive factors used by Boles was also chosen in this study as a PYD construct: volunteering in the community. Their work reminds us of the inherent difficulties in any effort attempting to measure or characterize the full breath of PYD with a narrow selection of indicators.

The other major consideration in selecting measures for a statewide benchmark is practicality. To our knowledge, the only other state that has attempted to create a PYD measure to be used at the state level is New York (Surko, Pasti, et al.; 2006). Attempting to create a measure, or series of measures, that will have utility as a practical public health measure brings up additional considerations beyond what is most scientifically valid. Researchers and contributors to the New York State effort cite measurability, consensus building and a general education effort of involved partners as being important factors to consider when developing statewide indicators.

Positive youth development may mean different things to different people, and the process of selecting indicators must have some sort of general buy-in from stakeholders (Sabaratnam and Klein, 2006). Oregon's effort benefited from already having the data collection tool available to us (the state's adaptation of the Youth Risk Behavior Surveillance survey), but we also had to gain permission from survey stakeholders to add questions to the survey that would satisfy the PYD construct while still fitting in with the rest of the survey. Our six measures were selected based on both the in-depth literature discussed here and the very practical considerations necessary to state government operations. In the end, we felt our selections were highly rooted and supportable by the available research on PYD and risk/protective factors.

Choosing PYD Indicators and Collecting Data

Throughout 2005, a group of partners (representing the Oregon Progress Board, the Oregon Commission on Children and Families, the Washington County Commission on Children & Families, the Oregon Department of Human Services Office of Disease Prevention and Epidemiology, Center for Health Statistics, and the Office of Family Health, Adolescent Health

Section) interested in developing a method of measuring PYD in Oregon met and discussed the choice of questions that could be included on the OHT survey for this purpose. OHT is a comprehensive, anonymous and voluntary survey that monitors risk behaviors and other factors that affect the physical and emotional health and well being of adolescents (online at www.dhs.state.or.us/dhs/ph/chs/youthsurvey/index.shtml). Each year, the survey is administered to a sample of randomly selected high schools and middle schools in Oregon. In odd-numbered years the sample selection methodology meets the Centers for Disease Control and Prevention criteria for their Youth Risk Behavior Survey. Data collected by OHT are a key source of state and national leading health indicators and outcome measures, such as those included in the Oregon Legislative Benchmarks and Healthy People 2010.

Discussions and decision-making around the choice of PYD questions on the OHT survey were guided by a few considerations:

1. There are very real practical limitations regarding adding new questions to the survey, thus there was substantial value in using or modifying questions that were already on the survey or have been asked in the past;

2. The choice of indicators would be in agreement with or reflect PYD frameworks or measurement constructs currently represented in the literature; and

3. While there is a rapidly growing national interest in PYD measurement and evaluation, there is currently no national consensus on any single theoretical framework to define PYD or likewise any single recommended measurement.

The group reviewed literature and discussed research related to PYD frameworks and measurement. Based on extensive discussions the group developed and adopted a conceptual framework that would guide question development and adoption. The conceptual framework had two major measurement dimensions – individual and environmental - that represented five commonly recognized components of PYD summarized below in Table 1. The final questions are displayed below in Table 2.

Table 1
Conceptual framework for developing PYD measurement tools

Dimension	PYD Component	Component Description
Individual	Competence	Belief in individual ability to do something well
Individual	Confidence	Feeling of empowerment and control over the future
Individual	Health	Physical, emotional or mental health
Environmental	Support	Connectedness to family and the school community
Environmental	Service	Engagement in the community

Table 2
PYD Question Wording

PYD Component	Question	Answer Choices
Health	"In general, would you say your [physical/emotional] health is…?"	Excellent, Very good, Good, Fair, Poor
Competence	"I can do most things if I try."	Very much true, Pretty much true, A little true, Not at all true
Confidence	"I can work out my problems."	Very much true, Pretty much true, A little true, Not at all true
Support	"There is at least one teacher or other adult at my school that really cares about me."	Very much true, Pretty much true, A little true, Not at all true
Service	"I volunteer to help others in my community."	Very much true, Pretty much true, A little true, Not at all true

A matrix was developed that compiled past and current questions that have been used on YRBS/OHT that related to PYD frameworks and which were grouped to represent the above conceptual framework. Principal component analysis was conducted on 2004 OHT data to help identify individual questions that accounted for the majority of variance across the components. Multiple principal component analyses were conducted so that a question could be chosen for each of the six conceptual dimensions. For example, in order to choose a question that measured best connectedness to family and to the school community, six different questions were included in the principal component analysis and reduced to one question or measure to be included in the survey. As a result, the number of questions was reduced to six; these six questions were included on the 2006 OHT survey and administered to 3,615 eight grade and 2,602 eleventh grade students from randomly selected Oregon secondary schools. The distribution of answers for each question is presented below in figures 1 through 5.

Figure 1
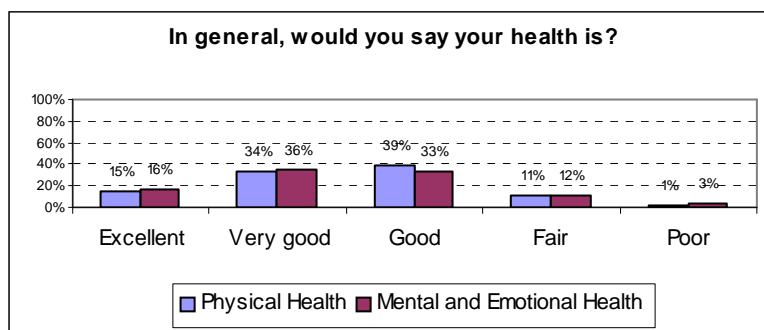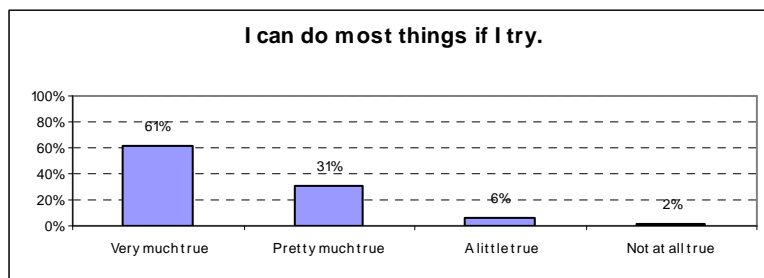Physical Health & Mental and Emotional Health (2 questions)

In general, would you say your health is?

	Excellent	Very good	Good	Fair	Poor
Physical Health	15%	34%	39%	11%	1%
Mental and Emotional Health	16%	36%	33%	12%	3%

Figure 2
Confidence

I can do most things if I try.

Very much true	Pretty much true	A little true	Not at all true
61%	31%	6%	2%

Figure 3
Support in the school environment

There is at least one teacher or other adult in my school that really cares about me.

Very much true	Pretty much true	A little true	Not at all true
54%	25%	15%	6%
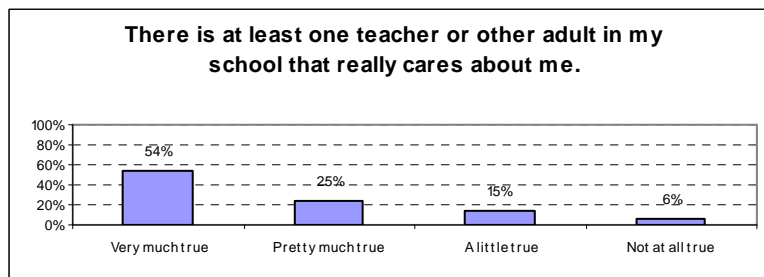
Figure 4
Service to the community

I volunteer to help others in my community.

	Very much true	Pretty much true	A little true	Not at all true
	28%	21%	30%	21%

Figure 5
Competence

I can work out my problems.

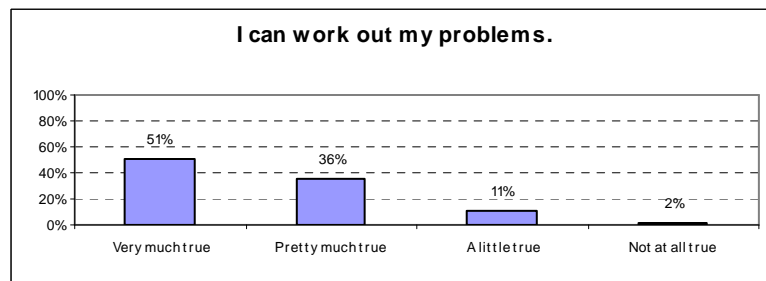|	Very much true	Pretty much true	A little true	Not at all true
	51%	36%	11%	2%
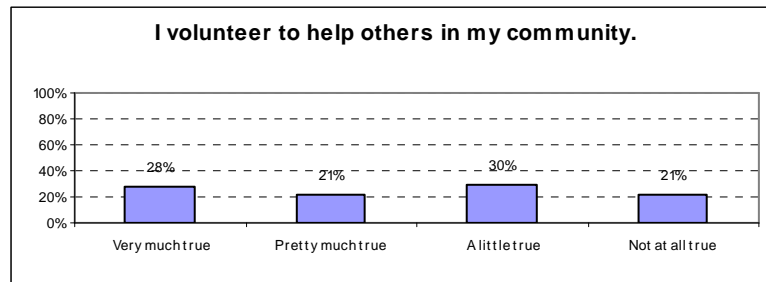
Analyzing the Individual Questions

Our analysis of the six individual questions began by testing the relationship between levels of risk behaviors and levels of PYD. Given the mainstream theory of the strong connection between individual health risk behaviors and levels of PYD, we expected that if the measures effectively capture PYD, we should find a strong association linking high levels of PYD to small levels of risk behaviors and to high levels of positive, healthy behaviors.

Questions were selected from the following health areas: nutrition, physical activity, suicide, sexual behaviors, tobacco, alcohol and drug use, grade performance, suspension from school and physical fighting. Two-way tables with tests of associations were produced, using weighted data for each of the 6 PYD questions against each of these health behavior areas. (The 2006 OHT sampling methodology was a random sampling of statewide high schools and middle schools, with no prior stratification; thus data are weighted using the statewide probability weight, as well as a primary sampling unit variable that accounts for clustering and uniquely identifies each school.) The strength of association between variables was analyzed using $\chi 2$ tests with Rao-Scott corrections in Stata (all p-values reported in the paper are based on corrected Rao-Scott $\chi 2$ statistics).

Logistic regression was not employed in the analysis. Chi-squared tests are a special case of logistic regression. Logistic regression assumes a dependent variable, and one or more independent variables. With $\chi 2$ tests, there is no assumption about independent and dependent variables: the tests simply measure association. Our analysis is aimed at measuring the strength of association between levels of PYD and risk or positive health behaviors, rather

than measure effect and cause. In fact, we acknowledge that the direction of causality can go both ways: increases in a student's PYD level may reduce the risk of negative behaviors and boost the likelihood of positive health behaviors; and at the same time, positive changes in health behaviors may increase a student's PYD level.

Results provided strong evidence that students with higher levels of PYD are less likely to incur health behavior risks and more likely to adopt healthy, positive behaviors. At both the 8th and 11th grade levels, students that report strong levels of PYD are more likely to:

> Have had at least 3 servings of **fruits and vegetables** a day during the past 7 days;
> Have been **physically active** at least 3 days a week for 60 minutes or more during the past 7 days;
> Have not seriously considered **suicide** during the past 12 months;
> Have never had **sexual intercourse**;
> Have not smoked **tobacco** at all during the past 30 days;
> Have not used **marijuana, inhalants, prescription drugs, stimulants, cocaine, heroin, ecstasy and/or LSD** during the past 30 days;
> Have not consumed any **alcohol** during the past 30 days;
> Have never been **suspended from school** during the past 12 months;
> Have never been involved in a **physical fight** during the past 12 months;
> Have mostly A and B **grades**.

Table 3 below contains a matrix with the statistical significance levels indicating the strength of the relationship between each PYD question and each risk behavior. The stronger the relationship, the less likely are students that indicated higher levels of PYD to incur risk behaviors and the more likely to have healthy positive behaviors.

Table 3
Levels of Statistical Significance for the Relationship between PYD and Health Risk Behaviors

	Physical health		Mental health		Confidence		Support		Service		Competence	
	8th	11th	8th	11th	8th	11th	8th	11th	8th	11th	8th	11th
Nutrition	***	***	***	**	***	**	***	**	***	***	***	**
Physical Activity	***	***	***	***	***	***	*	-	*	***	**	***
Suicide	***	**	***	***	***	*	***	**	***	-	***	***
Sexual Activity	-	*	***	*	-	-	**	**	-	*	-	-
Tobacco Use	***	*	***	***	***	**	***	**	**	***	*	**
Drug Use	***	-	***	***	*	***	*	**	**	***	***	-
Alcohol Use	**	-	***	-	***	-	**	**	***	**	***	-
School Suspension	-	-	**	-	**	-	*	-	*	*	***	-
Physical Fighting	-	-	***	-	*	*	**	***	**	-	**	-
Grades	***	***	***	**	***	***	***	***	***	***	***	***

* = p < .05   ** = p < .01   *** = p < .001

As can be seen from these results, the general trend is for strong levels of PYD to be associated with lower levels of risk behaviors and higher levels of positive, healthy behaviors. The relationship varies by health area and PYD component. While all six PYD indicators are strong predictors for physical activity, nutrition, tobacco use and grade performance, the indicators vary in how well they predict the remaining risk behaviors. In turn, this variation suggests that each component captures a fairly different aspect of PYD. Taken together, all six indicators are important predictors of risk health behaviors, as expected.

Creating and adopting a PYD state benchmark measure

Following the preliminary analysis of the six PYD questions, our goal was to create a state benchmark measure, based on all 6 questions, that could be used to track changes in PYD across time and set programmatic and policy goals. We created three alternative versions of the PYD benchmark measure. In all 3 versions, we included only students that answered all 6 questions (n = 4,803 students). We addressed the concern of excluding from the analysis those students in the sample that did not answer all 6 questions (a total of 1,414) by looking at non-responder data. Over 80% (1,135) of those that answered fewer than 6 questions actually answered only 2 questions (the two questions that are in the beginning of the survey, about physical and emotional health). Thus, even if we were to include in the analysis students that answered at least half of the questions, we would not be adding a substantial number of observations. We also compared the risk behaviors of students that we excluded in the calculation of the benchmarks (because they did not answer all 6 questions) to those of the students we included in the analysis. We found no significant differences in the areas of nutrition, tobacco, alcohol use or grade performance. For the remaining six risk behavior areas, we found small differences but in opposite directions: students excluded in the analysis were somewhat more likely to use drugs, fight and be suspended from school, but also more likely to be physically active and less likely to consider suicide or be sexually active. Thus there are no systematic risk behavior differences between students included in the analysis and those excluded that would bias our estimates.

Versions 1 and 2 rely on counting the number of PYD questions that students answered "positively"; positive answers were: "excellent", "very good", "good", "very much true" and "pretty much true". Version 3 calculated the mean PYD score for the student population by treating the answers to the 6 questions as interval scales, and dividing students in two categories: those with "strong" levels of PYD (above average) and those with "weak" levels of PYD (below average).

Benchmark Versions

> **Version 1:** The percent of students that answered at least 4 out of 6 PYD questions positively is the percent of students with strong PYD levels.

> **Version 2:** The percent of students that answered at least 5 out of 6 PYD questions positively is the percent of students with strong PYD levels.

> **Version 3:** The percent of students that rank above the population PYD mean is the percent of students with strong PYD levels.

Version 1 of the benchmark measure codes 84% of 8th graders and 87% of the 11th graders as having strong PYD levels. These high percentages leave little opportunity to formulate a policy recommendation to increase the percent of students with strong levels of PYD. Versions 2 and 3

of the benchmark measure are less inclusive and quite consistent with each other. 84% of the students are coded the same way in both versions (as either having "strong" or "weak" levels of PYD). Figure 6 presents the distribution of students according to PYD levels, for each of the three versions.

Figure 6
Distribution of students by PYD rating in the three alternative benchmark measures
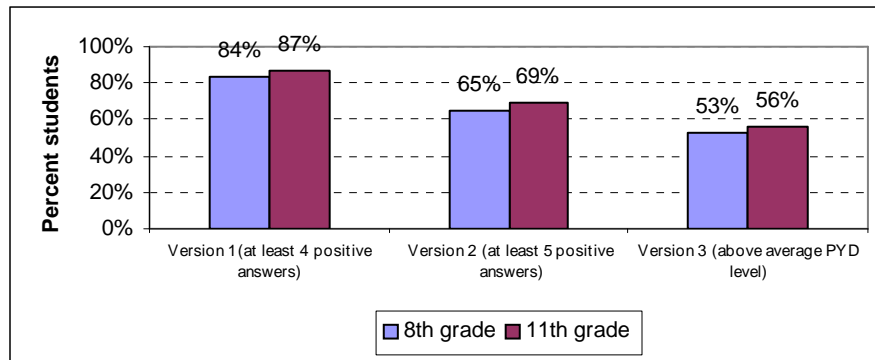
All three versions of the benchmark measures were tested against the selected risk areas, obtaining similar results as when we tested each question separately against respective risk areas.

Table 4
Levels of Statistical Significance for the Relationship between PYD and
Health Risk Behaviors for the three Alternative Benchmark Measures

	Benchmark Version 1 (at least 4 positive answers)		Benchmark Version 2 (at least 5 positive answers)		Benchmark Version 3 (PYD score above average)	
	8th	11th	8th	11th	8th	11th
Nutrition	**	*	***	***	***	***
Physical Activity	***	***	***	***	***	***
Suicide	***	***	***	***	***	***
Sexual Activity	**	-	***	**	***	-
Tobacco Use	***	***	***	***	***	***
Drug Use	***	***	***	***	***	***
Alcohol Use	***	*	***	**	***	*
School Suspension	***	***	**	-	***	-
Physical Fighting	***	-	***	-	***	-
Grades	***	***	***	***	***	***

* = p < .05   ** = p < .01   *** = p < .001

Overall, our analysis of the alternative benchmarks revealed that all three were consistently confirming the same strong relationship linking high levels of PYD to low levels of risk behaviors and high levels of positive health behaviors. All three benchmark variables measure PYD well.

However, because version 1 of the benchmark (at least 4 positive answers) leaves little room to recommend a targeted increase in the percentage of students with high levels of PYD (since already over 80% of students qualify as having strong PYD levels under this construct), we eliminated this measure. Because version 3 relies on treating interval answer scales as ordinal (assigning numerical values and assuming that the distances between answer alternatives are equal), which is somewhat controversial, we also eliminated this version. However, version 3 is very consistent with version 2, which adds validity to version 2 as the final choice of the PYD benchmark measure – the percentage of students answering at least 5 PYD questions positively.

After completing analysis of the three versions and selecting version 2, the wording of the benchmark was finalized. The PYD state benchmark is: "Percent of teens who report positive youth development attributes; a) 8th grade; b) 11th grade."

A noteworthy additional finding is that, in those risk areas where one gender is typically more at risk, gender differences diminish or fully disappear for students with low PYD levels. For instance, in the areas of physical activity and suicide, females are typically more at risk than males – but these gender differences dissipate for students with the lowest levels of PYD. When it comes to suspension from school, getting involved in physical fights, and grades, males are more at risk than females, but again these gender differences diminish or even disappear for students with low levels of PYD.

Figure 7 below provides an illustration using the distribution of students by gender for 8th graders contemplating suicide. As can be seen from the graph, for both males and females, the higher the level of PYD, the lower the proportion of students contemplating suicide. Females are at higher risk than males, with the exception of students with bottom levels of PYD – 2 or less PYD questions answered positively. In fact, for students that answered more than 3 PYD questions positively, the differences between males and females are highly significant (p<.001); but for students that answered 2 or less PYD questions positively, the differences in gender are no longer significant. Thus, low levels of PYD affect strongly both females and males and diminish or fully eliminate gender differences in the likelihood to incur risky behaviors.

Figure 7
PYD and considering suicide, for 8th grade females and males
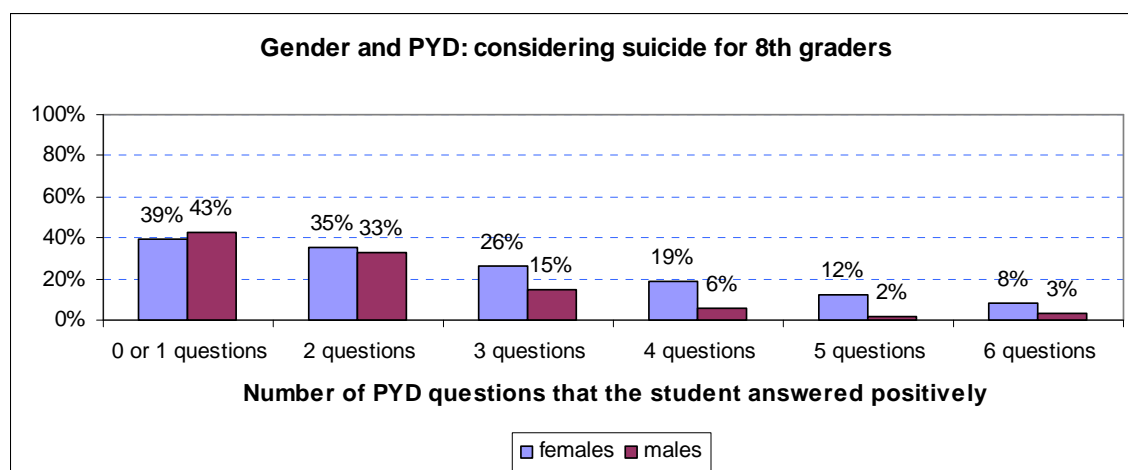
Policy Implications

The findings on the relationship between our PYD benchmark and prevalence of adolescent risk behaviors have implications for policy development at two levels: state government and local involvement (primarily, school and community organizations). At the level of state government, the findings have reinforced the goals of the Oregon Commission on Children and Families project. These goals aim to increase PYD through adoption of state agency policies that support PYD principles and changes in service delivery systems, involvement of youth in service learning, engagement of youth in local and state government, and providing professional development to public and private community partners that serve youth. Adoption of the PYD benchmark formalizes the state's commitment to PYD and elevates it to a level of state agency discourse making the policy recommendations related to PYD advanced by the Commission more relevant.

Now that a benchmark has been established, the State will continue to follow and track data as it comes in annually to see how Oregon youth are progressing, thus creating a long-term commitment and increasing public recognition of PYD as a component of measuring the health and wellbeing of Oregon youth. In addition, Oregon will be monitoring closely at the state level to observe changes across time in the relationship between our benchmark and risk behaviors. Perhaps most significantly, establishing this benchmark and its significance raises the possibility of determining funding priorities based on the benchmark. State benchmarks are often one of the justifications used for increasing activities or allocating state resources/funding to specific programs. The presence of a PYD Benchmark now allows for programs that demonstrate effectiveness in targeting elements of PYD (competence, confidence, health status, etc.) to link their funding requests directly to their efforts to strengthen PYD.

At the school and community levels, these findings offer support for programs that target youth and again aim to boost one or more elements of PYD in order to reduce risk behaviors and promote positive health behaviors and attitudes. Programs such as Oregon Mentors (where mentoring is an evidence-based strategy) that promote youth character, confidence and caring relationships with adults, are among those that should find the most support in these findings. Another prime example is the youth-created Youth Bill of Rights in Portland, a process that engaged thousands of young people in focus groups, surveys and other community engagement methods.

Based on the benchmark development and findings, communities and schools will be able to conduct needs assessments to evaluate their PYD efforts as they relate to the elements of the benchmark and risk behaviors. All secondary schools that participate in the Oregon Healthy Teens survey receive school-level data, which will allow them to calculate their own benchmark percentage and thus set programmatic goals for positive youth programs. Under some circumstances, it may also be feasible for schools or other community-based programs that work with youth to utilize one or more of the PYD indicator questions, or the full PYD measure, as part of an evaluation of their program.

Across the spectrum, the Oregon PYD findings should be encouraging to those who are working on developing or implementing positive youth programs. Of course, the fact that a strong relationship exists between PYD and risk behaviors does not necessarily imply a one-way relationship. Various social, environmental, biological and developmental factors all influence the prevalence of substance use, physical and emotional health, sexual activity and other areas of health risk. Programmatic solutions cannot exist in a vacuum if they hope to be effective. However, programs that improve connectedness to caring adults, aim to boost youth feelings of

confidence, impart social, decisional and problem-solving skills that raise youth competence levels, or promote meaningful community engagement and involvement now benefit from additional evidence in their relationship to reduced risk behaviors.

Conclusion

There are many options to consider when applying a multi-faceted concept such as positive youth development to real world public policy. This effort shows the feasibility of using an existing mechanism (Oregon Healthy Teens survey) to first define, then to measure PYD against reported risk behaviors among youth. Key to the success of this endeavor was multi-agency collaboration in measure design and identifying resources and capacity to analyze and test underlying assumptions. Collaboration was also essential in assuring the availability of an established state-level benchmark system to anchor the measure and a consensus process for final determination on how the benchmark would be established and portrayed. As expected, youth that scored higher on PYD measures were less likely to report engaging in risk behaviors and more likely to have higher self-reported grades. This project offers an approach and methodology to develop a state-level PYD measure, encourages further support for initiatives and programs that target PYD elements, and strengthens policy arguments for the continuation and funding of such programs.

References

Alaska Division of Public Health. (2006). *Alaska Health Status Indicators: 1996 – 2005*. Retrieved October 24, 2007 from http://hss.state.ak.us/hspc/files/HealthStatus2006.pdf.

Benson, P.L., Scales, P.C., Hamilton, S.F., et al. (2006). Positive youth development so far: core hypotheses and their implications for policy and practice. *Search Institute Insights & Evidence, 3,* 1-13.

Bernat, D.H. & Resnick, M.D. (2006). Healthy youth development: science and strategies. *Journal of Public Health Management Practice, 12,* S10-S16.

Boles, S., Biglan, A., & Smolkowski, K. (2006). Relationships among negative and positive behaviours in adolescence. *Journal of Adolescence, 29,* 33-52.

Carter, T.P., Spitalny, K.C., Marsh, N.R., et al. (2006). Comprehensive statewide approach to improve youth outcomes: experience of the New York State youth development team. *Journal of Public Health Management Practice, 12,* S32-S40.

Catalano, R.F., Berglund, M.L., Ryan, J.A.M., et al. (2004). Positive youth development in the United States: research findings on evaluations of positive youth development programs. In Peterson C, ed., *Positive development: realizing the potential of youth* (98-124). Thousand Oaks, Ca: The American Academy of Political and Social Science.

Coie, J.D., Watt, N.F., West, S.G., et al. (1993). The science of prevention: a conceptual framework and some directions for a national research program. *American Psychologist, 48,* 1013-1022.

Hawkins, J.D., Catalano, R.F., & Miller, J.Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: implications for substance abuse prevention. *Psychological Bulletin,112*(1), 64-105.

Johnston, B., Wheeler, L., Deuser, J., et al. (2000). Outcomes of the Kaiser Permanente Tele-Home Health Research Project. *Archives of Family Medicine, 9,* 40-45.

Metzler, M. (2006). *Community Health Status Indicators Project.* Retrieved October 24, 2007 from http://cdc.gov/nceh/tracking/webinars/jul06/MetzlerWebinar072406.pdf. National Center for Chronic Disease Prevention and Health Promotion, Division of Adult and Community Health, Centers for Disease Control.

Nicholson, H.J., Collins, C., & Holmer, H. (2004). Youth as people: the protective aspects of youth development in after-school settings. *Annals of the American Academy of Political and Social Science, 591,* 55-71.

Oregon Department of Administrative Services. (2002). *Oregon Progress Board Recognized for Innovation in Public Sector*. Press Release downloaded from http://egov.oregon.gov/DAS/docs/4-9-02-progressbdinnovation.pdf.

Resnick, M.D., Bearman, P.S., Blum, R.W., et al. (1997). Protecting adolescents from harm: findings from the National Longitudinal Study of Adolescent Health. *Journal of the American Medical Association, 278,* 823-832.

Resnick, MD, Harris LJ, & Blum, RW. (1993). The impact of caring and connectedness on adolescent health and well-being. *Journal of Paediatric & Child Health, 29*(suppl1), S3-S9.

Roth, J.L. & Brooks-Gunn, J. (2003). What exactly is a youth development program? Answers from research and practice. *Applied Development Science, 7,* 194-211.

Roth, J., Brooks-Gunn, J., Murray, L., & Foster, W. (1998). Promoting healthy adolescents: synthesis of youth development program evaluations. *Journal of Research on Adolescence, 4,* 423-59.

Sabaratnam, P. & Klein, J.D. (2006). Measuring youth development outcomes for community program evaluation and quality improvement: findings from dissemination of the Rochester Evaluation of Asset Development for Youth (READY) tool. *Journal of Public Health Management Practice, 12,* S88-S94.

Scales, P.C., Benson, P.L., & Mannes, M. (2006). The contribution to adolescent well-being made by nonfamily adults: an examination of developmental assets as contexts and processes. *Journal of Community Psychology, 34,* 401-13.

Surko, M., Pasti, L.W., Whitlock, J., et al. (2006). Selecting statewide youth development outcome indicators. *Journal of Public Health Management Practice, 12,* S72-78.

Werner, EE & Smith, RS. (1977). *Kauai's Children Come of Age*. Honolulu: University of Hawaii Press.

Engaging Street Youth in an Evaluation of a Community-Based Arts Program

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Abstract: Data from the Edmonton Arts & Youth Feasibility Study (EAYFS) was used to ascertain the feasibility of engaging street youth in a structured community-based arts program and an outcome-based evaluation. The study engaged 23 street youth in a ten-week multi-media arts program focused on developing prosocial communication, team-building, and problem-solving skills. Results have shown that street youth are highly interested in artistic endeavors; will participate to the best of their circumstances; and will provide reliable data. The youth and staff reported improved art skills, problem-solving capacity, and prosocial communication as well as a decrease in drug use, depression, loneliness, and a greater sense of enjoyment about life. Strengths of the program included the arts media, the non-judgmental environment, and the support from staff. The study suggests that community-based arts programs for street youth could be subjected to a rigorous outcome-based evaluation.

Introduction

Findings from the National Longitudinal Survey of Children and Youth (NLSCY 2002), an ongoing Canadian longitudinal household survey designed to monitor the development and well-being Canadian children, have shed light on the concept of 'youth at risk.' In analyzing the data from the NLSCY, Willms (2002) emphasized youth outcomes rather than risk factors. The approach underscores the fact that there is not a one-to-one relationship between risk factors and vulnerability. Werner and Smith (1982) have shown that some children and youth growing

up in high-risk environments go on to lead successful lives as adults, whereas others are devastated by such life circumstances.

Nonetheless, if we look at outcomes rather than risk, the most vulnerable youth are probably youth living on the streets. In Maslow's (1954) model of human motivation, a higher need, namely, self-actualization, is expressed only after lower needs are fulfilled. Street youth are faced with the daily struggle of meeting basic survival needs. The marginal nature of living day to day in such a threatening environment, inexorably leads to hopelessness and despair. To further complicate matters, that proportion of society's most vulnerable youth do not have either physical or psychological accessibility to available psychological services. The heavy burden of suffering attributed to these youth is often associated with reduced life quality and limited opportunities to attain socially desirable outcomes (Offord, Lipman, & Duku, 1998).

Street youth have to cope with a multitude of life stressors such as hunger, homelessness, drug addiction, being in conflict with the law, and involvement in the sex trade. Street victimization also amplifies already high levels of depression and conduct disorders (Whitback, Hoyt, & Bao, 2000). Research has primarily focused on street youth pathology with little attention paid to intervention and prevention efforts (Kidd, 2003). Few interventions with this population have been formally evaluated. Careful program evaluation of services is sorely needed, especially based on rigorous experimental designs (Robertson & Toro, 1999).

An innovative approach that has worked with other youth at risk for psychosocial problems is community-based art programs. There is growing research evidence that well-designed and structured community-based arts programs can promote positive youth development and enrich the lives of youths (Eccles & Templeton-Gootman, 2002; Posner & Vandell, 1999; Wright, John, Offord, Duku, Rowe, & Ellenbogen, 2006), improve school performance (Catterall, Chapleau, & Iwanaga,1999), as well as reduce negative behaviors like delinquency, alcohol and drug abuse (Mahoney, Larson, & Eccles, 2005). The high costs of the current justice system must be considered in the context of its limited successes. There is evidence that deterrence approaches, such as boot camps, zero tolerance programs, and other punitive exclusionary policies, may actually increase crime and marginalization (Jackson, 2002; Kempinem & Kurlychek, 2003)

However, little is known about the effects of community-based arts programs on street youth. It seems worthwhile to query whether the methods and procedures that arguably work with youth from at-risk communities will also be effective with a much higher risk group of youth, namely, street youth. Before embarking on an outcome-based study of community-based arts programs as a strategy to improve the psychosocial functioning of street youth, it was deemed necessary to assess the feasibility of such a cost-intensive strategy with that population. Many assume that it would be very difficult to engage street youth in community intervention research given their transient nature, high incidences of drug use, emotional and behavioral problems as well as their general mistrust of adults. Of particular interest for this study are certain practical questions. For example - could street youth, many of them homeless, be engaged in artistic endeavors? Would they demonstrate regular and sustained attendance? Would they be willing to complete self-report questionnaires in a reliable manner?

Existing Literature

Many researchers have shown a growing interest in arts education programs within schools, youth organizations and in juvenile offender institutions (Darby & Catterall, 1994; Eisner, 1998; Ezell & Levy, 2003; Offord, Lipman, & Duku, 1998; Weitz, 1996). A review of the literature

reveals that in addition to acquiring art skills, there is evidence of cognitive, academic and psychosocial benefits related to arts education. Experimental studies on the effects of art programs, specifically for high-risk youth in voluntary settings is non-existent. However, there have been a few studies conducted with at-risk youth, with art as a strategy for delinquency prevention.

For example, the YouthARTS Development Project (Clawson & Coolbaugh, 2001) was designed to identify implement, and refine effective arts-based delinquency prevention programs. Programs were run in three sites in the United States: Atlanta, GA, Portland, OR, and San Antonio, TX. Each of the three sites ran slightly different programs with the common goal of gaining a better understanding of the positive effects of arts-based programming on at-risk youth. In the Art-at-Work program in Atlanta, engaging the youth to participate in the research was a challenge. The program started in the fall of 1996 with 15 participants, by that December only 10 participants were still attending regularly. Complete evaluation data was only collected on 7 of those 10 participants. Although the reported data was lacking in quality, the responses given by the participants and staff suggests that the program was beneficial (Clawson & Coolbaugh, 2001).

In the Portland site, the Youth Arts Public Art program was geared towards adolescents who committed any delinquent offence except for sex offences. Referrals to the program came from three separate units, but for one of them the program was not considered voluntary. For the two other programs, out of 30 participants who were referred to the program almost 80% participated. Again, the quality of the data collected was limited, yet there was some indication that the program proved to be beneficial for the participants. In San Antonio, the Urban smARTS program was an after school program designed for 6th graders, in order to prevent them from engaging in delinquent behaviors. More than 400 students were referred to the program from seven school districts. Only 112 of those students participated in the program regularly. Some of the reasons given for dropping out included lack of interest, family obligations and involvement in other programs among others. The quality of the data from the Urban smARTS program was poor because of a lack of good comparison data. The available data did indicate beneficial components to the program.

As the aforementioned study has shown, it is difficult to sustain regular participation of at-risk youth in community art programs and obtain reliable data. To the authors' knowledge, there has been no attempt to conduct an evaluation of a community arts programs for street youth and/or youth in conflict with the law in a voluntary setting. To address the gap in the literature, this study will use data from the Edmonton Arts & Youth Feasibility Study (EAYFS) which was conducted to assess whether it is possible to engage a group of high-risk youth in a structured and intensive arts activity, and whether the community-based organization implementing this program would be willing and capable of implementing a rigorous research protocol.

The specific objectives of the Edmonton Arts & Youth Feasibility Study were to:
- Ascertain the feasibility of establishing a structured arts program that can be subjected, at a future date, to an outcome-based evaluation.
- Test the feasibility of conducting a before and after data collection with a very high-risk group.
- Test the acceptability of a structured art curriculum and data collection procedures with the participants.

The EAYFS arts program is a targeted intervention model, based on positive youth development. That model can be easily subsumed under the research done on risk and protective factors (Catalano, Hawkins, Bergland, Pollard, & Arthur, 2002). Lawrence (1998)

operationalizes positive youth development as an approach to working with youth that assumes that they all engage in a developmental process by which they seek to meet their needs and build competencies. The development is considered positive since it departs from the deficit model by assuming that youths have innate abilities, and that they only need the opportunity to develop these talents. This can best be achieved in environments that underscore strengths and nurture positive child/adult relationships (Lawrence, 1998). Many of the tenets of positive youth development will be reflected in the structure of the proposed program, hypothesized to reduce antisocial behavior and enhance positive behavior. For example, the program will engage youth in productive and life-enriching activities, rather than attempting to correct or treat problems.

Methods

Design

Before embarking on a rigorous intervention program with a socially marginal and very high-risk group, it was deemed advisable to first conduct a three-month feasibility study. The study had both a quantitative and a qualitative component. The quantitative component was a pre-post test method. The latter involved collecting baseline data on the youths prior to the 10-week arts program (January 2005) and again after the art program was completed (March 2005). Qualitative interviews were also conducted with youth, site directors, board members of the art organization, art instructors, and research assistants.

Sampling

iHuman Youth Society, a non-profit organization that functions as a communal art space for Edmonton's high-risk and street youth was selected to participate in the study. Once the site was selected and staff recruited, teleconferences, site visits, and training sessions were conducted with the site director, board members, research assistants, and art instructors to review the research protocol, the development of the art program, the recruitment of youth to the study, the data collection instruments, and reporting guidelines as well as youth management strategies and policies for crisis intervention. Twenty-three high-risk youths were recruited based on referrals from youth workers, social workers, probation officers, and lawyers from shelters, community health organizations, youth offender centres, the youth criminal defense office, and a youth justice committee. Both the youth and their parent or guardian had to sign an informed consent form to participate in the study. In many cases, obtaining consent from a parent or guardian proved difficult as many of the youth were living on their own or on the streets.

The Intervention

The intervention for the study was a 10-week arts program delivered twice a week for ninety-minute sessions, from January to March 2005. The organization offered a multi-media program that combined graphic, visual, video and digital music workshops. Activities included story development, collage storyboard, animation, photography, field and studio recording, lighting, digital photography, video editing, etc. Art instructors developed and documented the curricula, which targeted artistic and social skills. The aim of the art programs was to provide the youths with the tools they needed to strengthen their cognitive abilities, enhance their social skills and develop interpersonal relationships in addition to developing artistic skills (Wright & John, et al 2006). It should also be mentioned that iHuman Youth Society offered a multitude of services in addition to the arts programs, such as information and referrals to shelters, drug addiction centers, medical centers, legal services, etc. There were also trained social workers on hand to address any crisis that would arise.

As previously mentioned, youth completed questionnaires prior to the arts program and after the art program was completed. The study used existing self-administered scales from cycle 4 of the NLSCY to gather demographic information and measure psychosocial outcomes, such as:

- Self-reported delinquency: 14 items on committed offences.

- Self-esteem: a five-item scale measuring the youth's pride in themselves.

- Prosocial behaviour: a ten-item scale measuring the youth's empathic and helpful behavior towards other youth.

- Conduct problems: a seven-item scale measuring bullying, getting into fights, and vandalism.

- Emotional problems: an eight-item scale measuring unhappiness, depression and anxiety

- Smoking, drinking, and drug use.

- Quality of life: eight items measuring the youth's personal satisfaction (or dissatisfaction) with the conditions under which they live.

To augment the quantitative component of the study, the principal investigators wanted to explore stakeholders' perceptions of program activities and processes through qualitative interviews. The aim was to evaluate and document the implementation process, best practices, lessons learned, and sustainability issues. It was also necessary to identify common key elements of crucial importance for successful adaptation of arts-based programming for high-risk youth in other locales. The qualitative interviews were conducted with participating youth, the director and board members of the arts organization, the lead art instructors and the research assistants that served as liaison between the research team and the community site.

Analytical Strategy

All statistical analyses were done using SPSS statistical package. Attendance rates at the arts program were calculated by dividing the number of sessions attended by the number of sessions offered (20). As previously mentioned, one of the objectives of this study was to ascertain the reliability of obtaining reliable outcome data from such a high-risk group as the present population. One method is to assess the internal consistency of the participants' responses to the indicator-items within a scale that have been previously found to be reliable. Hence, we assessed the internal consistencies of the Youth Questionnaire scales using Cronbach's Alpha (α). If items within a scale purport to measure a common entity, they must be internally consistent. Hence, they should be correlated with one another. An acceptable reliability coefficient is 0.7 (Nunnaly, 1978). Furthermore, the obtained internal consistencies will be contrasted to two other studies, with comparable intervention using similar rating scales.

All interviews were transcribed, reviewed and cleaned in preparation for analysis. We conducted initial coding and categorizing on a sub-sample of interviews from each stakeholder group through line-by-line micro-analysis, employing an established five-stage procedure wherein the data were scanned, edited, refined, and reassembled (McCracken, 1988). Themes were extracted and interpretations made based on emerging data categories, from which we developed a coding framework. After developing the initial coding framework, we imported the transcribed interviews into N*Vivo, a software package commonly used in the analysis of qualitative data, then coded them along the developed framework. Within this process, we employed trained multiple coders to test for inter-rater reliability on the coding and consistency

of category development. A sub-sample of interviews coded independently by different coders and themes was developed and reviewed until satisfactory agreement was reached.

Results

The results are presented as follows:

- Description of sample.

- Attendance and response rates.

- Reliability of selected outcomes from the Youth Questionnaire.

- Findings derived from the qualitative interviews.

Given the small sample size, no inferential statistics are presented. Again, it is important to remember that the purpose of the study is not to evaluate the program's impact but to assess the feasibility of conducting a rigorous outcome-based study in a community setting with a group of high-risk voluntary participants.

Description of Sample

Twenty-three youth, 39.1% male (9) and 60.9% female (14), participated in the study. The youth were between the ages of 14 and 19, and were ethnically diverse, with 51.7% of youth identifying themselves as Aboriginal, 31% as White, 7% as Black, 7% as Asian, and 3.4% as Latinos. Approximately two thirds (69.6%) of the youth did not live with their parents. Table 1 shows the prevalence of self-reported delinquency for the 12-month period preceding entry into the program. The offences most frequently reported are 'Selling drugs' (91.3%), followed by 'damage to property' (78.3%), 'Stealing from school/store' (69.6%), 'Fencing stolen property' (69.6%), and being in a 'Fight with a weapon' (69.6%).

Table 1
Self-reported Delinquency by Specific Offences

Specific Offence	N	Frequency
Stolen money from parents	11	47.8
Stolen from store/school	16	69.6
Damage to property	18	78.3
In fight causing injury	14	60.9
Fencing stolen property	16	69.6
In fight with weapon	16	69.6
Sold drugs	21	91.3
Break and enter	12	52.2
Stolen a vehicle	11	47.8
Set fire to something on purpose	10	43.5
Touched someone who was unwilling	0	0.0
Threatened to get money/possessions	10	43.5
Carried a gun to defend oneself	7	30.4
Forced someone into having sex	0	0.0

Results from the baseline youth questionnaires also indicated that, in the past twelve months, 72.7 % of the youth had used drugs like crack cocaine, heroin, speed, or crystal meth (Methamphetamines). Furthermore, 52.4% of youth had used hallucinogenic drugs and 54.6% of the youth used marijuana at least three to five times a week. With respect to suicide attempts and other difficult life events, results from the youth questionnaires indicated that, in the past twelve months, 9 youth (39.1%) had attempted suicide, with 6 youth (26.1%) attempting more than once. It was also found that five of the 14 girls (35.7%) had been pregnant or had an abortion, 16 youth (69.6%) had experienced the death of somebody close to them, and 80% of youth were physically attacked at least once in the previous year. Other difficult life events identified by youth were fighting addiction, going to prison, and being abandoned by parents.

Attendance and Response Rates

By dividing the number of sessions attended by the number of sessions offered, the average attendance rate was 48%. We also explored whether the participation was sustained throughout the 10 weeks of programming by looking at the percentage of youth who attended at least once in the last three weeks of programming. Seventeen of the 23 youth (73.9%) attended at least once in the last three weeks of programming. With respect to the response rates for the youth questionnaire, 78.3% of youth completed the questionnaire in Time 1 and 60.9% in Time 2. Reasons for not completing the questionnaire included being unable to contact the youth, and incarceration. No youth refused to complete the questionnaire once contacted.

Reliability of Data from Outcome Scales

Table 2 shows the reliability coefficients of the self-esteem, prosocial behaviour, conduct problem, and emotional problem scale for the Edmonton Arts & Youth Feasibility Study (EAYFS), the National Arts & Youth Demonstration Project (NAYDP), and the Tampa Arts & Youth Demonstration Project (TAYDP). The NAYDP and the TAYDP were three year studies exploring community-based arts programs as a strategy for enhancing the well-being of children and youth in lower income communities (Wright, et al., 2006). All three studies used similar outcome measures from the NLSCY. As can be seen in Table 2, all studies have Cronbach's Alpha (α) over 0.7 with the exception of the emotional problems scale for the TAYDP. This shows that the scales used for the present study were reliable and that the youth did not complete the questionnaires randomly.

Table 2

Comparison of Internal Consistencies of Scales for Various Studies

	EAYFS	NAYDP	TAYDP
Self-esteem	.77	.85	.87
Prosocial Behaviour	.90	.83	.85
Conduct Problems	.75	.86	.87
Emotional Problems	.80	.81	.66

Qualitative Interviews

The analysis of the qualitative findings revealed specific issues that are significant for determining the feasibility of the program. Findings are categorized as follows:

- Reasons youth enrolled in the program.

- Benefits obtained from participating in the program.

- Characteristics of the program that helped to facilitate outcomes.

- Program challenges identified by youth and staff.

- Youth's acceptability of the data collection process.

Reasons youth enrolled in the program.
The youth were drawn to the program mainly because it focused on art activities that were appealing to them. Some of the youth mentioned specific activities such as making a video, drawing and painting; whereas others were simply pleased that they would get to participate in art activities, an opportunity they do not normally have.

Benefits obtained from participating in the program.
The youth identified many personal benefits that resulted from participating in the arts program. A positive impact that the program had on the youth was the specific art skills gained. Some of the favorite activities mentioned were painting, making videos, writing poetry and recording it onto a CD. The youth truly enjoyed the various, diverse and interesting art activities offered. One participant described one of her favorite activities in the following manner: "I liked the random videotaping. We had people running around with cameras, you don't know that they are videotaping you and you are doing something stupid, and you watch it later and you are like 'oh, man'."

In response to the question "In general what did you learn from the activities in the program?" one youth responded - "how to paint better, different techniques of painting, different things, different canvasses and papers. I never even knew what a canvas was until I came here. I thought it was just a piece of paper."

A number of the youth stated that by participating in the program they were able to stop or decrease their drug use because they shifted their focus, their time and their energy on something else. "I did quit crystal meth because I wanted to do this video. If I didn't quit, I would never show up because I would always be out there doing drugs." Another commonality amongst the youth regarding the personal benefits that they gained was that they were able to learn from one another, learn from each others' mistakes and be able to not replicate the mistakes of others. "I learned more about how they've dealt with different issues in their life, and how they've, you know, we kind of learned from each other, so that we, you know, don't make the same mistakes they've made." The youths described how being part of an art program and interacting with other youth with similar problems has helped them develop social skills. A participant simply stated that she has become "more sociable." When asked to expand on that remark she stated "with being more sociable, I've made so many friends here, different types of people. Normally half the people here wouldn't be the people I would've normally associated with." Some youth stated that the greatest benefit was problem solving. "When you are with people lots of times you kind of get mad at each other. Ways to deal with it I guess. Ways to talk it over instead of fighting."

Characteristics of the program that helped to facilitate outcomes.
The emerging relationship between the staff and the youth participants was identified as an integral part of the program. All the youth were able to name at least one staff person they would go to if they were in trouble. "I always talk to someone, to the staff about my problems" was how one youth commented on her relationship with the staff. She felt she could trust them.

The bonds built among youth were both valuable and educational. One of the most common themes that emerged from the interviews was the ability of the youth to learn from each other. Discussing what she learned from the other youth, one participant stated "instead of learning more about their art, and about how they do their own work, I learned more about how they've dealt with different issues in their life, and how they've, you know, we kind of learned from each other, so that we, you know, don't make the same mistakes they've made. I mean, knowledge in groups is power, it's, why have someone else mistake if you've already learned it right?" In addition to their relationship with the staff and youth, the participants talked about the importance of a non-judgmental environment at the studio.

Program challenges identified by youth and staff.
The participants' main complaint was the geographic location of the facility. "You got the … (homeless shelter) right across the street, and they are all doing needles and popping pills. It is just not something I want to see." Another youth's comments reflected the same sentiment, "I really wish this place was not in such a crappy neighborhood. There are some bad sketch cases."

All the stakeholders noted that the facility, in terms of its location and its layout, did not provide an appropriate environment for a structured art program for a group of high-risk youth. It was noted that this had an impact on the artists' ability to deliver the programming. One of the artists felt that "There were so many disciplines working in the one studio. We had art, and the video and the music; it just wasn't enough space for all of us to co-exist and still work as a group." The artists felt that the noise levels and the competition for space in the building made it difficult to maintain the participants' attention for any length of time.

Staff members also stated that the preparation time for the program was inopportune. The artists faced the challenge of formulating the appropriate program within the time provided. They felt that the program was invented on the run. One artist remarked "we never had much start up time. So I thought we were a little behind…We sort of invented the program." The research assistants felt the same way with regards to the amount of preparation time that was given before the initiation of the program. For them the main difficulty was the short period allotted for collecting the signed consent forms. Given that transient nature of the participant population and the time of the year, this was a significant challenge. "We needed more lead time to get the permissions from the youth and the time was too short, because it is so hard because they are all over the place and they are under age. Just even finding somebody who can sign a consent form for them is a monumental challenge. We needed more time."

Given the transient nature of these youth, it was difficult to ask them to be at the studio at specific times on a regular basis. The artists raised this concern because they would have liked to progress through the different stages of each module. They were unable to do so because when a participant missed a particular level, the artists would have to review the previous lesson. "What's happening now, you move on to stage two, the stage one kids come in again because you missed them last time so you have to hold the whole class back to go back to lesson one" stated one of the artists. This artist suggested "It would be good to be able to catch them at different times, so you would hold one workshop, hold it several different times and you would finally get them. Then you would hold another workshop, hold it several different times."

Youth's acceptability of the data collection process.
The youth had complaints regarding the questionnaires that they had to complete at the beginning and at the end of the project. Some commented that they were too long; others stated that it brought up bad memories of a psychiatric facility that they were in and others

stated that the questions were "dumb." Suggestions made to address this complaint included creating shorter forms and analyzing and adjusting the questions asked.

Discussion

To reiterate, the objectives of this study were to shed some light on some basic practical questions with relevance for future program development. The first objective was to assess the potential of street youth, many of them homeless, to be engaged in artistic endeavors. There are certain prevalent assumptions that arts programs targeted to high-risk youth is very challenging in terms of obtaining a sustained commitment (Clawson & Coolbaugh, 2001; Witt & Bradberry, 2000). However, the findings from the qualitative interviews were very encouraging and corroborate the assertion that every youth can be brought to a certain level of arts literacy (Pitman, 1998). Just because they are street youth does not necessarily make them unreceptive to such life-enriching endeavors as art. The qualitative findings also support some of the tenets of positive youth development as an approach to working with youth, which assumes that they all engage in a developmental process by which they seek to meet their needs and build competencies.

As a program philosophy, positive youth development departs from the deficit model by assuming that all youths have innate abilities and talents, and that they simply need opportunities to develop them (Lawrence, 1998). However, providing opportunity is a necessary component but not a sufficient one. Such opportunities must be provided within a supportive environment, one that underscores strengths and nurture positive child/adult relationships (Catalano et al., 2002; Lawrence, 1998). The qualitative interviews identify the youth relationship with staff that they felt were supportive, as a key component in motivating the youth. Notwithstanding the sporadic attendance, there was committed engagement in the program by the majority of participants. They were interested in the arts programs. Multi-media programming allowed for youth to explore a variety of art forms such as painting, photography, digital editing, etc. They were willing to sign consent forms and complete questionnaires. Cultural mistrust and general mistrust of adults was not a factor, mainly because the organization had credibility with street youth (good word of mouth).

The second objective of the study was to not only assess street youth interest in artistic endeavors but also their motivation for regular and sustained attendance. This is probably the most difficult problem regarding such a high-risk group. Sustained attendance is a problem for not only after-school art programs but all programs. Not all youth who enroll in community programs actively participate and sustain their motivation to stay. Many of them drop out. Community programs could not possibly compensate for all the obstacles to participation faced by those who live in extreme poverty or are faced with a multitude of problems. The participation rates, in the present study, are very encouraging, considering that one of the characteristics of street youths is a high rate of transience.

However, those who were retained participated joyfully and made progress along all behavioral measures. Even though the objective of the study was not to explore the effects of the art program, results indicate that participating youth made appreciable gains throughout the ten-week program. Improved art skills, problem-solving capacity, ability to work with others, cooperation and respect for other youth and adults, prosocial communication were some of the improvements identified in the youth questionnaires and in interviews with youth and staff. The youth also reported a decrease in drug use, depression, and loneliness, and a greater sense of enjoyment about life.

The third objective was to assess the willingness of such a high risk group to complete self-report questionnaires and show evidence that the questionnaire items were being answered in a reliable manner. As previously mentioned, the internal consistencies of the data were all above .70 and were comparable to two other more rigorous studies.

Conclusion

With the numbers of street youth growing in Canada, provision of programs to address the needs of this neglected population is desperately needed. We contend that if the necessary services are to be provided to that population it cannot be done at an ad hoc level. The present study has shown that street youth are interested in artistic endeavors; will participate to the best of their idiosyncratic circumstances and provide reliable data. However, sustained participation remains the most salient problems for that population. The question that future research must provide is: What needs to be built into these programs to increase sustained motivation to participate?

The findings from this study, albeit tentative, provide some clues. It is imperative that a safe non-judgmental environment with adults they can trust be the sine qua non of any program for street youth. The program must be staffed by trained social workers / youth workers able to manage street youth's emotional and behavioral problems, and refer them to other programs if needed. In order to promote sustained participation, tracking down youth who miss class must be viewed as a fundamental aspect of the program. Attrition rate in community programs range between 30 to 40 percent (Weisman & Gottfredson, 2001; Billingsley, 2003). If participation rates can be maintained at around 60-70 %, an outcome-based study would further explore the impact of community arts programs on the psychosocial functioning and quality of life of street youth. Given the youth's capacity to be engaged in community intervention research, this would be a feasible and worthwhile endeavor.

References

Billingsley, B.S. (2003). *Special education teacher retention and attrition: A critical analysis of the literature* (COPSSE Document No. RS-2E). Gainesville, FL: University of Florida, Center on Personnel Studies in Special Education.

Catalano, F., Hawkins, J.D., Bergland, M.L., Pollard, J.A., & Arthur, M.W. (2002). Prevention science and positive youth development: Competitive or cooperative frameworks? *Journal of Adolescent Health*, 31, 230-39.

Catterall, J. E., Chapleau, R., & Iwanaga, J. (1999). *Involvement in the arts and human development: general involvement in music and theatre arts.* Los Angeles: Imagination Project, UCLA School of Education and Information Studies.

Clawson, H. J., & Coolbaugh, K. (2001). *The YouthARTS Development Project. Juvenile Justice Bulletin*. Washington: The Office of Juvenile Justice and Delinquency. Retrieved November 29, 2004, from http://www.ncjrs.org/html/ojjdp/2001_5_2/contents.html.

Darby, J.T., & Caterall, J.S. (1994). The fourth R: The arts and learning. *Teachers College Record*, 96(2), Columbia University, 299-328.

Eccles, J., & Templeton-Gootman, J.A. (2002). *Community programs to promote youth development*. Washington, D.C.: National Academy Press.

Eisner, E.W. (1998). Does experience in the arts boost academic achievement? *Art Education, 51*(1), 7-15.

Ezell, M. & Levy, M. (2003). An evaluation of an arts program for incarcerated juvenile offenders. *Journal of Correctional Education*, 54(3), 108-114.

Jackson, A. (2002). Police-school resource officers' and students' perception of the police and offending. *Policing*, 25(3), 631-650.

Kempinen, C., & Kurlychek, M. (2003). An outcome evaluation of Pennsylvania's boot camp: Does rehabilitation programming within a disciplinary setting reduce recidivism? *Crime and Delinquency,* 49(4), 581-602.

Kidd, S.A. (2003). Street youth: Coping and interventions. *Child and Adolescent Social Work Journal, 20*(4), 235-261.

Lawrence, D.H. (1998). Positive youth development promotes pathways of growth. *Common Ground* 15: 9.

Mahoney, J.L., Larson, R.W., & Eccles, J.S. (2005). *Organized activities as contexts of development: Extracurricular activities, after-school and community programs*. Mahwah, New Jersey: Lawrence Erlbaum Associates Inc.

Maslow, A. H. (1954). *Motivation and personality*. New York: Harper.

McCraken, G. (1988). *The Long interview*. Newbury Park, CA: Sage Publications.

Offord, D.R., Lipman, E.L., & Duku, E.K. (1998). Sports, the arts, and community programs: Rates and correlates of participation. *Applied Research Branch, Strategic policy, Human Resources Development Canada.*

Pitman, W. (1998). *Learning the arts in an age of uncertainty*. Toronto: Arts Education Council of Ontario.

Posner, J.K., & Vandell, D.L. (1999). After-school activities and the development of low-income urban children: A longitudinal study. *Developmental Psychology*, 35(3), 868-879.

Robertson, M.J., & Toro, P.A. (1999). Homeless youth: Research, intervention, and policy. In L.B. Fosburg & D.L. Dennis (Eds.), Practical lessons: the 1998 National Symposium on Homelessness Research (pp.3-1-3-32). Washington DC: U.S. Department of Housing and Urban Development and U.S. Department of Health and Human Services.

Weisman, S. A., & Gottfredson, D. C. (2001). Attrition from after school programs: Characteristics of students who drop out. *Prevention Science*, 2(3), 201-205.

Weitz, J.H. (1996). Coming up taller: Arts and humanities programs for children and youth at risk. *President's committee on the arts and the humanities with the Americans for the arts*. April 1996. http://www.cominguptaller.org/cominguptallerreport.doc

Werner, E., & Smith, R. (1982). *Vulnerable but invincible*. New York: McGraw-Hill.

Whitbeck, L.B., Hoyt, D.R. & Bao, W. (2000). Depressive symptoms and co-occurring depressive symptoms, substance Abuse, and conduct Problems among runaway and homeless Adolescents, *Child Development*, 71(3), 721-732.

Willms, D.J. (2002). Research findings bearing on Canadian social policy. In D.J. Willms (Ed.), *Vulnerable Children* (pp. 45-69). Edmonton: The University of Alberta Press.

Witt, P.A., & Bradberry, E.K. (2000). *Evaluation of the totally cool, totally art program*. Texas: Austin Parks and Recreation Department. Retrieved November 8, 2004, from http://www.rpts.tamu.edu/Faculty/Witt/conpubs/TCTA00.PDF

Wright, R., John, L., Offord, D., Duku, E., Rowe, W., & Ellenbogen, S. (2006). Effect of a structured arts program on the psychosocial functioning of youth from low-income communities: Findings from a Canadian longitudinal study. *The Journal of Early Adolescence, 26*(2), 1-20.

Youth Assets and Sexual Activity Among Hispanic Youth

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Youth Assets and Sexual Activity Among Hispanic Youth

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Abstract: Hispanic females, ages 15-19, experienced the highest birth rates and smallest decline in birth rates over the past decade compared to youth of other racial/ethnic groups. This study's purpose was to investigate relationships among a series of protective factors, or youth assets, and sexual activity in the Hispanic/Latino youth population. Data were collected from Hispanic youth and their parents (N=232 youth/parent pairs) in randomly selected households using in-person, in-home interview methods. Independent variables were nine youth assets; "never had sexual intercourse" was the dependent variable. Data were analyzed using logistic regression analysis. Three assets were found to be significantly associated with whether or not Hispanic/Latino youth ever had sexual intercourse. Odds of never having had sexual intercourse were at least three times higher for youth with the Peer Role Models, Use of Time (religion), or Responsible Choices assets, compared to youth without these assets. Further Hispanic youth asset/risk behavior research is merited.

Purpose

Birth rates for teens of all racial and ethnic groups have reached an all-time low in the U.S., marking a steady decline in the teen birth rate since its most recent peak in 1991 (Hamilton, Martin, & Sutton, 2003). Compared to the overall teen population, Hispanic/Latino teens experienced the highest birth rates and the smallest decline in these rates among all racial and ethnic groups during the past decade (Ryan, Franzetta, & Manlove, 2005).

The birth rate for Hispanic teens has been the highest among all racial and ethnic groups since 1995, actually increasing slightly between 2003 and 2004 (Martin et al., 2005). The birth rate per 1,000 Hispanic females aged 15-19 was twice as high as the birth rate among the general

female population of the same age group, according to preliminary 2004 data (Hamilton, Ventura, Martin, & Sutton, 2005).

Over half of sexually experienced Hispanic teen females (52%) have been pregnant, compared to 40% of sexually experienced non-Hispanic African American teens females and 23% of sexually experienced non-Hispanic white teen females, according to findings from the National Survey of Family Growth (National Campaign to Prevent Teen Pregnancy, 2006). According to the same survey, the percentage of sexually experienced Hispanic teen males (aged 15-19) who have ever been involved in a pregnancy was 21%, compared to 19% for non-Hispanic African American teen males and 9% for non-Hispanic white teen males (National Campaign to Prevent Teen Pregnancy, 2006).

Higher rates of sexual activity and lower rates of contraceptive use are reported for Hispanic youth compared to the general teen population, which puts them at increased risk not only for pregnancy, but also for sexually transmitted diseases (STDs) and Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) (Ryan et al., 2005). The disproportionate risk for HIV infection among Hispanic youth, is reflected in the higher percentages of HIV and AIDS cases than their percentage of the population (Centers for Disease Control and Prevention, 2001; U. S. Census Bureau, 2002).

Accompanying the high teen birth rates is the fact that the Hispanic population is the largest minority group and the fastest-growing major racial/ethnic group in the United States (U. S. Census Bureau, 2001). Between 2000 and 2010, the overall Hispanic population is projected to grow by one-third (34%) -- almost four times faster than that of the total U.S. population (U.S. Census Bureau, 2004). The growth of the Hispanic teen population is expected to be even more dramatic over the next 20 years (U.S. Census Bureau, 2004). During that period, it is estimated that the number of Latino teens will grow by 50 percent, while the total teen population will grow by only six percent (Ryan et al., 2005). By the year 2020, one in five teens in the U.S. will be Hispanic (Day, 1996).

Parents of Hispanic youth have lower levels of education than those of other young people, and they have made little economic progress over the years (Driscoll, Brindis, Biggs, & Valderrama, 2004). Both of these factors – families with low levels of education and low incomes -- are associated with greater sexual risk-taking among young people (Driscoll et al., 2004). Also heightening the risks associated with sexual activity among Hispanic youth are language challenges, a lack of access to health care and health insurance, low levels of accurate and timely information about HIV and STIs, and a lack of access to and use of contraception (Driscoll et al., 2004). Research shows that the importance of peer influences increases during adolescence for all teens. Hispanic teens tend to overestimate the proportion of their peers that are sexually active, thus what they perceive their peers' behavior and attitudes to be may be reflected in their behavior (Driscoll, Biggs, Brindis, & Yankah, 2001).

A review of the literature suggests the importance of family characteristics in relation to early sexual activity by Hispanic youth. These characteristics include parental supervision/monitoring, discipline, parental support, and family structure. Associations with significant adults may have a strong influence on adolescents' decisions about sex and pregnancy issues (Moore, Peterson, & Furstenberg, 1986). This highlights the potential efficacy of family influences on the postponement of adolescents' initiation of sexual activity (Moore et al., 1986).

Research conducted by (Longmore, Manning, & Giordano, 2001) examined the effect of parenting strategies such as support, coercive control, and monitoring on the eventual initiation of sexual intercourse. The authors found that children who are monitored by their parents delay

onset of sexual activity. Conversely, parental support and coercive control did not influence the timing of sexual initiation (Longmore et al., 2001).

Another study concluded that family structure, parent sexual behavior, and modeling of peers were closely associated with adolescent sexual attitudes and behaviors (Rucibwa, Modeste, Montgomery, & Fox, 2003). Teens whose parents have permissive attitudes about sex and who have friends who are sexually active are more likely to have sexual intercourse. Other research supports the association of parental supervision with a reduction in adolescent sexual activity (Velez-Pastrana, Gonzalez-Rodriguez, & Borges-Hernandez, 2005).

Noting they are a relatively new area of inquiry, researchers studying health risk behaviors among Hispanic youth have begun to identify youth development strategies as potentially effective ways to reduce adolescent health risk behaviors (Rodriguez & Morrobel, 2004). Along with a call for incorporating research-based youth development strategies as part of overall prevention efforts, both researchers and practitioners have begun to focus on the need for a greater understanding of how those strategies might be protective in influencing sexual and reproductive health and behavior of Latino youth (Driscoll et al., 2001).

When trying to improve health outcomes among youth, research suggests that focusing solely on "fixing problems" is no longer enough. A range of positive services, supports, and opportunities that help young people build specific capabilities, competencies, skills, and positive qualities need to be at the core of prevention and development strategies (Pittman, Irby, Tolman, Yohalem, & Feber, 2003). These positive youth development strategies reflect a shift in recent years from a traditional, deficit-based approach focused primarily on the problem behavior, to an approach based on the belief that all young people have strengths to be nurtured and that young people can become contributing participants in their families and communities (Leffert et al., 1998).

Numerous studies suggest that prevention efforts to reduce sexual risk-taking among youth may be strengthened by incorporating youth development strategies to increase protective factors, or youth assets, which appear to help insulate young people from engaging in harmful behaviors (Benard, 1990; Bogenschneider, 1996; Jessor, 1991; Kirby et al., 1994; McKnight, 1997; Scales, 1990). An extensive review of 19 youth development programs (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 1998) reported significant improvements in positive youth behaviors such as interpersonal skills, quality of adult and peer relationships, self-control, problem solving, cognitive competencies, self-efficacy, commitment to schooling, and academic achievement.

Studies have found that youth with these assets are less likely to participate in risk behaviors. For example, studies have shown that teens that are performing well in school and who have career plan are less likely to become pregnant and that teens in families with high levels of cohesion or parental monitoring are less likely to engage in sexual risk behavior (Beal, Ausiello, & Perrin, 2001; DiIorio, Kelley, & Hockenberry-Eaton, 1999; Kirby, 2001; Resnick et al., 1997; Scales & Leffert, 1999) Another study, involving the entire population of the present study, found that specific youth assets (i.e., Non-Parental Adult Role Models, Peer Role Models, Use of Time (religion) and Aspirations for the Future) were each independently and significantly related to youth never having had participated in sexual intercourse (Vesely et al., 2004).

Despite the high rates of sexual activity, pregnancy, and births among Hispanic youth, a search of the literature found little research that focused on specific factors, or youth assets, that may protect Hispanic/Latino youth from participating in sexual risk behaviors. This study is among the first to investigate potential associations between youth assets and sexual intercourse

among Hispanic youth. The findings from this study will inform program and policy development efforts that seek to reach Hispanic teens with effective, culturally appropriate teen pregnancy prevention strategies that incorporate a strength-based, youth development approach.

Methods

Data were collected for a larger study conducted through the *HEART of OKC* (Healthy, Empowered And Responsible Teens of Oklahoma City), a community-based project funded by the Centers for Disease Control and Prevention (CDC) as part of a national teen pregnancy prevention initiative. The primary objective of the project was to promote teen pregnancy prevention from a perspective of blending risk-reduction with youth development strategies. The approach focused on building youth assets while simultaneously working to reduce sexual risk-taking and related adolescent health risk behaviors, instead of addressing teen pregnancy as a single, isolated, free-standing issue.

One parent and one adolescent (N = 1350 youth/parent pairs) from randomly selected households in inner-city areas of two Oklahoma cities participated in interviews that were conducted in the respondents' homes using a computer-assisted data entry system (Oman, McLeroy, et al., 2002a). The adolescent and parent were interviewed at the same time, but in different rooms of the residence. The teenager self-administered the risk behavior questionnaire by listening to tape recorded items with headphones and then entering responses into the computer. Findings reported in this article reflect the interviews of 232 Hispanic youth, equally divided between males and females. The response rate was 51%, which included all youth who refused to participate in the study plus a percentage (8%) of the households for which study staff were never able to determine if a youth lived in the household.

Measures
Demographic, asset and sexual activity data were collected from adolescent respondents. Household income, family structure, and parent education data were collected from parent respondents.

Youth assets
Specific youth assets were the independent variables in this study. Focus groups and needs assessment data were used to determine the key assets. A literature search was conducted to identify appropriate items for asset measurement. Items with established reliability and validity from previously published research were used when possible. Items were created and pre-tested if appropriate items were not available in the literature.

Nine youth assets (shown in Table 2) were identified and measures developed for each following a lengthy period of focus group and pilot testing. Factor analyses and reliability testing determined items included in the final asset scales (Oman, Vesely, et al., 2002b). Cronbach's alpha for the asset constructs ranged from .61 to .81.

The nine assets (listed with the number of items representing each asset, Cronbach's alpha, and an example item) are:
- *Non-Parental Adult Role Models* (seven items, .74, "You know adults that encourage you often.");
- *Peer Role Models* (six items, .81, "Are most of your friends responsible?"); *Family Communication* (four items, .61, "How often do you talk to an adult in your household about your problems?");

- *Use of Time (groups/sports)* (four items, .71, "You participate in an organized activity after class.");

- *Use of Time (religion)* (two items, .71, "How often do you participate in church or religious activities?");

- *Community Involvement* (six items, .78, "You work to make your community a better place.");

- *Aspirations for the Future* (two items, .67, "As you look to your future, how important is it to you that you stay in school?");

- *Responsible Choices* (six items, .69, "You can say no to activities that you think are wrong."); and

- *Good Health Practices (exercise and nutrition)* (one item, "You take good care of your body by eating well and exercising."). Good Health Practices (exercise and nutrition) was measured with a single item because no two items loaded for this scale in the factor analyses.

Assets were reported as present (1) or absent (0) on the basis of youth mean responses to the items included in the asset scale. Items comprising each scale were generally scored from 1 to 4 (4 being the most positive response) and youth were said to have the asset if their mean score was 3 or higher. This indicated that the youth generally answered the asset questions by responding "usually or almost always," "very important or extremely important," and/or "agree or strongly agree." (Oman, Vesely, et al., 2002b). A full description of the development and construction of the assets is published elsewhere (Oman, Vesely, et al., 2002b).

Sexual Activity
Sexual activity was assessed with the item. "Have you ever had sexual intercourse ('done it', 'had sex', 'made love', 'gone all the way')?" Youth responded either "yes" (coded 0) or "no" (coded 1) to the item. The item is provided and recommended by the authors of the Prevention Minimum Evaluation Data Set (Brindis, Peterson, Card, & Eisen, 1998).

Statistical Analysis
Of 1350 youth in the primary study, 255 (19%) youth reported their race/ethnicity as Hispanic or Latino. Our analysis had a sample size of 232 after excluding 23 youth due to missing data (12 parental income, 9 sexual intercourse questions, 2 missing both). All statistical analyses were performed with SPSS for Windows, Release 10.0 (SPSS, 1999). An alpha of 0.05 was used to determine statistical significance. Bivariate associations between the dichotomous risk factor and the demographic variables were assessed using a chi-square test. The unadjusted odds ratios (OR) between each asset and the absence of the risk factor (i.e., never had sexual intercourse) were calculated using logistic regression. Individual multiple logistic regression analyses were performed to examine the relationship between the absence of the risk factor and each asset while adjusting for the possible confounders of age, gender, and family structure.

Potential interactions between each asset and age, gender, and family structure were assessed in each logistic regression. In order to decrease the risk of Type I error, the alpha level was set at 0.01 to evaluate the interactions. We also conducted multiple logistic regression to determine if the assets were significantly associated with the absence of the risk factor in the presence of other assets. Age, gender, and family structure, since they were potential confounders, were controlled for, and all assets that maintained a p-value ≤ 0.05 were included in the final model. Interactions between the assets and the demographic variables were

assessed using a p-value of ≤ 0.01 and an interaction term was added to the final model when appropriate.

Results

Descriptive Data

The mean age of the Hispanic youth sample was 15.4 ($\pm$1.7) years; 50% of the sample was female. Approximately 58% of the youth lived in two-parent households and 84% lived in households with reported income levels of less than $35,000. For 40% of the youth, neither parent had graduated from high school. Of the 232 youth in the study, 149 youth (64%) reported never having had sexual intercourse. More females (69%) than males (60%) reported that they never had sexual intercourse. Other descriptive data are reported in Table 1.

Table 1
Frequencies and Chi-Square Values for Youth and Parent Demographics
And Never had Sexual Intercourse for Hispanics and Latinos (n=232)

		No.	% Never Had Sexual Intercourse	P-Value[a]
Youth Age				<0.001
13-14		8	87.7[1]	
15-17		120	56.7	
18-19		31	32.3	
Youth Gender				0.159
Female		115	68.7	
Male		117	59.8	
Parent Income				0.960
< 20K		96	64.6	
20 – 35K		99	64.6	
> 35K		37	62.2	
Family Structure				0.080
2 Parent household		135	68.9	
1 Parent household		97	57.7	
Parent Education				0.780
< High School, both parents		93	66.7	
1 parent had high school, GED or some college		127	62.2	
At least one parent had bachelor's degree or higher		12	66.7	

[a] Chi-square test of independence   [1] Significant trend (p<0.05)

The only significant difference in demographic variables was noted for age. As the youth age increased, the proportion reporting never having had sexual intercourse decreased significantly, from 88% for young teens, ages 13-14, to 57% for middle teens, ages 15-17, dropping to 32% for older youth, ages 18-19. There was no significant difference related to gender, family structure, parental education, or parental income for this outcome.

Youth Assets

Proportions of Hispanic youth with each of nine assets are presented in Table 2. The least prevalent asset was Community Involvement, which 9% of the youth reported, followed by Use of Time (groups/sports) reported by 26% of the youth. The most prevalent asset was

Responsible Choices, which 85% of the youth reported, followed by Aspirations for the Future, which was reported by 83% of the youth.

Table 2
Percent of Youth with Each of the Nine Assets

Asset	N	% who have asset
Non-Parental Adult Role Model	205	69.3
Peer Role Models	230	47.4
Family Communication	232	53.4
Use of Time (Groups/Sports)	230	26.1
Use of Time (Religion)	232	46.1
Good Health Practices (Exercise/Nutrition)	231	67.5
Community Involvement	231	8.7
Future Aspirations	205	83.4
Responsible Choices	232	84.5

Assets and Youth Sexual Risk Behaviors

As shown in Table 3, the odds of never having had sexual intercourse was over three times higher for Hispanic youth with the Peer Role Models asset as compared to Hispanic youth without this asset (odds ratio (OR)=3.17). This association was also observed for youth with the Responsible Choices asset (OR=3.19). For Hispanic youth with the Use of Time (Religion) asset, the odds of never having had sexual intercourse were over five and one-half times higher compared to Hispanic youth without that asset.

Table 3
Youth Assets on Adolescent Never Had Sexual Intercourse
Unadjusted and Adjusted Odds Ratios (OR) with 95% Confidence Intervals (CI)
from Individual Multiple Logistic Regression Models

Youth Asset		Unadjusted		Adjusted[a]	
	N	OR	95% CI	OR	95% CI
Non-Parental Adult Role Model	205	1.57	(0.84, 2.94)	1.78	(0.89, 3.56)
Peer Role Models	230	2.99*	(1.69, 5.30)	3.17*	(1.67, 6.02)
Family Communication	232	1.29	(0.75, 2.21)	1.16	(0.64, 2.11)
Use of Time (Groups/Sports)	230	1.30	(0.70, 2.44)	1.25	(0.63, 2.49)
Use of Time (Religion)	232	4.42*	(2.43, 8.05)	5.61*	(2.80, 11.27)
Good Health Practices (Exercise/Nutrition)	231	1.00	(0.57, 1.78)	0.94	(0.49, 1.82)
Community Involvement	231	1.76	(0.62, 5.03)	2.14	(0.64, 7.08)
Future Aspirations	205	1.25	(0.58, 2.71)	1.46	(0.62, 3.42)
Responsible Choices	232	2.02	(0.98, 4.13)	3.19*	(1.40, 7.28)

[a] Adjusted for youth age and gender, and family structure
* $P \leq 0.05$

Table 4 shows the final logistic regression model that includes all significant assets. The Peer Role Models and Use of Time (Religion) assets were both significant in the model after controlling for demographic variables. For example, the odds of never having had sex are over five times greater for youth who report having the Use of Time (religion) asset as compared

with a youth without the asset after taking into account the demographic variables and the Peer Role Models asset. This result suggests that the Peer Role Models and Use of Time (religion) assets are each independently related to never having had sexual intercourse.

Table 4
Adjusted Odds Ratios (OR) with 95% Confidence Intervals (CI) from Multiple Logistic Regression Model for Hispanic Youth on Adolescent Never Had Sexual Intercourse

		Adjusted[a]	
	N	OR	95% CI
	230		
Peer Role Models		2.61*	(1.33, 5.14)
Use of Time (Religion)		5.24*	(2.55, 10.78)
Likelihood ratio test[b] X^2=36.308, df=2, p<0.0001			
Hosmer and Lemeshow Goodness-of-Fit Test X^2=3.463, df=8, p=0.902			

[a] Adjusted for youth age and race, family structure, and other variables in the model
[b] Comparing the model with demographic variables only to model with demographic variables and assets
* P ≤ .05

Discussion

This study is among the first to examine associations between specific youth assets and sexual intercourse in Hispanic youth. The results indicated that the odds of never having had sexual intercourse were at least three times higher for Hispanic youth with the Peer Role Models, Use of Time (religion), or Responsible Choices assets, compared to Hispanic youth without any one of these assets. The final analytic model indicated that the Peer Role Models and Use of Time (religion) assets were each independently related to never having had sexual intercourse but the influence of the Responsible Choices asset was diminished to being nonsignificant.

The relationships between each asset (i.e., Use of Time (religion), Responsible Choices and Peer Role Models) and youth sexual behavior in the present analyses were similar to those for all races noted in a previous analysis of these data that included youth of all races (Vesely et al., 2004). For Hispanic youth, however, the effects were magnified in that odds ratios were larger for Hispanic youth compared to youth of all races for the Peer Role Models, Responsible Choices, and Use of Time (Religion) assets.   These analyses also found differences from the previous study. For example, some assets (i.e., Non-Parent Adult Role Models, Aspirations for the Future, Community Involvement, and Family Communication) were associated with abstinence for all race/ethnicity but not for Hispanic youth. However, since the point estimates in the odds ratios in the Hispanic samples are similar in magnitude to those found in the analyses of the combined race/ethnicity study, the smaller sample size may be the reason these assets were not statistically significant in the present study.

Peer Role Models
If these assets are protective from sexual activity for Hispanic youth, the mechanisms of action should be explored. For the Peer Role Model asset, evidence suggests that adolescents often influence each other positively, by either modeling behaviors or pressuring each other to behave in certain ways or adopt certain attitudes or goals. Decisions about initiation are strongly bound to social context, with peers playing an important role in creating a sense of normative behavior. Specific components of peer norms impact the process of sexual initiation in both positive and negative ways, with research suggesting that peer relationships perpetuate

adolescents' behaviors -- positive reinforcing positive and negative reinforcing negative (Kinsman, Romer, Furstenberg, & Schwarz, 1998; Moore & Zaff, 2002).

At all levels of peer context, the strongest and largely protective effects for girls are having low-risk friends, with a female's close group of friends having the most influence on sexual debut. Additionally for girls, how close a girl's friends are to their parents appeared as important as a girl's relationship with her own parents (Bearman & Bucker, 1999). As might be expected, having high-risk male friends increased pregnancy risk for girls (Bearman & Bucker, 1999). When factors of family structure, wealth, education and popularity were controlled, adolescents whose friendship network included mostly low-risk friends were half as likely to experience first intercourse as were adolescents whose close friend network was composed mostly of high-risk friends (Sieving, Eisenberg, Pettingell, & Skay, 2006).

Use of Time (Religion)
The findings related to the Use of Time (religion) asset are important as the influence of spirituality, religiosity, and involvement of religious activity is an area of growing interest, which has had limited research. Several studies involving different adolescent ages and developmental stages show that religion and/or involvement in religious activities appears to be a protective factor throughout the teen years (Catalano, Berlund, Ryan, Lonszak,& Hawkins, 2002; Holder et al., 2000; Nonnemaker, McNeely, & Blum 2003; Rostosky, Regenerus, & Wright, 2003). In a study of younger teens, ages 11-15, respondents who were not sexually active scored significantly higher than sexually active youth on the importance of religion in their lives and reported more connections to friends whom they considered to be religious or spiritual (Holder et al., 2000).

Responsible Choices
Teens say morals, values, and/or religious beliefs influence their decisions about sex more than parents, concerns about pregnancy and sexually transmitted diseases, friends, teacher and sexual educators, or the media (Kirby & Troccoli, 2003). A national survey of 15-19 year olds in 2002 indicated that males and females chose the same main reason why they had not yet had sexual intercourse, both citing it was "against religion or morals", 31.4% and 37.8% respectively (Abma, Martinez, Mosher, & Dawson, 2004).

Likewise, religiosity has been identified as one factor that appears to be associated with delaying sexual intercourse among males (Marsiglio, Vastine Ries, Sonenstein, Troccoli, & Whitehead, 2006). The lack of religious involvement was identified as part of a cluster of antecedents to teen pregnancy in a major research review of "reasons why" teens became sexually active. That study noted that both religiosity and an attachment to religious institutions were protective factors for some sexual behaviors, such as initiation of sex and number of sex partners (Kirby, 1999). In another study, key distal protective factors included church attendance (Jessor, Turbin, & Costa, 1998).

A summary of 50 studies found support for the idea that religiosity (variously defined) was associated with delayed sexual activity among some groups of teens (DaFoe Whitehead, Wilcox, & Scales Rostoskey, 2001). However, that report also noted the poor state of research in this area, limiting conclusions that could be drawn.

Potential Protective Asset
It is interesting to note that the prevalence of some assets was quite low in this sample of Hispanic youth, particularly, the Community Involvement asset, with only 9% reporting the presence of that asset. Research studies have begun to identify this asset, and programs that include extensive structured voluntary service in the community, as showing clear evidence

among the general teen population that they reduce pregnancy rates while youth are in the programs (Kirby, 2001). This emerging research may prove to be an important area for future study to determine its potential for strengthening programs that seek to reduce adolescent risk behaviors among Hispanic youth.

Limitations

There are limitations to this study. Youth may have provided inaccurate, socially acceptable responses to the risk behavior questions even though they were allowed to read the questions and enter their responses into a computer unobserved. This protocol may have reduced the number of socially acceptable responses. Also, the moderate response rate raises questions about the generalizability of the results.

Further research is necessary to determine if the results are due to sample size issues, social or cultural norms or to actual race/ethnicity differences. Studies with larger sample sizes and longitudinal study designs will greatly increase our understanding of the relationships among assets in Hispanic youth and sexual and related risk behaviors. When considering the applicability of these results to other settings, it is important to remember that teen birth rates vary among Hispanic subgroups based on the country of origin, generational status, and acculturation of the particular population. The majority of Hispanic residents in the area where this study was conducted are Mexican-Americans. Finally, the data analyzed in this study are cross-sectional. An asset/risk behavior causal relationship cannot be tested.

Conclusion

This study represents an initial effort to explore the relationship between youth assets and sexual intercourse among Hispanic/Latino youth. The study found three assets – Use of Time (religion), Peer Role Models, and Responsible Choices -- that appeared protective for sexual intercourse compared to the youth without these assets. Compared to the larger study of all racial groups, the relationships between these assets and sexual behavior were larger although fewer assets overall were related to sexual behavior in the Hispanic sample.

With Hispanics representing the highest teen birth rate of any racial or ethnic group, and given the projected population increase for Hispanic teens and large percentage of Hispanic youth living in poverty, there is an immediate need to identify and implement strategies that reduce sexual risk behaviors.

The findings of this study provide interesting and timely implications for informing program and policy development at the community, state, and national levels. The findings support the need to incorporate strategies for increasing specific youth assets as part of efforts to reduce adolescent sexual health risk behaviors among Hispanics. Additional research is needed to better understand the potential influence of these assets on sexual activity among Hispanic youth, that will result in more effective and culturally appropriate prevention programs tailored to the needs of and protective factors found in that population.

References

Abma, J.C., Martinez, G.M., Mosher, W.D., & Dawson, B.S. (2004). Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, 2002. *Vital Health Statistics, 23*(24), 2.

Beal, A.C., Ausiello, J., & Perrin, J.M. (2001). Social influences on health-risk behaviors among minority middle school students. *Journal of Adolescent Health, 28*(6), 474-480.

Bearman, P.S., & Bucker, H. (1999). *Power in numbers: Peer effects on adolescent girls' sexual debut and pregnancy.* Washington, DC: National Campaign to Prevent Teen Pregnancy.

Benard, B. (1990). Youth service: From youth as problems to youth as resources. *Prevention Forum, January*, 6-14.

Bogenschneider, K. (1996). An ecological risk/protective theory for building prevention programs, policies, and community capacity to support youth. *Family Relations, 45*, 127-138.

Brindis, C., Peterson, L.J., Card, J.J., & Eisen, M. (1998). *Prevention Minimum Evaluation Data Set (PMEDS): A minimum data set for evaluating programs aimed at preventing adolescent pregnancy and STD/AIDS*. Los Altos, CA: Sociometrics Corporation.

Catalano, R.F., Berglund, M.L., Ryan, J.A., Lonczak, H.S., & Hawkins, J.D. (1998). Positive youth development in the United States.   From http://aspe.hhs.gov/hsp/PositiveYouthDev99/

Centers for Disease Control and Prevention. (2001). *HIV/AIDS surveillance report* (No. 13(2)). Atlanta: Centers for Disease Control and Prevention.

DaFoe Whitehead, B., Wilcox, B., & Scales Rostoskey, S. (2001). *Keeping the faith: The role of religion and faith communities in preventing teen pregnancy*. Washington DC: National Campaign to Prevent Teen Pregnancy.

Day, J.C. (1996). *Population projections of the United States by age, sex, race, and Hispanic origin: 1995 to 2050*: U.S. Census Bureau.

DiIorio, C., Kelley, M., & Hockenberry-Eaton, M. (1999). Communication about sexual issues: Mothers, fathers, and friends. *Journal of Adolescent Health, 24*(3), 181-189.

Driscoll, A.K., Biggs, M., Brindis, C.D., & Yankah, E. (2001). Adolescent Latino reproductive health: A review of the literature. *Hispanic Journal of Behavioral Sciences,23(3),* 255-326.

Driscoll, A.K., Brindis, C.D., Biggs, A., & Valderrama, T. (2004). *Priorities, progress and promise: A chartbook on Latino adolescent reproductive health*. San Francisco, CA: University of California.

Hamilton, B.E., Martin, J.A., & Sutton, P.D. (2003). Births: Preliminary data for 2002, 51(11). *National Vital Statistics Reports*(April 1st, 2006).

Hamilton, B.E., Ventura, S.J., Martin, J.A., & Sutton, P.D. (2005). Preliminary births for 2004. Retrieved April 15th, 2006, from http://www.cdc.gov/nchs/products/pubs/pubd/hestats/prelim_births/prelim_births04.htm

Holder, D.W., Durant, R.H., Harris, T.L., Daniel, J.H., Obeidallah, D., & Goodman, E. (2000). The association between adolescent sexual spirituality and voluntary sexual activity. *Journal of Adolescent Health, 26*(4), 295-302.

Jessor, R.J. (1991). Risk behaviors in adolescence: A psychosocial framework for understanding and action. *Journal of Adolescent Health, 12*(8), 597-605.

Jessor, R.J., Turbin, M.S., & Costa, F.M. (1998). Protective factors in adolescent health behavior. *Journal of Personality and Social Psychology, 75*(3), 788-800.

Kinsman, S., Romer, D., Furstenberg, F.F., Jr., & Schwarz, D. (1998). Early sexual initiation: The role of peer norms. *Pediatrics, 105*(5), 1185-1192.

Kirby, D. (1999). *Looking for reasons why: The antecedents of adolescent sexual risk-taking, pregnancy, and childbearing*. Washington DC: National Campaign to Prevent Teen Pregnancy.

Kirby, D. (2001). *Emerging answers: Research findings on programs to reduce teen pregnancy.* Washington, DC: National Campaign to Prevent Teen Pregnancy.

Kirby, D., Short, L., Collins, J., Rugg, D., Kolbe, L., Howard, M., et al. (1994). School-based programs to reduce sexual risk behavior: A review of effectiveness. *Public Health Reports, 109*, 339-360.

Kirby, D., & Troccoli, K. (2003). *Progress pending: How to sustain and extend recent reductions in teen pregnancy rates*. Washington DC: National Campaign to Prevent Teen Pregnancy.

Leffert, N., Benson, P.L., Scales, P.C., Sharma, A.R., Drake, D.R., Blyth, D.A. (1998). Developmental assets: Measurement and prediction of risk behaviors among adolescents. *Applied Developmental Science, 2*(4), 209-230.

Longmore, M.A., Manning, W.D., & Giordano, P.C. (2001). Preadolescent parenting strategies and teens' dating and sexual initiation: A longitudinal analysis. *Journal of Marriage & the Family, 63*(2), 322-335.

Marsiglio, W., Vastine Ries, A., Sonenstein, F., Troccoli, K., & Whitehead, M. (2006). *It's a guy thing: Boys, young men, and teen pregnancy prevention*. Washington DC: National Campaign to Prevent Teen Pregnancy.

Martin, J.A., Hamilton, B.E., Sutton, P.D., Ventura, S.J., Menacker, F., & Munson, M.L. (2005). Births: Final data for 2003. *National Vital Statistics Reports, 54(2)* Retrieved April 1st, 2006.

McKnight, J.L. (1997). A 21st century map for healthy communities and families. *Families in Society, March/April*, 117-127.

Moore, K., Peterson, J., & Furstenberg, F. (1986). Parental attitudes and the occurrence of early sexual-activity. *Journal of Marriage and the Family, 48*(4), 777-782.

Moore, K., & Zaff, J.F. (2002). *Building a better teenager: A summary of "what works" in adolescent development*. Washington DC: Child Trends, Inc.

National Campaign to Prevent Teen Pregnancy. (2006). *Science says: Teens' sexual experience, 1995-2002*. Washington DC: National Campaign to Prevent Teen Pregnancy.

Oman, R.F., McLeroy, K., Vesely, S., Aspy, C.B., Smith, D.W., & Penn, D.A. (2002a). An adolescent age group approach to examining youth risk behaviors. *American Journal of Health Promotion, 16*(3), 167-176.

Oman, R.F., Vesely, S.K., McLeroy, K.R., Harris-Wyatt, V., Aspy, C.B., Rodine, S., et al. (2002b). Reliability and validity of the Youth Asset Survey (YAS). *Journal of Adolescent Health, 31*(3), 247-255.

Pittman, K., Irby, M., Tolman, J., Yohalem, N., & Ferber, T. (2003). *Preventing problems, promoting development, encouraging engagement: Competing priorities or inseparable goals?* Washington DC: The Forum for Youth Investment: Impact Strategies, Inc.

Resnick, M.D., Bearman, P.S., Blum, R.W., Bauman, K.E., Harris, K.M., Jones, J., et al. (1997). Protecting adolescents from harm: Findings from the National Longitudinal Study on Adolescent Health. *Journal of the American Medical Association, 278*(10), 823-832.

Rodriguez, M., & Morrobel, D. (2004). A review of Latino youth development research and a call for an asset orientation. *Hispanic Journal of Behavioral Sciences 26*(2), 107-127.

Rucibwa, N.K., Modeste, N., Montgomery, S., & Fox, C.A. (2003). Exploring family factors and sexual behaviors in a group of Black and Hispanic adolescent males. *American Journal of Health Behavior, 27*(1), 63-74.

Ryan, S., Franzetta, K., & Manlove, J. (2005). Hispanic teen pregnancy and birth rates: Looking behind the numbers. *Child Trends Research Brief* Retrieved November 2005, from http://www.childtrends.org/Files/HispanicRB.pdf

Scales, C.P., & Leffert, N. (1999). *Developmental assets: A synthesis of the scientific research on adolescent development*. Minneapolis, MN: Search Institute.

Scales, P.C. (1990). Developing capable young people: An alternative strategy for prevention programs. *Journal of Early Adolescence, 10*, 420-438.

Sieving, R.E., Eisenberg, M.E., Pettingell, S., & Skay, C. (2006). Friends' influence on adolescents' first sexual intercourse. *Perspectives on Sexual & Reproductive Health, 38*(1), 13-19.

SPSS. (1999). *SPSS Base 10.0 Applications Guide*. Chicago, IL: SPSS.

U. S. Census Bureau. (2001). Population by sex, age, Hispanic origin, and race: March 2000. Retrieved March 31st, 2006, from www.census.gov/population/socdemo/hispanic/p20-535/tab01-3.txt

U. S. Census Bureau. (2002). Statistical abstract of the United States. Retrieved March 31st, 2006, from http://www.census.gov/statab/www/

U.S. Census Bureau. (2004). U.S. interim projections by age, sex, race, and Hispanic origin. Retrieved December 7, 2004, from http://www.census.gov/ipc/www/usinterimproj/

Velez-Pastrana, M.C., Gonzalez-Rodriguez, R.A., & Borges-Hernandez, A. (2005). Family functioning and early onset of sexual intercourse in Latino adolescents. *Adolescence, 40*(160), 777-791.

Vesely, S., Wyatt, V.H., Oman, R.F., Aspy, C.B., Kegler, M., Rodine, S., et al. (2004). The potential protective effects of youth assets from adolescent sexual risk behaviors. *Journal of Adolescent Health, 34*, 356-365.

A Case of a Partnership Academy Small Learning Community Model on Student Outcomes

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A Case of a Partnership Academy Small Learning Community Model on Student Outcomes

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Abstract: Many students are experiencing disconnect from their large, seemingly impersonal high schools. This case study research explored a post-high school class cohort's perceptions of an academy environment. The study examined the nature of its connection to academic, behavioral and post-secondary effects by utilizing a treatment group of academy students and a comparison group of non-academy students. The study found that students within academies experienced a greater sense of high school community than non-academy students. Differences were also found in post-secondary endeavors including greater participation by academy students in college, the workforce and career/technical areas.

Introduction

United States educators have assumed the role of not only educating their charges, but also providing social support networks for them as well. Amidst political and societal pressures, U.S. secondary school administrators, teachers and support staff have strived to come to terms with their responsibility to provide an educational environment that connects students to school while addressing the call for heightened achievement levels.

Disconnected young adults are those who are neither in school nor the workplace. Over 700,000 young people fit that description, which equates to a 19% rise from 1999 through 2002 (Whitlock, 2003). Prospects for young adults who have not connected to school or their community are jeopardized as they transition into adulthood. A disturbing trend surfaced in 2002 when it was discovered that 15% of U.S. 18 to 24 year olds were disconnected (Whitlock, 2003).

A sense of community contributes to a successfully functioning society and can potentially play a role in ameliorating school dropout rates. Researchers (Bryk & Driscoll, 1988; Hill, Foster & Gendler, 1990) found schools act as their own segments of society and function as communities that contribute to school outcomes. As the diverse needs of students increase, the importance of community and the connectedness that stems from it also grows. Jones (2006) found that the most positive youth-adult relationship experiences were those with supportive adults willing to share power with youth, those instituting youth-led endeavors where young people were allowed to demonstrate high levels of involvement and responsibility, and those involving participants who had previously worked as a community partner.

School connectedness can be defined as the degree to which a student experiences a sense of caring and closeness to teachers and the overall school environment (Bonny, 2000). This connectedness has effects on student academic achievement as it builds relationships between the learner and the members of the institution. Most important amongst these relationships are those forged between students and teachers. Croninger and Lee (2001) found that although other members of the school community are significant, the teacher-student relationship provides special support. This is particularly true of students who come from socially disadvantaged backgrounds (Croninger & Lee, 2001).

High School dropouts often report not having a strong interest or sense of belonging in school. When asked why they left, one third cited not liking school as well as poor relationships with teachers. Both factors demonstrate features of connectedness. Weak connectedness was also associated with increased health risk that contributes to students' inability to focus on learning (Bonny, 2000). Blum (2005) found seven characteristics that reflected students' connectedness to school:

- Having a sense of belonging and being part of a school
- Liking school
- Perceiving that teachers are supportive and caring
- Having good friends within school
- Being engaged in their own and future academic progress
- Believing that discipline is fair and effective
- Participating in extracurricular activities

Through analysis of the National Longitudinal Study of Adolescent Health (Harris, 2003) Blum and Rhinehart (1997) associated school level characteristics that influenced school connectedness. In a related study, researchers found that school connectedness was a powerful protective factor. Students who felt connected were less likely to use alcohol and illegal drugs, to engage in violent or deviant behavior, to become pregnant or to experience emotional distress (Blum, 2002). A recent study upheld data demonstrating that youth engagement in service to others and their community plays a role in reducing high risk behaviors (Rodine, et al, 2006).

National research of 254 public secondary schools showed that school factors such as communal school organization and student bonding were predictive of school behaviors. Greater communal organization and student bonding led to less delinquency and victimization (Payne, Gottfredson & Gottfredson, 2003).

In school communities where students feel safe from harm and humiliation they experience greater attachment and commitment. Parsons (2004) suggested that when students feel safe,

they are more likely to take risks because they have the security to succeed and feel supported as they put out their best efforts.

Educational administrators are increasingly aware of harmful effects of large schools on low SES students (Howley, 2000). As a result, innovators have sought new school structures to combat the well-documented influences of large schools. Welburn (1999) has argued that an *academy model* seems to be the most feasible way to downsize schools and have become one of the fastest growing school reforms. Lynch (2000a) agreed in his examination of the principles of school improvement when he cited academies in his list of top high school reforms.

Rubin (2002) found that career academies increased the probability that students would attend post-secondary education, improved academic achievement levels, decreased the need for remediation in English at the university, and increased the probability of graduating.

The academy model levels the playing field for all students. Conchas and Clark (2002) illustrated that particularly for low-income minority students, the academy promoted optimism. Increased investments in career-related experiences through academy participation during high school were also found to improve post-secondary labor market prospects (Kemple, Snipes & Clayton, 2004).

Theoretical Base/Conceptual Framework

The study's theoretical framework comes from the seminal work of sociologists and community theorists. Ferdinand Tonnies (1887) defined community as not only one of kinship and place, but also, as a community of the mind. Community also occurs amongst individuals brought together by common interests, goals and values and this shared conception of being, creates belongingness and purpose (Craig, Harris & Weiner, 2002). Society differs, as it is a group of individuals motivated through self-promotion and completion of rational tasks and tangible goals of the social organization (Tonnies, 1887). A community model within a school can be viewed as an amorphous presence that is flexible to the needs of its constituents.

Talcott Parsons (1951) enacted measurements of social relationships by describing their types. He utilized five variable pairs placed on a continuum to assess social relationships. These five dimensions included: affective - affective neutrality; collective orientation - self-orientation; particularism - universalism; ascription - achievement; and diffuseness - specificity (Parsons, 1951). Sergiovanni (1994), utilizing Parson's continuum approach, added two more sets of variables. These included substantive - instrumental and altruism – egocentrism. Four dimensions were selected from Parsons (1951) and Sergiovanni's (1994) work as a part of this study. Each dimension was included as a construct for this study's survey instrument because each was determined to be of import to school community concepts.

Community is essential to a school. As Sergiovanni (2000) put it: "as community wanes in a school, feelings of belonging, of being a part of something important, of having a common purpose, are weakened, and parents, teachers, and students experience a lack of connectedness, disorientation, and isolation" (p. 15). "Community is the tie that binds students and teachers together in special ways. Community can help teachers and students be transformed from a collection of 'I's' to a collective 'we', thus providing them with a sense of identity, belonging and place" (Sergiovanni, p. xiii).

Although Sergiovanni (1994) asserted that relationships between all school stakeholders are integral to develop a comprehensive profile of a school community, this study undertakes to

review student perceptions of relationships between themselves and school staff. It is the manifestation of community within an academy that the authors seek to assess.

Purpose

The purpose of the case study was to describe the differences for students as they participated in one school's career academy programs. The study sought to describe the effects on student achievement of participation in a small learning community environment. By examining academy students and non-academy participants, a description of the impact of the intervention could be developed. The study was also designed to observe the impact of community on students within academy settings. A survey was used to measure and compare student perceptions of their learning community in relationship to two community dimensions articulated by Parsons (1951) and two other dimensions delineated by Sergiovanni (1994).

Context of the Study

To determine the influence of the small learning community model on student outcomes, a case study approach was utilized. The study focused on one racially and culturally diverse high school that houses two academies and shall be known for the purpose of this study as North High School (NHS). The two academies were named Academy A (agriculture) and B (business). Each academy closely adhered to the model of a common set of teachers delivering a core academic curriculum with a career and technical education focus in the two aforementioned fields. In addition each program followed similar student recruitment and screening processes to form their small learning community. The academies also had the third commonality of partnerships with employers.

NHS is a large high school currently comprised of 2,355 students. The researchers used archival data to follow students from their ninth grade forward. Academy participation begins in the 10th grade year. The examination yielded differences in holding power amongst groups (Table 1).

Table 1
Holding Power of NHS Class of 2004

	9th	10th	11th	12th
Total Students	655	553	407	310
Non Academy students	655	429	290	212
Academy A	N/A	64	59	44
Academy B	N/A	60	58	54

Methodology

Design of Study

The researchers used the positivist approach to this descriptive case study. This approach was determined appropriate to explore this situation because the intervention had no single set of outcomes (Yin, 2003). Further, Yin has argued the case study technique is often used to understand complex social phenomena. In this case, the complex social phenomena were student participation in a partnership academy, small learning community and the influences this had on school and non-school outcomes. Yin (1994) has stressed that is incumbent on researchers to make case study data conducive to statistical analysis by coding events into numerical form. In this study, two numerically based data sources were used: (1) district archival data for three years and (2) a mail survey.

Population

This study's population was originally 553 tenth grade students registered at NHS in 2001-2002. At the time of the study, three years later, the contactable student population numbered 486. These students were aged 18 years or more. One hundred twenty were academy students and 366 were non-academy students.

The response rate from the 486 surveys successfully mailed was 46.5% or 226 individuals. One hundred forty-six were non-academy students and 80 were from the two academies. Fifty of these were Academy A and 30 were Academy B. The 226 survey respondents consisted of 109 males and 117 females. The mean age of respondents was 18.20 years (SD = .45) with an age range of 18 to 20.

Archival Data

Quantitative data consisted of assessment of individual student outcomes. To ascertain these outcomes, archival transcript data were analyzed for the class of 2004 for the following years: (a) 2001-2002, (b) 2002-2003, and (c) 2003-2004.

Survey

A survey was developed based on previous research studies on the relationship of community to learning (DiBartolomeo, 1998) and graduate follow-up models (Kemple, et al., 2004). The instrument consisted of three parts:

(1) demographic information,

(2) post-high school endeavors, and

(3) student perceptions of their learning community as it compared to two dimensions of community articulated by Parsons (1951) and two community dimensions as delineated by Sergiovanni (1994).

The face validity and usability of the instrument were ascertained via a field test with twenty-three students who had graduated.

A Cronbach's alpha was performed to assess the survey's internal consistency. This study's questionnaire had four theoretical constructs. These constructs came from the aforementioned work of Parsons and Sergiovanni and were found to be very robust:

- .8635 for Affective to Neutral Affective;
- .8320 for Ascription to Achievement;
- .8771 for Substantive to Instrumental; and
- .7583 for Altruism to Egocentrism.

In addition to the numerical data gathered via the survey, there was one open-ended question. The purpose of this qualitative question was to provide an opportunity for participants to provide additional comments.

Data Analysis

Archival data and survey data were analyzed and frequency counts, percentages, Chi Squares, t-tests, means and standard deviations were used to describe data. Findings from statistical tests were used as a decision rule for declaring differences. As this study was a census, statistical tests assisted in decision making and examining in detail, not for inferential purposes.

For the first two research questions, decision criteria were used to determine findings to report. Although small differences existed in many of the archival data categories, a "big picture" approach was determined appropriate to report findings of most import. A range of percentage differences from 1.2% through 20.6% was addressed in the findings. A threshold of differences greater than 3% was set as an analytical tool for the majority of findings. One below the threshold finding of 1.2% disconnected students was also included as it was deemed of interest to note to the premise of the study.

Limitations of the Study

There are two important limitations to this study. First as with most case studies, the present study's findings cannot be generalized to the population at large. Borrowing from the qualitative research paradigm, however, the authors argue particulars described in this case are transferable to other school-based settings that are considering or using small learning communities.

A second limitation is the fact that a causal relationship between participation in the academy and student outcomes cannot be discerned and applied. Although no cause and effect explanation was sought as a result of this study, the authors were aware of potential confounding variables including students being engaged in other school activities that can be likened to the academy model.

Results and Findings

Research Question One: Were differences noted for holding power and transiency rate for students involved in the academy programs?

Reviewing holding power, or the proportion of students retained 9-12 in a school, allowed examination of transiency and stability for academy and non-academy students. The academy population experienced a lower transiency rate and increased holding power (Table 2).

Table 2
Transiency and Stability of Study Population

	10th	11th	11th Grade Transiency	11th Grade Stability	12th	12th Grade Transiency	12th Grade Stability
Total Students	553	407	26.4%	73.6%	310	23.8%	76.2%
Non academy students	429	290	32.5%	67.5%	212	29.9%	73.1%
Academy A	64	59	7.9%	92.1%	44	25.4%	74.6%
Academy B	60	58	3.4%	96.6%	54	6.9%	93.1%

Due to the varying transiency rate of the two academies, further explorations were conducted. It was determined that Academy A was more representative of the total school population. Academy B differed more from the general school population in their ethnic makeup (Table 3). The most notable difference occurred within the Asian subgroup of the study population where Academy A had 10.4% fewer students of Asian descent and Academy B had 9.5% more students of Asian descent.

Table 3
Ethnicity of Study Population

Population	American Indian	Asian	Pacific Islander	Filipino	Hispanic	African American	White	Other
Non-academy	.5%	33.8%	3.1%	5.1%	17.7%	23%	15.7%	1.1%
Academy A	0%	23.4%	4.7%	4.9%	17.6%	23.4%	22.9%	3.1%
Academy B	0%	43.3%	5%	1.7%	16.7%	21.6%	11.7%	0%

Research Question Two: Were there differences in post-secondary endeavors for students involved in the academy programs? The impact of academies on students' post-high school endeavors was examined. Through an examination of previous studies (Kemple, et al., 2004; Linnehan, 1996) the areas of post-high school examination were determined.

An examination of status at graduation time was conducted (Table 4). Both the academy programs showed more students graduating at NHS than did the non-academy population. Academy A was again more similar to the non-academy population than Academy B in status at graduation.

Table 4
Status of Students at Graduation Time

Population	NHS Grad	Other Comp HS Grad	Alt HS Grad	Moved	Ongoing Educat.	Private School	Failure to graduate HS	Failure to graduate after transfer to Alt HS	Expelled
Non-academy	49.3%	1.9%	9.8%	9.6%	11.7%	.7%	11.9%	4.2%	.7%
Academy A	68.8%	1.6%	9.4%	4.6%	9.4%	3.1%	3.1%	0%	0%
Academy B	90%	3.3%	1.7%	3.3%	0%	0%	1.7%	0%	0%

Note. Grad = Graduates. Comp = Comprehensive. Alt = Alternative. Educat. = Education.

Descriptive statistics were used for this study to provide a heightened awareness of all cohort members. In addition, descriptive statistics were also used to present findings of the survey. To provide a clearer picture of the students in this study, the ethnicity of survey respondents is described in Table 5.

Table 5
Ethnicity of All Respondents

Ethnicity	# Respondents	Percent of Total
American Indian	1	.44
Asian	94	41.59
Pacific Islander	7	3.10
Filipino	12	5.31
Hispanic	35	15.49
African American	35	15.49
White	37	16.37
Other	5	2.21

The academy population demonstrated a higher enrollment in four-year universities at 35% compared to 26.7% for non-academy students (Figure 1). Further, academy participants partook of more part and full-time work experience opportunities. In addition, academy

students had slightly fewer individuals not working at 5% compared to non-academy students at 6.2%.

Figure 1
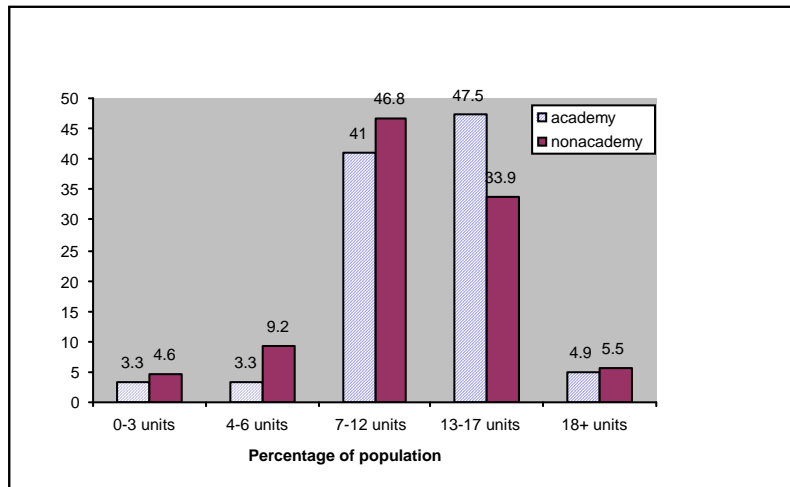
Students' post-secondary endeavors
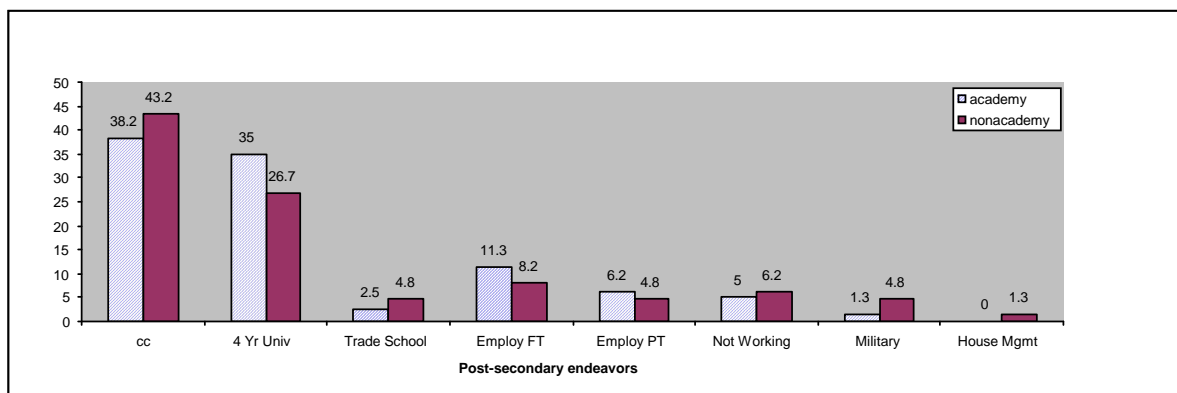
Collegiate Findings. Academy participants had fewer undeclared college majors (29.5%), than non-academy students (34.9%) (Figure 2). In the two academy specialization areas of agriculture and business, the academy population demonstrated more students with these as declared majors. Agriculture, as an academy student's major, was 8.2% and agriculture as a non-academy student's major was 0%. Business, as an academy student's college major, was 16.4%, while non-academy student majored at 11%. Academy students were not involved in trade preparation, but 4.6% of non-academy students were so engaged. A larger percentage of non-academy students reported majoring in both the life and physical sciences than academy students, while more academy students majored in English or Liberal Arts than non-academy students.

Figure 2
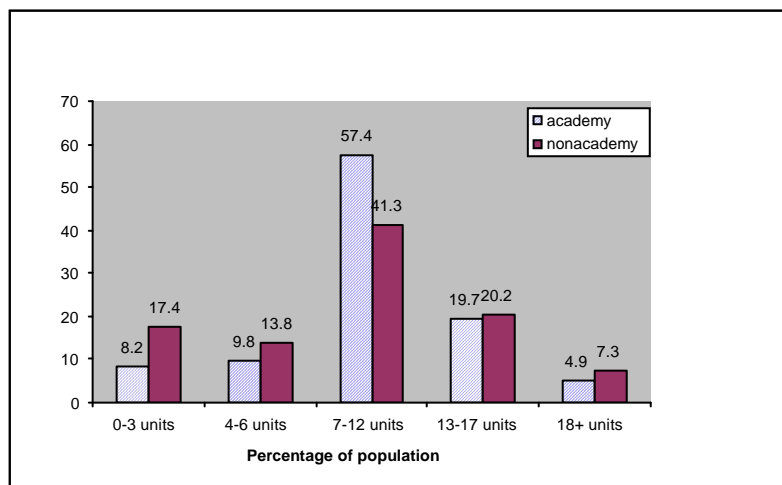
Students' college majors
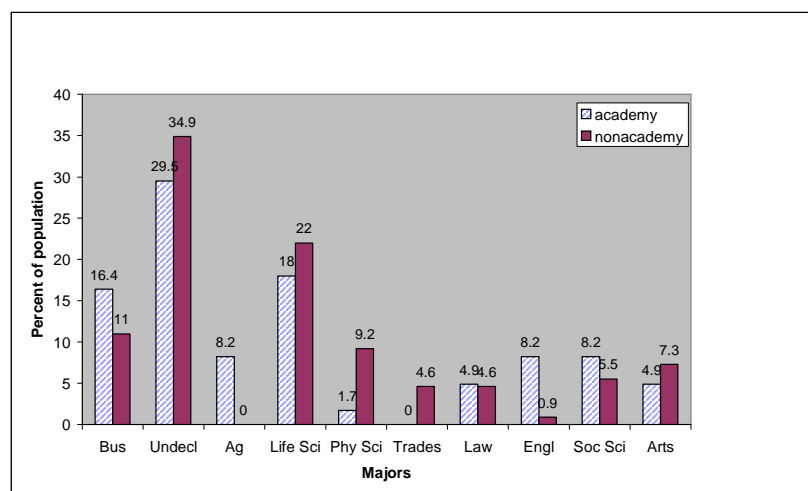
As shown in Figure 3, of those students currently attending college, a greater number of academy respondents (52.4%) reported that they were carrying full time unit loads of 13 or more units than non-academy respondents (39.4%).

Figure 3
Number of college semester units

Bar chart showing percentage of population by number of college semester units for academy and nonacademy groups:
- 0-3 units: academy 3.3, nonacademy 4.6
- 4-6 units: academy 3.3, nonacademy 9.2
- 7-12 units: academy 41, nonacademy 46.8
- 13-17 units: academy 47.5, nonacademy 33.9
- 18+ units: academy 4.9, nonacademy 5.5

Percentage of population

For units completed, the non-academy participants reported having completed 13 or more college units at a higher number than the academy population. This stood at 27.5% of the non-academy as compared to 24.6% of the academy population (Figure 4).
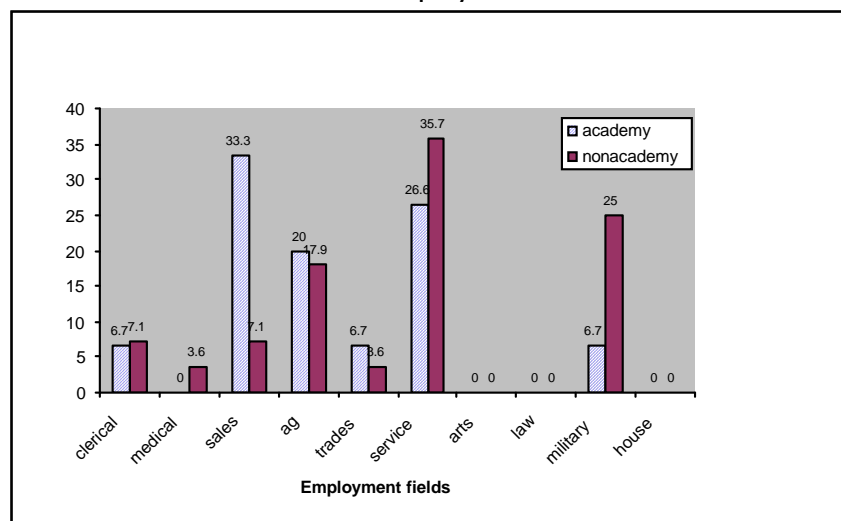
Figure 4
Number of units completed

Bar chart showing percentage of population by number of units completed for academy and nonacademy groups:
- 0-3 units: academy 8.2, nonacademy 17.4
- 4-6 units: academy 9.8, nonacademy 13.8
- 7-12 units: academy 57.4, nonacademy 41.3
- 13-17 units: academy 19.7, nonacademy 20.2
- 18+ units: academy 4.9, nonacademy 7.3

Percentage of population

Employment Findings. Utilizing the same self reported survey results, data was garnered on students' employment status and the groups differed in several ways. Non-academy participants reported 4.8% military service, compared to 1.3% of academy participants (Figure 1). When a subset of those who were working was examined, 25% of the non-academy population reported military service as opposed to 6.7% of the academy population (Figure 5). In addition, fewer academy participants (26.7%) were employed in service professions, than non-academy students (35.7%).

Agriculture and business academy graduates had higher incidences of employment in these fields than non-academy students. Agriculture employment by academy students stood at 20% while agriculture by non-academy students was 17.9%. Business employment for academy students stood at 40% and 14.2% for non-academy students. Career and technical education areas of employment were all higher for the academy students than the non-academy students. For example, the percentage of students involved in the trades for the academies was 6.7% compared to 3.6% for non-academy students (Figure 5).

**Figure 5**
Students' employment fields

In the realm of weekly hours engaged in work, academy respondents had greater full-time employment of 31-40 hours at 82.4% as compared to non-academy respondents at 61.8% (Figure 6).

Figure 6
Weekly hours of employment
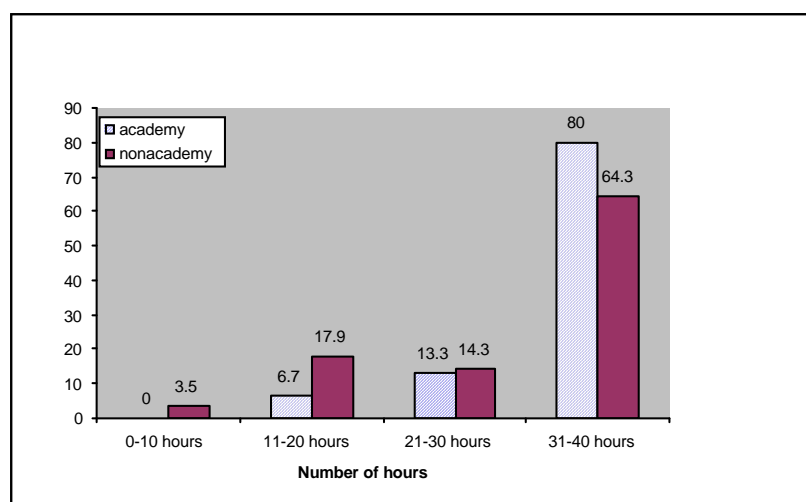
The academy population also had a greater range of salaries as well as a greater dollar amount earned (Figure 7). For academy students, 13.4% received more than $2,000. per month as compared to 0% of non-academy students.

Figure 7
Students' monthly salary
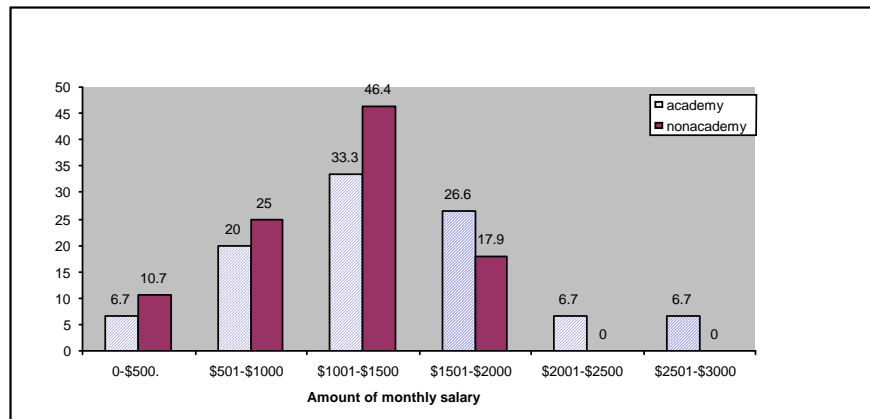
Research Question Three: Were there differing perceptions of school community for students involved in the academy programs? To determine students' perceptions of school community, mean scores for the four community perception constructs were tabulated. Academy participants had highest mean score (4.34) in the Ascription vs. Achievement construct. Similarly, non-academy participants showed the highest mean response in the Ascription vs. Achievement construct area at 3.68. The lowest mean scores for both groups with scores of 4.13 and 3.53 occurred in the Affective vs. Neutral Affective construct. Means score comparison of the two groups also revealed differences in standard deviations. The academy population demonstrated greater consistency throughout their responses as illustrated in lower standard deviations. The number of respondents remained consistent for all four constructs at 80 for academy students and 146 for non-academy students.

To determine if differences existed between the two groups, independent t-tests were conducted. Differences were found in all four constructs. Academy students had higher mean scores in each community perception construct.

Table 6
Comparison of Community Perception Means between Academy and Non-academy Participants

Constructs	Academy Mean (SD)	Non-academy Mean (SD)
Affective vs. Neutral Affective	4.13* (.67)	3.53 (.76)
Ascription vs. Achievement	4.34* (.64)	3.68 (.79)
Substantive vs. Instrumental	4.29* (.60)	3.65 (.76)
Altruism vs. Egocentrism	4.17* (.63)	3.54 (.76)

Note. 1 = not true, 2 = rarely true, 3 = sometimes true, 4 = usually true, 5 = very true.
*Independent samples *t*-tests found significant differences at the .05 level.

Analysis

Quantitative methodology was used in this study because it provided a means to examine three indicators of participation in an academy: (a) holding rates of students, (b) post-high school endeavors, and (c) relationships of students' perceptions of community dimensions. The case study format was utilized because it provided a basis for the initial theory of the phenomenon of academies. Although the case study approach can be criticized for its lack of representativeness and scientific rigor, it remains as a viable method for an in-depth investigation using different methods to collect various kinds of information and make observations (Hamel, 1993).

Results from this case study were used to inform educators on the nature of school community in relationship to the academy and student outcomes. This study approach provided a means to delve into one school's experience with the academy intervention method.

Academy students demonstrated greater holding power as evidenced by lower transiency rates and greater stability rates. NHS academies appear to foster community that subsequently connects students to school. The institution of academies within schools requires a strong commitment from all school stakeholder groups but the effort could propel the involved students as well as benefiting society.

In examining further the difference between the two studied academies it was noted that Academy A had fewer Asian students than the non-academy population. Academy B had more Asian students than the non-academy population as well as the greatest number of Pacific Islanders. This has implications for this study's outcomes because according to the U.S. Economics and Statistics Administration Bureau of the Census for the population 25 years and over, Asians and Pacific Islanders have the highest graduation rate from high school (87.4%) than any other group. In addition, Asians and Pacific Islanders also hold more Bachelor's Degrees (47.2%) than any other group (U.S. Census Bureau, 2003). Further, the annual median income of Asian and Pacific Islander households is the highest of any group at $57,313. (U.S. Census Bureau, 2002).

Academy students illustrated greater post-high school self-direction than their non-academy peers. They have more full and part time employment and higher earnings ratios than their non-academy peers. In addition, more academy students were engaged in higher education and fewer were being disconnected from both work and college. NHS academy participation appeared to help reverse the trend noted by Whitlock (2003) of greater numbers of 18-24 year olds being neither employed nor in college. Students' increased sense of community along with their post-secondary engagement suggest that students are able to form connections between high school and their future aspirations furthering their awareness of their potential.

The perception of school community was significantly greater for academy students than non-academy students. The greatest differences among means in the two groups occurred in the Ascription vs. Achievement construct. These results demonstrate that academy students felt a higher sense of unconditional positive regard around them from staff and peers. Providing opportunities for community within the school setting may be one of the few opportunities for students to experience positive normative influences of a group with norms that are often shared by the majority of society.

Implications for Practice

A major implication of this study is that fostering community among young people is of paramount import, particularly for students from low SES, large high schools. Connectivity must

be in place. Mechanisms to connect teachers, administrators and support staff to students provide a positive environment that can translate into positive post-secondary outcomes for these individuals. Implementing similar school designs to small learning communities is one step towards establishing connections for students. Encouraging students, through social support by their peers and school personnel, translates into one form of support for student learning and post-secondary outcomes. When this can be formalized through establishment of a small learning community, efforts are targeted towards creating supports for student successes.

Extending this study longitudinally to examine how and if the results are sustained into the future could be a fruitful area of future research. Ascertaining what skills are acquired through participation within these learning communities would also provide insights into the effectiveness of this reform mechanism. Other specific explorations could include examining the extent to which connectivity provided by these learning communities promote persistence towards future endeavors. By addressing these circumstances amongst others, school community efforts that connect students can be validated. This school initiative could provide the glue to connect students to school while propelling them towards success.

Small learning communities can potentially counteract some of the societal obstacles that preclude students from seeing the relationship between high school and their future lives. This case study contributes to the growing body of evidence, which shows positive impacts of the academy model of small learning communities on post-secondary outcomes. The study explores community from both the sociological and educational standpoints and endeavors to unite the community aspects of academies with post high school success indicators.

References

Blum, R. (2002). *The untapped power of schools to improve the health of teens*. Minneapolis: Center for Adolescent Health and Development.

Blum, R. (2005). *School connectedness: Improving the lives of students.* Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, 2005.

Blum, R., & Rhinehart, P. (1997). *Reducing the risk: Connections that make a difference in the lives of youth.* Minneapolis: Division of Adolescent Health: 12.

Bonny, A. (2000). School disconnectedness: Identifying adolescent risk. *Pediatrics, 106*(5), 4.

Bryk, A., & Driscoll, M. (1988). *The school as community: Theoretical foundations, contextual influences and consequences for teachers and students.* Madison, WI: National Center for Effective Secondary Schools**:** 19.

Conchas, G., & Clark, P. (2002). Career academies and urban minority schooling: Forging optimism despite limited opportunity. *Journal of Education for Students Placed at Risk, 7*(3), 287-311.

Craig, W., Harris, T., & Weiner, D. (2002). *Community participation and geographic information systems.* New York: Taylor and Francis.

Croninger, R., & Lee, V. (2001). Social capital and dropping out of high schools: Benefits to at-risk students of teachers' support and guidance. *Teachers College Record, 103*, 548-581.

DiBartolomeo, J. (1998). *Small learning communities and their relationship to school performance outcomes* (Doctoral Dissertation, Widener University, 1998).

Hamel, J. (1993). *Case study methods*. Newbury Park: Sage.

Harris, K.M., Florey, F., Tabor, J., Bearman, P.S., Jones, J., & Udry, J.R. (2003). The National Longitudinal Study of Adolescent Health: Research Design [WWW document]. URL: http://www.cpc.unc.edu/projects/addhealth/design.

Hill, P., Foster, G., & Gendler, T. (1990). *High schools with character.* Santa Monica, RAND**:** 110.

Jones, K.R. (2006). Relationships Matter: A mixed-methods evaluation of youth and adults working together as partners. *Journal of Youth Development, 1*(2), 1-11.

Kemple, J., Snipes, J., & Clayton, J. (2004). *Career academies impacts on labor market outcomes and educational attainment.* New York, MDRC, 45.

Linnehan, F. (1996). Measuring the effectiveness of a career academy program from an employer's perspective. *Educational Evaluation and Policy Analysis, 18*(1), 73-89.

Lynch, R.L. (2000a). High school career and technical education for the first decade of the 21st century. *Journal of Vocational Education Research* 25, 18.

Lynch, R.L. (2000b). New directions for high school career and technical education in the 21st century. (ERIC No. ED-99-CO-0013).

Parsons, A. (2004). Discovering students' knowledge through observation and community building. *Childhood Education,* 80(4), 2.

Parsons, T. (1951). *The social system.* New York: Free Press.

Payne, A., Gottfredson, D., & Gottfredson, G. (2003). Schools as communities: The relationships among communal school organization, student bonding and school disorder. *Criminology, 41*(3), 2.

Rodine, S., Oman, R., Vessely, S., Aspy, C., Tolma, E., Marshall, L., & Fluhr, J. (2006) Potential protective effect of the community involvement asset on adolescent risk behaviors. *Journal of Youth Development, 1*(1).

Rubin, V. (2002). *Career academy programs in California: Outcomes and implementation*. Berkeley, California Policy Research Center: 41.

Sergiovanni, T. (1994). *Building community in schools.* San Francisco, CA: Jossey-Bass.

Sergiovanni, T.J. (2000). *The lifeworld of leadership.* San Francisco, CA: Jossey-Bass.

Tonnies, F. (1957). *Gemeinschaft und Gesellschaft (Community and Society).* New York: American Book Company. (Original work published 1887)

U.S. Census Bureau. (2002). *Money income in the United States: 2001.* Annual demographic supplement to the current population survey. Washington DC: U.S. Government Printing Office.

U.S. Census Bureau. (2003). *Poverty, income see slight changes; child poverty rate unchanged.* Population survey's annual social and economic supplement. Washington DC: U.S. Government Printing Office.

Welburn, B. (1999). *Career academies.* Alexandria, National Association of State Boards of Education, 3.

Whitlock, J. (2003). *School and community connectedness.* Department of Human Development in the College of Human Ecology. Ithaca, Cornell**:** 110.

Yin, R.K. (1994). *Case study research: Design and methods.* Newbury Park: Sage.

Yin, R.K. (2003). *Case study research: Design and methods.* Thousand Oaks, CA: Sage.

Overnights Encourage Girls' Interest in Science-Related Careers

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Overnights Encourage Girls' Interest in Science-Related Careers

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Abstract: With sell-out crowds and phenomenal research results, Science Siesta and Advanced Science Siesta are programs designed to change the traditional perceptions that girls have about science and science-related careers. Through hands-on science activities (in and out of the lab), and through working with local female scientists, girls who range from fourth to eighth grade are provided valuable opportunities to combat the stereotype that "girls can't do science." This article addresses the need to engage girls in science and explains "how-to" meet that need through the Science Siesta programs.

Introduction

Though jobs requiring advanced degrees in science and math continue to flourish, women remain underrepresented in these careers (Bordogna, 2003). It is unfortunate to note that even though women make up about 50% of the United States workforce, they account for only about 21% of the nation's scientists and 11% of the engineers (Ride Urges, 2006). Experts agree that this is a complex problem with no easy answers. However, they do point to some steps that can be taken to promote science-related careers among girls. These steps include:

- Encouraging girls to become involved in enrichment or summer programs that focus on science;
- Using non-sexist language and examples when teaching science;
- Utilizing female scientists as role models for young girls; and
- Creating an environment where hands-on learning is encouraged. (Five Myths, 2007 and Why Girls, 2005)

It was in the spirit of these suggestions that a program called Science Siesta was initiated by University of Illinois Extension Youth Development professionals in Northwest Illinois during the spring of 2002. The goal of this program was to begin changing the traditional perceptions that girls have had about science-related careers by providing them with unique opportunities to

meet and interact with local female scientists; conduct fun, hands-on science activities in the lab; and participate in activities in stimulating science-centered environments.

Program Design

Reaching sell-out crowds annually, Science Siesta is now in its sixth year. The program targets girls in grades 4-6 and is a blend of "science" and "siesta". It is conducted by University of Illinois Extension Youth Development staff and is held at the Discovery Center Children's Museum and Burpee Museum of Natural History in Rockford, IL. A maximum of 160 girls can participate annually at the low rate of $30 each. The cost includes program supplies, museum admission, science activities, pizza, an evening snack, breakfast, and a t-shirt. Remaining expenses are covered by grants and donations secured as needed.

Participants engage in a total of 7 hours of programming. During that timeframe, participants meet local female scientists representative of fields such as forensics, medicine, engineering, chemistry, meteorology, plant science, vet science, and more. Participants then engage in 20-minute interactive workshops led by these scientists. After working with the scientists, participants are split into three groups where the girls complete hands-on lab activities that revolve around the work of a female scientist featured in University of Nebraska's "Wonderwise Women in Science Learning Series" curriculum. As the evening draws to a close, they enjoy free time to "play" among the host sites' exhibits.

When it is time for lights out, participants spread out their sleeping bags among the museum exhibits and sleep under the supervision of one of 16 high school and college-age counselors who have volunteered their time to assist with the leadership of the event.

Program Evaluation

Science Siesta is evaluated using a combination of instruments, including a pre-test, post-test, and evaluation. To date, the program has reached approximately 740 girls. Results from 2006 indicated that 96% of the girls who participated agreed Science Siesta had made them more aware of the variety of available science and math-related careers. Ninety-two percent credited Science Siesta with increasing their confidence in their abilities to do science. Eighty-nine percent agreed that the program had increased their interest in science and math-related careers.

Expansion of Program

Science Siesta expanded in 2006 to include a "graduate-level" opportunity for girls who had attended two or more times and were in the 7th or 8th grades. Dubbed Advanced Science Siesta, this program was the result of participant recommendations collected during a 2005 focus group study of multi-year participants.

Advanced Science Siesta was developed with the intent of taking the objectives of Science Siesta up a notch for past participants. The goal was to engage participants in more interactive field experiences that would encourage higher level thinking, application of knowledge of skills, and extended interest in science. Objectives included helping participants:

- Achieve a greater understanding of science careers;
- Develop science methodology skills; and
- Increase their life skills related to decision making, responsibility, using resources wisely, and developing marketable skills.

During its inaugural year, Advanced Science Siesta involved Science Siesta graduates in in-depth science activities at two sites in Dubuque, Iowa, one being at the National Mississippi

River Museum and the other being the E.B. Lyons Interpretive Center. Immediately after school on Friday evening, forty girls boarded a bus and traveled to the National Mississippi River Museum for the first leg of their overnight experience. At the museum, they unloaded their personal belongings onto the William H. Black, a retired dredge boat whose bunkroom was to serve as their sleeping accommodations. During the evening, Advanced Science Siesta participants enjoyed workshops led by museum staff that were focused on water conservation, soil erosion, and Mississippi mammals. They also experienced the multi-sensory video presentation of "Journey On The Mississippi."

The next morning, participants engaged in animal husbandry activities with museum staff as they prepared the many animal exhibits for the day. Participants also participated in a waterways erosion model activity, as well as learned about a variety of Mississippi River reptiles. In the afternoon, participants boarded the bus, and traveled to E.B. Lyons Interpretive Center for several hours of seining and testing the quality of the Mississippi backwaters, tagging monarch butterflies, and prairie study. Late in the afternoon, participants boarded the bus for the last time to begin their journey back home.

Advanced Science Siesta participants paid a $40 registration fee that helped to cover program materials, lodging, museum admission, workshop costs, meals, and a program souvenir. Additional funding was made possible through a grant by the Community Foundation of Northern Illinois and the Lisa Woessner Science & Technology Award given by the Illinois 4-H Foundation.

As with Science Siesta, an Institutional Review Board approved pre-test, post-test, and evaluation were given to participants to measure the program's success and impact. Results showed that participants believed the weekend was very valuable to them in terms of changing their perceptions and attitudes about science as a career option. Ninety-five percent indicated that Advanced Science Siesta showed them a different side of science. Ninety-eight percent said that the program helped them see how science can be used to solve problems our country faces. Ninety-eight percent agreed that "girls should consider careers in science," and 87% agreed that Advanced Science Siesta taught them that science is likely to be useful to them when they think about what kinds of jobs they'd like to have as an adult.

Advanced Science Siesta '07 is in its planning stages at this time, but promises to be even more intense than the '06 version. University of Illinois Extension Youth Development professionals are partnering with University of Illinois faculty in the Colleges of Engineering and Agricultural, Consumer, and Environmental Sciences to provide girls with incredible hands-on activities alongside actual researchers. "Real world" applications of careers in these fields will also be addressed.

Replication
Individuals wishing to emulate the Science Siesta or Advanced Science Siesta programs locally are invited to purchase a CD from University of Illinois Extension. The CD contains copies of the event schedules, registration materials, evaluation tools, website design, promotional materials, the t-shirt design, and more and is available at the cost of $15.00. Mail a written request with payment to the University of Illinois Extension, Stephenson County, 2998 W. Pearl City Rd., Freeport, IL 61032.

References

Bordogna, Joseph, Dr. (2003, January). *Leveraging Experience to Accelerate Progress (LEAP): Moving Towards Gender Equity in Engineering*. Speech given at National Science Foundation Education Conference, Washington, DC.

Five Myths About Girls and Science. (2007, October). *Science Scope*, Available at: http://www.nsf.gov/news/news_summ.jsp?cntn_id=109939

Ride Urges Emphasis On Math, Science Studies. (2006, March 19). *USA Today*. Retrieved March 19, 2006, from: http://www.usatoday.com/money/companies/management/2006-03-19-sally-ride_x.htm?loc=interstitialskip

Why Girls Bypass Science: Perceptions and Messages Steer Them Away. (2005, July). *Industrial Engineer* 37.7 16(2).

SCIENCE SIESTA '07

PRE-TEST / POST TEST

Draw a picture of a scientist in this box.

1. Put the steps of the **scientific method** in the correct order.
   (Write #1 by the first step; #2 by the second step, etc.)

   _____ Develop a hypothesis
   _____ State your theory
   _____ Conduct experiments
   _____ Make an observation
   _____ Ask a question
   _____ Make predictions

2. Why is it important to use the **scientific method**?

3. Select the job description and cool fact that <u>best</u> describes each scientist. Put the letter of the correct response in the appropriate box.

SCIENTIST	JOB DESCRIPTION	A COOL FACT
Analytical Chemist		
Coroner		
Nuclear Chemist		
Nurse		
Pharmacist		
Physical Therapist		
Plant Pathologist		
Safety Engineer		
Veterinarian		

CHOOSE FROM THESE JOB DESCRIPTIONS:
A. Investigates deaths such as homicides, suicides, and traffic fatalities.
B. Prepares and dispenses drugs and knows about their properties.
C. Reviews aircraft systems to insure that takeoffs and landings will be safe.
D. Works to prevent diseases and treat sick animals of all kinds.
E. Protects the health and safety of the public by overseeing the equipment in her plant.
F. Invents and applies methods of determining the chemical make-up of substances.
G. A caregiver with knowledge about the physical and emotional needs of the people she serves.
H. Helps people improve mobility, relieve pain, increase strength, and prevent deformity.
I. Studies plants, plant systems, and plant diseases.

4. Answer one of the following multiple choice questions as it relates to your breakout session workshop. Circle the correct answer to the question.

Sea Otter Biologist Track

Oil spills in waterways:
A. Affect the environment for only a few days after the spill
B. Affect the environment for up to one year after the spill
C. Affect the environment for one to five years after the spill
D. Affect the environment for an undetermined amount of time

Pollen Detective Track

Which of the following is **NOT** considered a pollinator?
A. Honeybees
B. Garden Spiders
C. Hawkmoths
D. Flower Beetles

African Plant Explorer Track

If starch is present in food, what color will the iodine change during an iodine test?
A. Color will change from reddish brown to green
B. Color will change from reddish brown to blue-black
C. Color will change from reddish brown to orange
D. Color will change from reddish brown to pink

Post Program Evaluation

	Strongly Agree	Agree	Disagree	Strongly Disagree
The Science Siesta weekend showed me a different side of science				
Based on this weekend, I expect to do better in science at school				
This weekend increased my interest in science				
This weekend helped me see how science can be used to solve problems our country faces				
The job shadowing (seeing what a museum staff member does) gave me some ideas of what I might like to do when I select a job				
One of the things I learned this weekend is I am definitely **not** interested in science				
This weekend I learned science is **not** likely to be useful to me when I think about what kind of job I would like to have in later life.				
Girls should **not** consider careers in science.				
Boys are better than girls in science.				

Please circle a number showing how much you learned from the Science Siesta Weekend	Learned Little or Nothing			Learned a Great Deal
How science is useful in solving problems	1	2	3	4
How scientists work outside a laboratory	1	2	3	4
How much did you learn from the Mississippi River Journey? (movie)	1	2	3	4
How much did you learn from your behind the scenes tour of animal husbandry?	1	2	3	4
How much did you learn from the study of reptiles and amphibians?	1	2	3	4
How much did you learn from mammal identification?	1	2	3	4
How much did you learn from envioroscape model?	1	2	3	4
How much did you learn from invertebrate count?	1	2	3	4
How much did you learn from water sampling/testing	1	2	3	4
How much did you learn about the ecosystem in a Prairie?	1	2	3	4
How much did you learn about tagging monarch butterflies?	1	2	3	4

Opinion. Indicate your true feelings, not what you think may be an answer that is expected. Circle the appropriate answer according to the scale below. It is important that all questions are answered by circling only one number.

1. Strongly Agree
2. Agree
3. Mildly Agree

4. Mildly Disagree
5. Disagree
6. Strongly Disagree

PART A consists of statements numbered 1 to 32 which complete the following sentence:

When I think about a scientist, I think of a person who: Circle ONE number

1.	Sits in a laboratory all day.	1 2 3 4 5 6
2.	Pours chemicals from one test tube to another.	1 2 3 4 5 6
3.	Takes his/her work seriously.	1 2 3 4 5 6
4.	Is considered just a small part in a machine, if he/she works for a large corporation.	1 2 3 4 5 6
5.	Is courageous.	1 2 3 4 5 6
6.	Believes that there is no God.	1 2 3 4 5 6
7.	Is open minded.	1 2 3 4 5 6
8.	Is so involved in work that he/she doesn't know what's happening in the world.	1 2 3 4 5 6
9.	Records data carefully.	1 2 3 4 5 6
10.	Uses words few people understand.	1 2 3 4 5 6
11.	Is dedicated.	1 2 3 4 5 6
12.	Is usually reading a book.	1 2 3 4 5 6
13.	Does not work for money, fame or self-glory.	1 2 3 4 5 6
14.	Works for the benefit of human kind.	1 2 3 4 5 6
15.	Is intelligent.	1 2 3 4 5 6
16.	Has spent many years studying.	1 2 3 4 5 6
17.	Works in a dreary laboratory.	1 2 3 4 5 6
18.	Has heavy expenses if he/she works alone.	1 2 3 4 5 6
19.	Is careful in his/her work.	1 2 3 4 5 6
20.	Is patient.	1 2 3 4 5 6
21.	Must keep secrets if he/she works for the government.	1 2 3 4 5 6
22.	Knows his/her subject.	1 2 3 4 5 6
23.	Neglects his/her family.	1 2 3 4 5 6
24.	Has little social life.	1 2 3 4 5 6
25.	Stands up for his/her ideas when attacked.	1 2 3 4 5 6
26.	Has few hobbies or means of relaxation.	1 2 3 4 5 6
27.	Is prepared to work long hours.	1 2 3 4 5 6
28.	Is prepared to work years without getting results.	1 2 3 4 5 6
29.	Is rarely home.	1 2 3 4 5 6
30.	May work for years without success.	1 2 3 4 5 6
31.	Works at an uninteresting job.	1 2 3 4 5 6
32.	Makes the world a better place to live.	1 2 3 4 5 6

1. Strongly Agree
2. Agree
3. Mildly Agree

4. Mildly Disagree
5. Disagree
6. Strongly Disagree

PART B consists of complete statements numbered 33 to 48.

33. A scientist's work is dangerous.	1 2 3 4 5 6
34. I would like to be a scientist.	1 2 3 4 5 6
35. Science is responsible for causing pollution.	1 2 3 4 5 6
36. Scientists are good for society because they help find cures.	1 2 3 4 5 6
37. Science is responsible for wars.	1 2 3 4 5 6
38. Science is necessary for the defense of our country.	1 2 3 4 5 6
39. I would like to marry a scientist.	1 2 3 4 5 6
40. We would be better off without scientists.	1 2 3 4 5 6
41. Without scientists we would still be living in caves.	1 2 3 4 5 6
42. Being a scientist would be fun.	1 2 3 4 5 6
43. Science is responsible for progress.	1 2 3 4 5 6
44. A scientist's work is dull.	1 2 3 4 5 6
45. A scientist's work is boring.	1 2 3 4 5 6
46. Science is responsible for preserving more lives.	1 2 3 4 5 6
47. A scientist's work is time consuming.	1 2 3 4 5 6
48. Science is responsible for improving the health and comfort of the population.	1 2 3 4 5 6

Science Siesta Evaluation Summary (n=127)

1. Put the steps of the scientific method in the correct order:

Question	Correct Response Pre	Correct Response Post
Develop a hypothesis	20 – 16%	107 = 84% (68% increase)
State your theory	39 = 31%	118 = 93% (62% increase)
Conduct Experiments	50 = 39%	115= 91% (52% increase)
Make an Observation	7 = 6%	114= 90% (84% increase)
Ask a question	20= 16%	114= 90% (74% increase)
Make predictions	27= 21%	110 = 87% (66% increase)

2. Why is it important to use the scientific method?
   110 = 87% correct response
   "It is the best way to separate the things that are true about our world from those that are untrue."

3. The job description and cool fact that best describes each scientist.
   Put the letter of the correct response in the appropriate box.

Scientist	Job Description Pre	Job Description Post
Analytical Chemist	38 = 30%	46 = 36% (6% increase)
Coroner	58 = 46%	82= 65% (19% increase)
Nuclear Chemist	27= 21%	39=31% (10% increase)
Nurse	30= 31%	66= 52% (21% increase)
Pharmacist	81= 64%	90 = 71% (7% increase)
Physical Therapist	46 = 36%	71 = 56% (20% increase)
Plant Pathologist	81 = 64%	87 = 69% (5% increase)
Safety Engineer	71 = 56%	79 = 62% (6% increase)
Veterinarian	91 = 72%	107 = 84% (12% increase)

Scientist	A Cool Fact Pre	A Cool Fact Post
Analytical Chemist	15= 12%	39= 31% (19% increase)
Coroner	18 = 14%	54= 43% (29% increase)
Nuclear Chemist	33 = 26%	54 = 43% (17% increase)
Nurse	20 = 16%	35= 28% (12% increase)
Pharmacist	13 = 10%	40 = 31% (21% increase)
Physical Therapist	25 = 20%	71 = 56% (26% increase)
Plant Pathologist	23 = 18%	53 = 42% (24% increase)
Safety Engineer	46 = 36%	63 = 50% (16% increase)
Veterinarian	25 = 20%	65 = 51% (31% increase)

Model Youth Programs:
A Key Strategy for Developing Community-University Partnerships Using a Community Youth Development Approach

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Model Youth Programs:
A Key Strategy for Developing Community-University Partnerships Using a Community Youth Development Approach

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Abstract: Universities across the nation face the charge of enhancing their intellectual capital as a learning institution while also contributing to the greater social good. While there is great potential for university-community partnerships to generate lessons for youth workers and policy makers, create powerful new knowledge for the academic field, and provide transformative experiences for community members, partnerships often fail to produce such meaningful results. In the San Francisco Bay Area, community residents who have been involved in such unsuccessful initiatives frequently perceived that university partners spent insufficient time learning about the community context, prioritized research objectives over community needs and did not make long-term commitments. Despite these challenges, community-university partnerships can be useful strategies for advancing the field of youth development by strengthening research and practice in local contexts.

This paper presents how the design and implementation of model youth programs served as an effective strategy in developing a partnership between a university-based center and two local communities over a 5-year period. It also describes essential lessons that other communities, research institutions or universities may use to launch, implement, expand and sustain their own successful partnerships to build local capacity to implement youth development practices, promote positive outcomes for young people, and generate knowledge about the impact of youth development approaches.

Introduction

In the fall of 2000, the John W. Gardner Center for Youth and Their Communities (JGC) initiated partnerships with two San Francisco Bay Area communities to generate better outcomes for young people and develop new knowledge and resources for research and practice in youth development. Guided by a community youth development philosophy, the JGC was able to overcome many of the challenges that have historically plagued community-university partnerships.

The community youth development approach values the voices of young people and residents, focuses on assets, and emphasizes collaboration (Hughes & Curnan, 2000; Pittman, 1996). A key strategy within this process was to co-develop and implement a model youth program in each community. This effort created the necessary conditions for a strong partnership that would develop new knowledge and resources for research and practice in youth development (Harkavy, 2006; Jacoby, 2003). This paper will outline the approach the JGC used and highlight essential lessons learned about partnership development as the youth program unfolded.

The Historical Context of Community-University Relations

Universities across the nation face the charge of enhancing their intellectual capital as a learning institution while also contributing to the greater social good (Burkhardt, J., Chambers, T., & Kezar, A., 2005). Efforts to fulfill the latter come in many forms: college students volunteering in community programs; faculty conducting research activities to support local reform efforts; or university centers and civic leaders launching major community development initiatives (Erlich, 2000). In some cases, collaborative endeavors result in powerful new knowledge for the academic field and transformative experiences for community members. Other partnerships fail to produce such meaningful results. In the early stages of developing the JGC, staff members asked Bay Area community members to share their experiences in such unsuccessful initiatives. These residents perceived that university partners:

- *Spent insufficient time learning about the community context:* researchers had theories about how to fix neighborhoods, but they did not consider the experiences and ideas of residents. Researchers focused on obvious community deficits and problems without exploring strengths and assets.

- *Prioritized research objectives over community needs:* information from community-based research projects was not translated into accessible formats or practical tools that community members could utilize to solve local problems. Instead, the data were primarily used to address an academic audience, with few direct benefits to those who were being researched.

- *Did not commit to long-term goals or strategies:* faculty members initiated projects that were connected to short-term grants. Once the funding cycle came to a close, so did the partnership.

Historically, mistrust has been particularly strong in communities of color that have been exploited in medical research experiments or pathologized by scholars. The concerns of our partner communities reflect such experiences. These perceptions, actual or imagined, are oftentimes compounded by the real differences that exist between academic institutions and under-resourced communities in terms of privilege, power, and values.

A Community Youth Development Approach to Partnerships

The JGC was established to strengthen policy, practice and research in the field of community youth development (CYD). This particular focus on community-university partnerships is driven by the vision of John W. Gardner, a nationally renowned civic leader and public servant. Throughout his lifetime, Gardner often spoke of the indispensable role of the university as a member of the broader community with responsibility to improve the quality of life for everyone. He believed that universities could make unique contributions to local efforts that aim to improve the well-being of young people (Gardner, 1968). Gardner also recognized that residents had distinct knowledge that could inform and build the academic field of community youth development (Gardner, 1965).

Community youth development is an approach predicated on the belief that the health of young people and their communities are interdependent. As Hughes and Curnan (2000) describe, CYD strategies "harnesses the power of youth to affect community development and, similarly, engages communities to embrace their role in the development of youth" (p. 1). Youth and their communities are not problems to be fixed; they are essential partners with assets and expertise (Pittman, Irby, Tolman, Yohalem, & Ferber, 2003). This framework also acknowledges that young people grow up in communities, not isolated programs or systems; they develop physically, intellectually, psychologically and socially all at once. Therefore, programs and systems intended to support them should be well-coordinated and context-driven in order to maximize effectiveness. Furthermore, a CYD approach recognizes that the task of creating meaningful and lasting change requires a long-term investment and commitments from all stakeholders (Eccles, 2002).

The JGC's approach to partnerships applied the main principles of CYD in response to challenges that have often hindered other collaborative efforts for youth in the past. In order to develop a common vision with partners, the JGC first learned about a community's history and context through open-ended conversations with residents and local leaders. The JGC made a particular effort to include all critical stakeholders, including young people and institutional leaders, in early planning efforts. The discussions also identified potential goals and objectives. JGC staff members then worked with local partners to co-construct model programs that built on effective research-based youth development practices as well as community knowledge. These shared efforts led to new relationships between the university and community, which were leveraged to create opportunities for research and action that aim to have a lasting impact on young people's lives.

The Strategy of Implementing Model Programs

The steps and lessons presented here are derived from case studies of partnerships between the JGC and two local communities: Redwood City and West Oakland. Although the partnerships in each community have evolved in different ways, they both began with a youth leadership program, Youth Engaged in Leadership and Learning (YELL). For the past six years, YELL has provided Kennedy Middle School and McClymonds High School students with the opportunity to lead action projects on social justice issues they find important and relevant.

Throughout the program, youth learn research, advocacy and organizing methods in order to seek and implement answers to the difficult problems that face their school and community. YELL participants use these skills and knowledge to inform and improve local youth and education policy through shared decision-making with adults. Beginning with 2 cohorts of

approximately a dozen young people at the program's inception, the project now supports almost 200 youth.

The process of co-developing and implementing YELL within each community was a key strategy to create the necessary conditions for successful collaboration on systems-level research and action efforts. As a JGC- sponsored program, YELL fundamentally changed the dynamics between the community and the university. Community partners no longer perceived the university to be an elite institution, but instead associated it with a set of human relationships built on mutual respect and trust. Furthermore, seeing the YELL model in action prompted a range of stakeholders to become more deeply invested in CYD strategies and more willing to engage in a partnership with the JGC to better support youth in their communities.

With respect to building a partnership, the JGC had three main objectives in co-creating and sponsoring YELL as a model program within a CYD framework. This paper will highlight examples and lessons learned in meeting each of these objectives.

- *Objective 1:* Address Negative Perceptions of University Partners
- *Objective 2:* Generate Community Commitment to a CYD Approach
- *Objective 3:* Engage in Systems-Level Change

OBJECTIVE 1:
Address Negative Perceptions of University Partners

To change community members' negative perception of the university, the JGC had to:

- Understand the community context and co-construct the model program with partners
- Support both research and practice
- Develop agreements for sustainability

Understand Community Context and Co-Construct the Model Program with Partners

Instead of the university setting the agenda with preconceived ideas about the nature of the partnership or model program, the JGC's first role was to listen to community leaders and learn about the local context before making any decisions. JGC staff members spoke with city leaders, school staff and members of community-based organizations in both Redwood City and West Oakland about their past experiences and new ideas for better supporting young people.

All voiced a need for more coordinated systems, services, and supports for young people in and out of school. In these conversations, community members also expressed a need for more information and additional research before setting the partnerships' agendas. In particular, community leaders wanted to better understand how academic theories of youth development could be adapted to inform local programming that was appropriate for their neighborhood context. Policy makers, funders and practitioners also wanted to assess the everyday experiences and needs of local youth and their opinions about how to improve existing services. It quickly became clear that both communities would benefit from developing youth leaders who could generate new knowledge about youth to inform local decision making. Out of these discussions emerged a program design for YELL in which young people led action research projects on issues important to youth.

Essential Lesson: Frame initial conversations broadly. The JGC did not come prepared with proposals or solutions to these early meetings. Community leaders were surprised to hear that the Center did not have a specific program or particular grant in mind. Instead, the guiding question for partnership development was, "What might we be able to do together to further

support young people?" This framing proved to be effective in opening rather than closing doors.

Support Both Research and Practice

To overcome perceptions of the university as only acting in academic self interest, the JGC's second task was to ensure YELL supported the JGC's research and dissemination goals along with the community's need for high quality training and direct service. Therefore, it was critical that YELL's design was informed by effective practices that could be aligned with concrete research questions about their effectiveness within a particular community context. That way, the knowledge gained from this work could be shared with the academia, but would also allow the JGC to create tools, models and strategies that local community members could also use in their practice.

Essential Lesson: Give program coordinators explicit responsibilities in both research and practice. In order to eliminate any impression that one set of goals was more valuable than the other, Center staff worked diligently to make the work of running the program and documenting the youths' experience as seamless as possible. In particular, the YELL Director served a critical role of research-practitioner with two primary responsibilities: interface with the youth and community members to meet program goals and also support university students and staff in implementing the research agenda. As a result, the documentation of youths' experiences in YELL was an intentional effort to bridge research and practice. These multi-purpose data were used to answer academic questions, contribute to program improvement, support grant evaluations, advocate for additional funds, and share successful program strategies through curricula and training.

Develop Agreements for Sustainability

Many community-university partnerships face challenges in securing and sustaining the financial resources needed to support their work. However, as a new center with support from Stanford, the JGC was in a unique position to support YELL's early development. Housed within a school of education at a major research university, the JGC had expertise to offer in research training, curriculum development, data collection and analysis. Furthermore, the JGC had been awarded initial research and development funds from a foundation for a feasibility study of partnerships in local communities. Community partners offered in-kind resources such as staff time, local knowledge, connections, space, equipment, and commitment to making the program work.

The JGC assumed managing responsibility for the YELL program with verbal agreements and trust that both parties were committed to a long-term partnership. But as the JGC began long-term strategic planning, executive leadership questioned the organization's ongoing responsibility for managing YELL after five years of implementation, particularly since more than enough data had been collected to meet research goals. Some believed that partners should offer more ownership and responsibility for the program given the benefits it provided for local youth. However, the JGC had also benefited significantly through this collaboration and these communities already struggled with scarce financial resources. At this point, questions of what each partner would ultimately and officially be accountable for had to be addressed. These conversations were difficult and brought out old suspicions that the university would back out. Once these fears were assuaged, community partners assumed primary responsibility for managing the program, with technical assistance from the JGC, including short-term fundraising support as community partners worked to take more of a lead in leveraging resources.

Essential Lesson: Create a plan for sustainability and shared accountability up front. Although a two or three-year grant was enough to launch a youth program, it did not represent the kind of long-term investment needed to see meaningful community change. Communities want to see

that universities are partners for the long haul, not just when the grant money is available. This kind of enduring partnership requires foresight, planning and difficult conversations about shared responsibilities from the start of model program development. In the case of YELL, confusion could have been avoided by creating a Memorandum of Understanding for the partnership and each program as it developed during the first year of implementation. An MOU that outlined each party's specific responsibilities, including fundraising roles, would have provided a concrete framework for conversations as the partnership evolved and changed.

OBJECTIVE 2:
Generate Community Commitment to a CYD Approach

A second major goal of the JGC's model program strategy was to generate community investment in a CYD approach. In particular, community members wanted to see how related academic theories were relevant and useful in local improvement or reform efforts. In order to meet this need, the JGC used YELL to:

- Model effective practices in community youth development
- Develop positive relationships with community leaders and stakeholders

Model Effective Practices in Community Youth Development

YELL was developed in part to create a model that demonstrated the effectiveness of a community youth development approach, with a particular focus on youth voice in decision making. Through YELL, the JGC adapted effective practices to local contexts before suggesting that schools or community-based organizations embed these strategies in their own work. YELL served as a tool to translate CYD theories into concrete examples from which partners could draw lessons and inspiration. As partners observed their own youth successfully fulfilling roles as researchers and advocates, they became more excited about the potential of youth leadership and more willing to develop new venues for youth voice and involvement.

In addition to informal observations by community members, researchers affiliated with the project gathered evidence from YELL that CYD strategies actually worked. Student participants completed pre- and post- surveys and interviews that measured their growth in positive youth development outcomes. Not only did YELL have a measurable impact on the lives of participating youth, the program also led to more supports and opportunities for young people in their schools and larger community (The impact of the YELL program has been documented elsewhere. For example, see: Kirshner, B. Strobel, K., Fernández, M.A., 2003; Strobel, K., et al., 2006).

Partner schools now offer the YELL program as a course during the mainstream school day, have created structures for youth voice in decisions about school policy and youth programming, and use YELL curriculum to enrich classroom and after school learning. For example, in Redwood City, YELL students sit on school decision-making bodies and are participating in civic activities in greater numbers. In West Oakland, youth were part of a major school reform effort that created small schools within the larger school site, while others serve as key decision makers and evaluators in the high school's after-school initiative. The Oakland Unified School District now collects data on youths' perspectives, modeled after YELL research, at all grade levels. In this way, YELL became an important vehicle for the JGC to introduce innovative approaches and ideas that could encourage other stakeholders in the community to embrace youth voice.

Essential Lesson: Translate academic theories into applied strategies. While the JGC rarely found partners who disagreed with theories of community youth development, community

members often expressed skepticism about how CYD strategies could successfully be applied in their neighborhoods, with *their* youth. Model programs that translate theory to local practice proved to be effective tools for generating the will of school and community leaders to move from theory to action and implement strategies on their own.

Develop Positive Relationships with Community Leaders and Stakeholders

In early conversations, community leaders shared that past relationships with university researchers were often distant and detached. The JGC understood that strong relationships were the building blocks to a comprehensive partnership that could improve outcomes for youth. Through YELL, the JGC worked side by side with partners and essentially became embedded researchers. Staff members gained credibility by working directly with youth and demonstrating commitment by doing rather than just telling. As a result, the JGC had the unique opportunity to learn about the day-to-day challenges faced by youth and the adults who serve them. Furthermore, with time and trust, community members began to open doors to research and program staff that were previously closed to outsiders. As a result, the JGC had unprecedented access to local leaders and informal settings where decisions about policy, practice and research are made.

Essential Lesson: Invest significant time and resources early on to building relationships.
Developing positive relationships with youth and respected school or community leaders created a ripple effect to counter negative perceptions of the university with other members of the community. These crucial players served as champions for the partnership, brokering additional relationships and setting the stage for partnership efforts to expand.

OBJECTIVE 3:
Engage in Systems-Level Change

While the development and implementation of model programs reaps immediate rewards for youth participants and local communities, the ultimate goal of these partnerships is to create long-lasting systemic change. To position the JGC for involvement with partners in systems-level work, staff members leveraged relationships built through YELL to:

- Expand youth development opportunities in the community
- Develop new research projects that could inform policy

Expand Youth Development Opportunities in the Community

YELL staff, products, events and images promoted positive public perceptions of the JGC and led to greater willingness to engage in collaborative efforts. Relationships built during the programs' implementation were leveraged to expand CYD programming for more youth in the community. In West Oakland, YELL participants used research data to obtain funding for a youth and family center. Today, that effort has grown to include youth leading evaluations and grant-making processes for the programs at the center. In Redwood City, local YELL data was used to secure funding for a family resource center which now serves hundreds of students every year.

Relationships built from YELL also provided the JGC with access to information about emerging prospects for systemic reform. For example, connections from YELL at Kennedy Middle School in Redwood City led to the participation of multiple schools in a reform effort to develop community schools that bring together schools, families and the broader community to better support youth. Today, that work has deepened with two of those middle schools to address issues faced by schools and youth during this critical age. Similarly, because of the relationships staff members had with school leaders through YELL, in West Oakland the JGC

was able to work with school leaders on an effort to integrate and align in-school and out-of-school learning through professional development and collaborative projects between teachers and youth workers.

Essential Lesson: Maximize relationships to engage in systemic reform. The JGC leveraged relationships from YELL to expand community youth development programming and engage in broader reform efforts. The credibility and connections from model program implementation served as critical tools for engaging partners in systems-level change efforts.

Develop New Research Opportunities That Can Inform Policy

The JGC also capitalized on relationships in the community to initiate research projects that would answer both academic and practical questions. These research projects provided faculty members, along with graduate and undergraduate students, unique access to research subjects within their community contexts.

For example, Stanford faculty and students had the opportunity to study the process in which West Oakland students become disconnected from the institutions meant to serve them and become significant costs to the state. McClymonds High School granted researchers permission to shadow cohorts of high school students throughout the school day and into the neighborhood. In Redwood City, city and county officials are working with the JGC to look at youth data across systems to examine how young people move between various institutions such as health, welfare, education and other community or school-bases services. Both projects intend to identify ways to reengage young people and understand what can be done to better support them. However, given the history of academic institutions in these communities, these research activities are extraordinary and reveal the power of relationships built through model programs.

Essential Lesson: Site-based placement of university staff can yield critical knowledge for researchers and practitioners. Since JGC staff members were embedded in the community, they were privy to local knowledge that could be used to develop research questions to inform policy. Lessons learned from these real-life CYD settings came back to the university to inform theory and support the development of future leaders across academic disciplines. Staff members' dual roles as research-practitioners also supported this goal. Instead of sending university "experts" out to the field to train community leaders and providers with what "the research says" about supports young people need, the JGC partnered with these individuals to bring the expertise of both the university and community members to build better tools, resources, and local models of community capacity together. YELL program directors served as "critical friends" to partners and shared YELL research results to local leaders in a way that depoliticized and did not feel like an attack from an outsider. In other words, community members believed in the JGC's good intentions and understood that the Center's research was intended to support improvement efforts, not to punish. Community responses to researchers recommendations were purely voluntary and there was no mandate or consequence attached to study results - only the shared vision for promoting an approach that support the positive development of the community's youth.

Conclusion

Universities will continue to face challenges presented by the checkered history of university-community partnerships. However, a community youth development approach, with model youth programming as a key strategy, can help realize the promise of community-university partnerships.

References

Eccles, J., & Appleton, J.A. (Ed.). (2002). *Community programs to promote youth development*. Washington, DC: National Academy Press.

Erlich, T. (Ed.). (2000). *Civic responsibility and higher education*. Phoenix, AZ: Oryx Press.

Gardner, J.W. (1965). *Self-renewal: The individual and the innovative society*. New York: Harper & Row.

Gardner, J.W. (1968). *No easy victories*. New York: Harper & Row.

Harkavy, I. (2006). The role of universities in advancing citizenship and social justice in the 21st century. *Education, Citizenship and Social Justice, 1*(1), 5-37.

Hughes, D.M., & Curnan, S.P. (2000). Community youth development: A framework for action. *CYD Journal, 1*(1), 7-11.

Burkhardt, J., Chambers, T., & Kezar, A. (Eds.). (2005). *Higher education for the public good: Emerging voices from a national movement*. San Francisco, CA: Jossey-Bass.

Jacoby, B. (Ed.). (2003). *Building partnerships for service-learning*. San Francisco, CA: Jossey-Bass.

Kirshner, B., Strobel K., Fernández, M.A. (2003). Critical civic engagement among urban youth. *Critical civic engagement among urban youth, 2*(1).

Pittman, K. (1996). Community, youth, development: Three goals in search of connection. *New Designs for Youth Development*, Winter.

Pittman, K., Irby, M., Tolman, J., Yohalem, N., & Ferber, T. (2003). *Preventing problems or promoting development: Competing priorities or inseparable goals?* Washington, D.C.: Forum for Youth Investment.

Strobel, K., Osberg, J., and McLaughlin, M. (2006). Participation in social change: Shifting adolescents' developmental pathways. In S. Gingwright, Noguera, P., and Cammarota, J. (Ed.), *Beyond Resistance: Youth Activism and Community Change: New Democratic Possibilities for Policy and Practice for America's Youth*. Oxford, UK: Routledge.

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Applying the Framework: Positive Youth Development and Restorative Practices

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Applying the Framework: Positive Youth Development and Restorative Practices

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Abstract: This article compares the framework of positive youth development and school connectedness with the practices of restorative measures applied to harm and rule violations in schools. Formal school discipline practices of in- and out-of-school suspension have the unintended outcomes of increases in maladaptive behaviors, with drawl or avoidance of school staff, stigma among peers and poor academic achievement, among others. Restorative practices provide accountability for harm, as well as the opportunity to guide youth in their development, regardless of their experience as an offender, victim or bystander. Stories illustrate the strengths of this approach. Recommendations for school and youth programs regarding restorative measures will include suggestions for future research and evaluation.

Introduction

The principles and philosophy of restorative measures are congruent with many programs and curricula that teach social emotional learning and classroom and behavior management. Restorative practices—circles to repair harm or restorative group conferences, as well as family group decision making and restorative peer juries—give educators an effective means of helping students practice the social skills they have been taught, under real and significant circumstances. As Margaret M. Clifford wrote, "We must encourage students to reach beyond their intellectual grasp and allow them the privilege of learning from mistakes. Students need challenge not easy success" (Clifford, 1993, p 149). When students have a vested interest in a fight or bullying situation, either as a victim, offender or bystander, they will learn more deeply as they practice repairing harm, communicating feelings, and problem solving.

In addition to being a strong learning tool, restorative measures can be aligned with the broader area of healthy youth development, as a means of implementing the elements youth need to engage as they grow to adulthood. The Konopka Institute for Adolescent Health uses Dr. Gisela Konopka's lifetime study of youth and their developmental needs to present a framework for working with youth, as well as a list of common components for successful youth programs. This paper will discuss school connectedness, formal school discipline practices and

their outcomes, and through a series of stories, examine restorative measures and positive youth development to illustrate the strengths of both. Finally, recommendations for school and youth programs regarding restorative measures will include suggestions for future research and evaluation.

School Connectedness and School Discipline

Resiliency research looks for elements in adolescents' lives that contribute to their strengths, assets and protective factors. One of the largest such studies were done by the Center for Population Options in collaboration with the University of Minnesota. *The National Longitudinal Study on Adolescent Health*, otherwise known as *AddHealth*, analyzed data from some 90,000 students across the nation, administrators of the schools the students attended, and 18,000 of their parents. Findings indicated two broad concepts: family connectedness makes a difference in the lives of youth and school connectedness makes a difference in the lives of youth (Blum & Rinehart, 2002, p. 7).

Students easily feel connected to school when the student never gets into trouble or has conflict with other youth. But it is more difficult to feel or maintain connection when a student is at odds with others on a continual basis, or when the student is victimized, but the victimization is not addressed. The challenge for educators is to maintain their professional self and their connection with youth while holding students accountable for misdeeds or harm, and to support those that have been harmed through meaningful involvement (Gathercoal, 1993, p. 30).

While school connectedness is an indicator of student health, typical school disciplinary practices rely heavily on exclusion. Formal discipline of suspensions, detention, exclusion and expulsion undermine the possible connections between the excluded student and the adults and other students in the school building. In a 1998 study by Costenbader and Markson on school suspensions, they summarized research on the effects of in- and out-of-school suspensions. Serious negative outcomes of out-of-school suspension included:

- An increase in maladaptive behaviors not addressed by the suspension;
- Withdrawal or avoidance of school staff;
- A negative impact on self respect;
- A stigma among peers;
- Driving a school problem into the streets and community
- Disruption of education progress, and
- Loss of state aid based on average daily attendance.

In-school suspension has been correlated with drug use, poor academic achievement, grade retention and long-term disaffection and alienation (Costenbader & Markson, 1998). Costenbader and Markson's own research showed "that students who had been suspended were more likely to be involved with the legal system."

Restorative measures, however, look not at rule violations but at the violation of relationships, and seek to hold the youth responsible to the persons who have been harmed and/or have been affected, challenging all to repair the relationships. Howard Zehr, in *The Little Book of Restorative Justice*, describes wrongdoing as "...a violation of people and interpersonal relationships. Violations create obligations. The central obligation is to put right the wrong." (Zehr, 2002, p. 19) The person who did the harm, the person harmed and the community— classmates, bystanders, staff and family members—work together to "put right the wrong."

There are several restorative practices used in school, such as restorative conferencing, circles to repair harm and restorative peer juries. Ideally, the person who was harmed, the person who did the harm, and the community—other affected parties, classmates, bystanders, friends, staff, family members, elders or neighbors—come together in a facilitated process. The group talks about the harm and how people were affected by it, identifies needs and obligations as a result of the harm, identifies possible solutions, and comes to agreement through consensus. The agreement should include restitution, reconciliation and resolution, as well as provide support for the victim or for the offender.

In a conference, the facilitator is called a facilitator; in a circle the facilitator is a keeper; and with peer juries, the members of the jury—trained students—together facilitate the process. Schools administrators that use these practices may combine them with more traditional discipline responses, such as a shortened suspension time for a fight, if the affected students agree to participate in a circle upon returning to school.

In The *Little Book of Restorative Discipline in Schools*, Lorraine Stutzman Amstutz and Judy H. Mullet (2005) provide the following principles of restorative discipline:

- relationships are central to building community;
- focus on harm done rather than on rule-breaking;
- give voice to the person harmed;
- engage in collaborative problem-solving;
- change and growth and enhance responsibility (p 26-28).

These themes are echoed in healthy youth development studies.

Healthy Youth Development

In 2000, the Konopka Institute for Best Practices in Adolescent Health published the monograph *Growing Absolutely Fantastic Youth*. It summarized the research on adolescent development and provided a framework for healthy youth development which can help guide discipline practices in both schools and youth programs. When using Gisela Konopka's *Requirements of Healthy Youth Development*, restorative discipline can provide youth with opportunities for healthy adolescent development. Dr. Konopka asserted that all young people need to:

- Participate as citizens, as members of a household, as workers, as responsible members of society;
- Gain experience in decision-making;
- Interact with peers and acquire a sense of belonging;
- Reflect on self in relation to others and to discover self by looking outward as well as inward;
- Discuss conflicting values and formulate their own value system;
- Experiment with one's own identity, with relationships; try out various roles without having to commit oneself irrevocably;
- Develop a feeling of accountability in the context of a relationship among equals;
- Cultivate a capacity to enjoy life; and
- Participate in the creative arts, to learn self-expression and communicate deeper feelings from within (p. 20).

In formal school discipline situations, when a student violates a rule, adults often talk about how the student has lost privileges or the right to participate in school, activities, and class

trips. Students often lose the right to make decisions (conveyed by the principal via the student handbook), and at least for a time being, the right to participate as a responsible member of the school society. With a restorative response, however the student does not lose the chance for positive youth development. The list above is, in fact, a list of all that could happen in a conference or circle to repair harm.

Youth participating in a restorative process are part of the decision-making process:
- discussing and coming to consensus about making amends,
- giving back to the community,
- making restitution and
- outlining a plan for improving behavior.

Restorative justice participants—the person who did the harm, the person harmed, community members, friends—are operating as a responsible members of society. A responsible person recognizes when she has done harm and works to repair that harm. A responsible person offers his knowledge and insight to solve a problem.

Howard Zehr identifies needs for victims, offenders and community. Needs for victims include information, truth-telling, empowerment, restitution or vindication. Offenders need accountability, encouragement to experience personal transformation, encouragement and support for integration into the community and for some, at least temporary restraint. The community—classmates, bystanders, staff, family members—need "attention to their concerns as victims, opportunities to build a sense of community and mutual responsibility, and encouragement to take on their obligations for the welfare of their members…(Zehr 2002, p. 14-18)."

Both victims and offenders are in need of positive interaction with peers and acquiring a sense of belonging, albeit for different reasons. Being a victim of harm or crime sets a person apart, and receiving messages of care and concern helps to bring the victim back into the community. Victimization can also feel dis-empowering, and having the chance to articulate what one needs to be safe or what restitution would be acceptable helps increase the youth's sense of personal power. In addition, by listening to all sides and working together to make an agreement that repairs the harm, all participants have the opportunity to empathize and develop capacity for pro-social moral agence (Hymel, Rocke-Henderson & Bonanno, 2005, p. 9).

Healthy Youth Development through Restorative Measures

Membership, accountability, and decision-making
Three stories have been selected to illustrate the application of restorative measures as a thoughtful means of furthering healthy adolescent development in students.

Oscar Reed, Circle keeper and trainer, has worked in the Minneapolis Public Schools, and tells this story:

The principal of one of the middle schools with whom we collaborate asked me to facilitate a Circle for nine members of the school's basketball team. Recently, they had done considerable damage to an opposing team's locker room. The principal felt that it would be too easy to suspend them, which is what the students expected, and valuable lessons would be lost.

In attendance for the Circle were parents, social workers, teachers, the basketball coach, the school's police liaison and the maintenance engineers. After two hours of testifying, justifying, apologizing, and finally, realizing the far reaching effects of their actions, the team was left alone to think and talk about what they had done, as well as come up with some "consequences" for their actions. This two-hour Circle was by far the hardest thing these boys had ever done.

The following day the Principal called to tell me the boys had come up with a solution. The proposed plan included:

1) *the team taking part in paying for the damaged door;*
2) *each member of the team writing a letter of apology to the other school;*
3) *attending a school assembly and sharing with the entire school not only what they did but how they decided on their own "punishment"; and finally*
4) *helping the school's maintenance engineers clean all the boys' restrooms for one week.*

Keep in mind that the alternative was suspension, which, for these boys, meant a few days at home watching TV or playing video games and walking the streets.

The opportunity to work with these students gave me an opening to introduce the principles of Health Realization through the Restorative Justice Circle. Then they tapped into their own natural wisdom to find solutions for inappropriate actions.

Through the circle, the students practiced life skills with a specific, serious situation. Because the adults left the students to themselves to solve the problem, they were intimately engaged in developing "a feeling of accountability in the context of a relationship among equals." The boys were members of a team, but they also recognized they were members of a school. As responsible members, they included specific tasks to "clean up" the mess they made. Working by themselves, they proved they could make good and fair decisions that required them to make amends. They made themselves accountable to the school they damaged through the letters of apology and paying for the door, and they made themselves accountable to their school by explaining themselves in the assembly, and they made symbolic restitution to janitors everywhere by helping to clean the bathrooms in their school.

Oscar saw the youth after their assembly. They seemed to carry themselves with more confidence, head up and open. Perhaps that was due to their renewed connection to their school, to its reputation, and to its clean bathrooms. Perhaps they also were relieved that while they experimented with their own identity, trying out various roles, they did not have to commit larger perspective themselves irrevocably to being vandals and fools.

Conflicting values and looking outward

Adolescents, as they grow into adulthood, move from a self-centered view of the world to a larger perspective, hopefully encompassing themselves and others. Youth do all kinds of things that provide exceptional opportunities for practicing reflection and perspective taking. The discussions in a conference can be profound, as the following story from a high school restorative justice planner illustrates.

Four juniors got into a fight in the school hallway, were sent to the office and agreed to sit in circle to try to repair the harm, in lieu of suspension. Three boys admitted to jumping the fourth boy because he had made disparaging remarks about a friend of theirs who had been killed in a car crash earlier in the month. Through discussion, all four boys agreed that the person they had harmed the most was the boy who had died. He did not deserve the

disparaging remarks, and he would not have wanted the friends to start a fight. So they all agreed to go to the cemetery, and one by one, apologize at the dead boy's grave.

These boys may have struggled with conflicting values: defending a dead friend's honor versus honest speech, however insensitive. They also were engaged in experimenting with their own identity: by fighting, am I brave, a true friend, or a tough kid? By talking out loud, am I painfully honest, clever with words, mean, unthinking or a bully? What is my relationship to my friends, to the school, and in this instance, to the dead? They tried out several roles in the course of this story, right up to the visit to the gravesite.

The alternative consequence for all four of the boys was out-of-school suspension. Allowing feelings of grief and shame to compete with a game cube and a TV set for 3-5 days does not "encourage reflection on self in relation to others or self-discovery by looking outward as well as inward," as these boys did.

Capacity to enjoy life and self-expression
The final story is about an argument over dancing. Konopka (1973) describes the capacity to enjoy life as the opportunity "…to be creative, to be frivolous, to do things on one's own, and to learn to interact with all kinds of people—people of different life styles, different economic and cultural backgrounds, different ages."

One might think that dancing is the expression of enjoying life, but in one high school, with one group of girls, a discussion about different dance styles and the girls' dancing ability resulted in an argument going from the hall to the bus, drawing a crowd, and the police liaison officer called in to handle the situation. He could have charged the girls with disorderly conduct. In addition, the assistant principal could have suspended them out of school for 2-3 days. Instead, they all agreed to meet in Circle and develop an agreement.

At the core of the shouting was this issue: "One student perceived another student to be talking about her and disrespecting her way of dancing," wrote the social worker that facilitated the Circle. The girls—Tsehai, Samantha, Kee, Zoie and Tanisha—were African American, Hmong American, African immigrant and Anglo. The last two girls were the arguers, and both were transfer students, one from Kenya and the other from inner-city Boston.

Part of the issue was that the transfer students did actually dance better than all the other Midwestern students, and they were vying for attention as the new kids in the school. In the Circle discussion, they realized they had more in common with each other than not. All girls were able to "quickly acknowledge they were really coming from the same place, same style of dance," and could share in each other's experiences. The agreement was that they would repair the harm by coming together in the hallway for a "shared dance experience after school."

Zehr (2002) recommends that in restorative justice, we pay attention to the intended and unintended outcomes. By the pictures of the dance session, it looked as if the girls were participating in creative arts, learning self-expression and cultivating a capacity to enjoy life—all outcomes intended and in line with positive youth development. In this instance, an unintended but positive outcome was that some boys stopped by to watch and applaud.

Participating as members of a group or household, experiencing decision-making, acquiring a sense of belonging, experimenting with identity, developing a feeling of identity in the context of a relationship among equals, and cultivating the capacity to enjoy life are the developmental tasks for healthy youth. As a district superintendent once pointed out, these are also the elements that draw a youth to join a gang or other negative peer groups. Whether we as

adults pay attention to adolescents or they pay attention to themselves, they will look for opportunities to develop, positively or negatively. We adults have ample opportunity to help direct youth, even if they call us bad names, key our car, fight in the lunchroom or get arrested for possession of a controlled substance.

Youth Development Programs

The Konopka Institute conducted an extensive review of research, and found common components of successful programs for youth development. This list provides an excellent framework for adolescent restorative justice programs, in schools, communities, or the legal system. Each conference, peer jury or circle should check off each of these seven elements as part of their operating system. Successful youth development programs:

•   Build strong adult-youth relationships;
•   Have a clear, well articulated philosophy about youth;
•   Build interventions on a theory of youth development, grounded in research;
•   Recognize the strengths of youth;
•   Recognize the human resources in the community;
•   Actively involve young people in all aspects of the program;
•   Provide life skills (Konopka, 2000, p. 20).

In *Restorative Measures: Respecting Everyone's Ability to Resolve Problems*, Cordelia Anderson outlines guiding principles for restorative measures in schools, including the importance to "build on youths' strengths and recognize them as resources. Each child/youth has strengths and potentials, is a resource, and needs to be able to make change to achieve success." Seeing youth as resources requires that adults "have high expectations for each student rather than seeing someone only as a risk with deficits." Restorative measures facilitate a student's success, whether victim or offender, friend or bystander (Anderson, 1997, p. 20).

Life skills are practiced in every restorative session, including listening and speaking, self-reflection and problem-solving. Life skills can also be included in agreements, such as writing and illustrating a children's book or tutoring. One student agreed to volunteer at three pow-wows, working with the managers on set-up, ticket-taking, greeting and seating the drum groups and concessions. Connecting a student with an adult who helps teach skills strengthens the student's connections with caring adults.

As participants in conferences or circles, young people are active participants, but they can also serve as co-facilitators or co keepers, recruiters and restorative peer jury members. By inviting past participants to future sessions, student who have done harm or who have been harmed, can use their experience in meaningful ways to give insight to others.

Final Thoughts

Positive youth development provides a framework for individuals, programs and institutions that work with youth. Future youth programs should include an emphasis on restorative measures as a means to develop healthy youth. Research and evaluation of programming should assess the ability of variations of restorative practices (e.g., circles, restorative conferencing, peer juries) to meet various youth developmental needs. These practices, like other youth development programs should be tested for short and long term effects on: self-esteem, depression, substance use, academic achievement as well as recidivism rates.

The AddHealth study states that school connectedness is as important to young people's health as "immunization programs, nutrition programs, health and physical education curricula, and

health services" (McNeely, Nonnemaker, Blum, 2002, p. 145). Positive youth development provides a framework that can be used to broaden and support the practice of restorative measures. Often, conferences and circles start out tense; participants may be angry, afraid or embarrassed. Hopefully through talk, support, accountability and restitution, the path of a youth, whether they have offended or have been harmed, may be cleared to cultivate a capacity to enjoy life.

References

Anderson, C. (1997). *Restorative Measures: Respecting Everyone's Ability to Resolve Problems*, Minneapolis, MN: Minnesota Department of Children Families and Learning/Minnesota Department of Education.

Blum, R.W. & Rinehart, P.M. (1997). *Reducing the risk: Connection that make a difference in the lives of youth.* Minneapolis, MN: Division of General Pediatrics and Adolescent Health, University of Minnesota.

Clifford, M.M. (1993). Students need Challenge, Not Easy Success. In A.E. Woolfolk (Ed.), *Readings & Cases in Educational Psychology.* (pp. 148-153). Needham Heights, MA: Allyn & Bacon.

Costenbader, V. & Markson S. (1998). School Suspension: A Study with secondary students. *Journal of School Psychology, 36,* (1), pp. 59-82(24).

Gathercoal, F. (1993). *Judicious Discipline.* San Francisco: Caddo Gap Press.

Hymel, Rocke-Henderson, Bonanno (2005). Moral disengagement: A Framework for Understanding Bullying Among Adolescents. *Journal of Social Sciences Special Issue No.8* (pp. 1-11).

Konopka, G. (1973). Requirements for Healthy Development of Adolescent Youth. *ADOLESCENCE, VIII* (31), pp.1-26.

Mann Rinehart & Kahn (2000). *Growing Absolutely Fantastic Youth: a guide to best practices in healthy youth development,* Minneapolis, MN: Konopka Institute for Best Practices in Adolescent Health, University of Minnesota.

McNeely, Nonnemaker, Blum (2002). Promoting School Connectedness: Evidence from the National Longitudinal Study of Adolescent Health, *Journal of School Health, 72*(4), pp. 138-145.

Reed, O. (2001). The Basket Ball Team: Community Empowerment and Prevention Program. *Life's Missing link Newsletter, Spring, 2001, 2.*

Stutzman Amstutz, l. & Mullet, J.H. (2005). *The Little Book of Restorative Discipline for Schools: Teaching Responsibility, Creating Caring Climates.* Intercourse, PA: Good Books.

Zehr, H. (2002). *The Little Book of Restorative Justice.* Intercourse, PA: Good Books.

Process Evaluation and Continuous Improvement in Community Youth Programs

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Process Evaluation and Continuous Improvement in Community Youth Programs

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Abstract: A method of using process evaluation to provide improvement plans in order to promote community youth programs is described. The core elements of this method include the following: (1) collection and analysis of baseline data, (2) feedback provided to programs describing their strengths and limitations, (3) programs provided with assistance in preparing improvement plans in regard to their baseline data, and (4) follow-up evaluation assessed program changes based on their improvement plans and baseline data. A case study of an inner-city neighborhood youth center is used to demonstrate this method.

Introduction

Numerous evaluations of youth programs founded on youth development principles have been conducted. However, most of these evaluations focused on youth outcomes, and more specifically, on whether a program had a positive influence on youth participants' psychosocial development (Allen, Philliber, Herrling, & Kupermine, 1997; Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002; Hawkins, Catalano, Kosterman, Abbott, & Hill, 1999; Roth, Brooks-Gunn, Murray, & Foster, 1998). There is a growing sentiment in the youth development field, however, that evaluations must focus more on what, in fact, is going on within the programs and whether programs are fulfilling the objectives of the youth development approach to programming (Catalano et al., 2002; Roth et al; 1998). It is not enough to know that a given program works. It is also important to know whether programs that work actually adhere to a youth development model. Thus, "process evaluations" are a necessary part of evaluating and refining the programming offered within youth development programs (Catalano et al., 2002; Gambone, Cao, Lewis-Charp, Sipe, & Lacoe, 2004; Gambone, Klem, & Connell, 2003; National Research Council, 2002).

Process Evaluation

Process evaluation is a form of program evaluation that applies descriptive research methods to compare the program being delivered with the program that was originally intended by planners (Stufflebeam & Shinkfield, 1985). Process evaluations can offer program directors a better understanding of how a program concept has been implemented. Additionally, they can provide insight into the strengths and weaknesses of a program's structure and delivery, and they can enhance the ability of program directors to describe their programs to outside sources. Process evaluations also help to identify which, among various program elements, are most essential for promoting developmental change (Larson, 2000). Furthermore, process evaluation data can play a critical role in improving a program's overall impact.

According to Patton (1994), a process evaluation should provide feedback on the original program and lead to improvements in the implementation and effectiveness of the program. Such modifications and improvements, in turn, should lead to improved program outcomes and impacts over time.

Finally, process evaluations can help funders and policy makers make informed choices about which programs to fund based upon the programs' accountability in offering the program as planned. In short, process evaluations can play an important role in describing the extent to which youth development programming is being implemented and in improving the overall quality of such programs.

The steps involved in using process evaluation to promote continuous program improvement are summarized in the next section. This section is followed by a case study of how the process worked in a Boys and Girls Club.

Process Evaluation Steps

Phase 1: A survey was administered to youth participating in the participating programs. The survey used for this purpose is the Youth Development Assessment Device (YDAD; Sabatelli, Anderson, & Rubinfeld, 2006). The YDAD was designed to assess the "developmental quality" of youth programs from the perspective of the youth. Developmental quality is the extent to which a program provides a set of program components that previous research has found to facilitate positive youth development (Eccles & Gootman, 2002). Specifically, questionnaire items were created to assess the following program attributes:

    a. the presence of supportive relationships;

    b. the existence of a physically and emotionally safe environment;

    c. the existence of programs offering challenging activities, and

    d. the existence of opportunities for youth to be meaningfully involved with their programs.

Each of these conceptual dimensions is characterized by a constellation of interrelated sub-dimensions. For example, with respect to safety, a high quality developmental youth program creates an environment that is both physically and emotionally safe. With respect to supportive relationships, a high quality developmental program is staffed by individuals who are knowledgeable of youth and who create opportunities for youth to receive guidance, emotional support, and instrumental or practical support.

The dimensions and conceptual sub-dimensions characterizing programs that provide supports and opportunities promoting youth development are summarized in Table 1 on the following page.

Following administration of the survey, results were shared at a feedback session with youth program staff.

Phase 2: Based on the results of the first survey administration, programs were provided technical assistance to create program improvement plans. A liaison worked directly with youth-staff teams to interpret the results of the first round of data and to identify areas for improvement. The youth programs then had the opportunity to implement their plans, with further technical assistance, over a one-year period.

Phase 3: At the end of the project year, the process evaluation was repeated. Once again, the same youth were asked to fill out the survey questionnaire designed to assess their perceptions of and experiences within the programs. These data were analyzed and reports were distributed to the youth programs during a feedback session.

Phase 4: Comparisons between youth's responses on the process survey between Time 1 and Time 2 were used to assess program changes. The two primary questions addressed were as follows:
  (1) to what degree did youth report changes in the developmental quality of the program they attended, and
  (2) were the reported changes consistent with the improvement plan that had been developed by each youth program?

Case Study

1. Process Evaluation Time One
Staff at the Boys and Girls Club administered the YDAD to youth attending an inner city Boys and Girls Club. This data was then analyzed by the authors. The scores of males and females and younger versus older youth were contrasted in order to maximize the usefulness of the data collected from the youth. Results revealed that females scored higher than males in a number of different areas (see Table 1).

Table 1
Average Scores on the Process Indicators: Contrasting Males and Females
and Contrasting Younger Youth and Older Youth (n=99)

	Females (*n* = 20)	Males (*n* = 79)	12-15 (*n* = 59)	16-18 (*n* = 40)
Supportive Relationships				
Guidance	15.8*	14.4*	14.4	15.0
Emotional Support From Staff	16.0*	14.0*	14.6	14.0
Practical Supports	16.0*	13.5*	14.1	13.8
Knowledge of Youth	15.1*	13.4*	13.9	13.5
Safety				
Physical Safety	13.3*	11.9*	12.4	12.0
Emotional Safety	16.5*	14.7*	15.0	15.1
Challenging activities				
Growth and Progress	16.2*	14.1*	14.6	14.4
Skill Building	15.9*	14.3*	15.2*	13.8*
Interesting Activities	12.5	11.6	12.0	11.3
Meaningful involvement				
Leadership	15.8*	13.9*	14.5	13.8
Decision-making	12.6*	11.2*	11.6	11.4
Belonging	16.5*	14.2*	14.7	14.7
Community Involvement	16.0*	14.2*	14.6	14.4

Note: * indicate statistically significant difference.

2. Improvement Plan

The Boys and Girls Club received technical assistance from the Yale Consultation Center's, Youth Development Training and Resource Center, to develop an improvement plan. The plan was as follows:

	Goal Area		
	Sense of Belonging for Males		Practical Supports for Males
Objective	Close the gap between the males' and females' involvement at the center. The team set the goal of increasing males' Sense of Belonging Scores from 14.2 to 15.2.		Increase males' scores on the practical supports available at the center from 13.5 to 14.5.
Proposed Activities	Have staff members approach youth (one on one) to review their membership status. Provide youth with new and improved membership cards and teach them about the many benefits of the new membership system. Reinforce the idea that the Boys and Girls Club is an important membership service organization to belong to.		Boys and Girls Club staff will hold bi-monthly group sessions with youth to address their concerns and seek input on program improvements. Staff will build greater rapport with disengaged youth to enhance their sense of safety and willingness to approach a staff person with personal issues or problems. Staff and youth will receive training in Advancing Youth Development practices, Girls and Boys Club of USA Principles of Youth Work, Psychology for Kids, What Teens Need to Succeed, and Conflict Resolution skills building materials.

3. Process Evaluation Repeated

One year after the first administration of the YDAD, the survey was re-administrated. The results from these surveys were then compared with the results from the surveys collected at time one (see Table 2).

Table 2

Summary of the Two Waves of Data within Program Areas Targeted for Change

Goal Area	2004 Score	Goal	2005 Score
Belonging	14.2	15.2	16.4
Practical Supports	13.5	14.5	16.4

Note: Data summarized in Table 2 pertain to males only.

4. Outcome

This Youth Center aimed to increase males' *Sense of Belonging* scores from 14.2 to 15.2, and male participant *Practical Supports* scores from 13.5 to 14.5. Results from the second round of data collection revealed that this center met both of its goals. This indicated that the improvement plan implemented at the Center had been successful.

Conclusions

The Boys and Girls Club set specific objectives to raise males' *Sense of Belonging* and *Practical Supports* scores. Data presented in Table 2 support the conclusion that the center was successful in achieving its improvement goals. This process evaluation resulted in tangible and positive changes in youth's experiences of the program. Other organizations committed to promoting youth development should be encouraged from these findings to adopt this "information processing" approach to the evaluation and refinement of their programs.

References

Allen, J.P., Philliber, S., Herrling, S., & Kupermine, G. (1997). Preventing teen pregnancy and academic failure: Experimental evaluation of a developmentally based approach. *Child Development, 68*(4), 729-742.

Catalano, R.F., Berglund, M.F., Ryan, J.A.M., Lonczak, H.S., & Hawkins, J.D. (2002). Positive youth development in the United States: Research findings on evaluations of positive youth development programs. *Prevention and Treatment, 5*(15), 1-111.

Eccles, J. & Gootman, J.A. (Eds.) (2002). *Community Programs to Promote Youth Development.* Washington, DC: National Academies Press.

Gambone, M.A., Cao Y.H., Lewis-Charp, H., Sipe, C.L., & Lacoe, J. (2004). A comparative analysis of community youth development strategies. College Park, MD: Center for Information and Research on Civic Learning and Engagement.

Gambone, M.A., Klem, A., & Connell, J.P. (2003). *Finding out what matters for youth: Testing key links in a community action framework.* Philadelphia, PA: Youth Development Strategies, Inc. and Institute for Research and Reform in Education.

Hawkins, J.D., Catalano, R.F., Kosterman, R., Abbott, R., & Hill, K.G. (1999). Preventing adolescent health-risk behaviors by strengthening protection during childhood. *Archives of Pediatric Medicine, 153*(3), 226-234.

Larson, R.W. (2000). Toward a psychology of positive youth development. *American Psychologist, 55,* 170-183.

National Research Council and Institute of Medicine (2002). Community programs to promote youth development. Report from the Committee on Community Level Programs for Youth. J. Eccles & J. Gootman (Eds.), *Board on children, youth and families.* Division of Behavioral Social Sciences and Education. Washington, DC: National Academy Press.

Patton, MQ. (1994). Developmental evaluation. *Evaluation Practice, 15,* 311-319.

Roth, J., Brooks-Gunn, J., Murray, L., & Foster, W. (1998). Promoting healthy adolescents: Synthesis of youth development program evaluations. *Journal of Research on Adolescence, 8*(4), 423-459.

Sabatelli, R.M., Anderson, S.A., & Rubinfeld, S. (2006, June). *Process Evaluation Report: Neighborhood Youth Center Program Evaluation.* Prepared for The State of Connecticut, Office of Policy and Management. Online: http://www.opm.state.ct.us/pdpd1/grants/NYC/NYC_ProcesstEvaluation2006.pdf

Stufflebeam, D.L., & Shinkfield, A.J. (1985). *Systematic evaluation: A self-instructional guide to theory and practice*. Boston: Kluwer-Nijhoff.

Evidence to Support the Use of the Retrospective Pretest method to Measure Dietary and Physical Activity Behavior and Self-Efficacy in Adolescents

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Evidence to Support the Use of the Retrospective Pretest method to Measure Dietary and Physical Activity Behavior and Self-Efficacy in Adolescents

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Abstract: This study compared the retrospective pretest-posttest method to the traditional prospective pretest-posttest method assessing adolescents' dietary and physical activity, self-efficacy and behaviors. Participants were 7th and 8th grade students at a rural K-8th grade elementary school in Northern California (n=188). All participants completed an evaluation instrument (traditional pretest), followed by a 9-lesson dietary and physical activity intervention. Upon completion of the intervention, participants completed a second and identical evaluation instrument which served as a traditional posttest. The following day, participants completed another evaluation tool, this time formatted as a retrospective pretest. Analysis included sample t tests comparing the means of each method. Participants (n = 154) with a mean age of 13 ± .7 years old were included in the analyses (52% female). Paired sample t tests reported non-significant differences between the two methods for dietary behavior and dietary self-efficacy, yet significant differences were found for physical activity behavior ($p < .05$) and physical activity self-efficacy ($p < .01$). We conclude that the retrospective pretest-posttest method was as good a measure of dietary self-efficacy and behavior as the traditional prospective pretest-posttest method and may be better at attenuating response-shift bias when assessing physical activity self-efficacy and behavior.

Introduction and Background

Evaluation is an important component of Youth Development programmatic efforts designed to change knowledge and behaviors. A one-group pretest-posttest design is often selected, where the evaluator uses a traditional prospective pretest-posttest method of data collection (Campbell & Stanley, 1966; Smith, Genry, & Ketring, 2005). This method has limitations in real world application, especially with adolescents. Administering tests on two separate occasions may result in additional burden and uses vital program delivery time for the Extension educator (Raidl et al., 2004).

When working with adolescents, establishing rapport at the first educational meeting is important for learning. Test taking can be perceived as intrusive and an obstacle to establishing trust (Stipek, 2002). Administering a pretest at the beginning of the program could reduce pretest completion rates because not all who participate in the program are in attendance at the pretest date (Raidl et al., 2004). In addition to practical barriers, the traditional prospective pretest-posttest method can result in response-shift bias where the participant rates himself differently on the posttest after acquiring new information related to the test item (Cook & Campbell, 1979; Howard & Dailey, 1979). The standard of measurement shifts from the first administration of the test (pretest) to the second (posttest) (Cook & Campbell, 1979; Howard & Dailey, 1979). The result is an underestimated effect during program evaluation (Hill & Betz, 2005). Such underestimation may be prevalent in nutrition-related programs where adolescents are likely to overestimate their initial capabilities. After the program, they may be more realistic about their capabilities, masking actual changes with a prospective pretest-posttest (Howard et al., 1979).

Using a retrospective pretest-posttest method instead of a traditional prospective pretest-posttest method could be a viable substitute for youth program evaluation. This method asks youths to take one test at the end of the program responding to each evaluation question twice. First, respondents answer each item in a traditional posttest manner, reporting current behaviors or skills. Then they respond to the same items retrospectively, before the program began.

The retrospective pretest-posttest method has been recommended when conducting program evaluation using self-report measures because the design encourages participants to rate themselves from the same perspective producing a more legitimate evaluation of program outcomes (Aiken & West, 1990; Howard & Dailey, 1979; Howard et al., 1979; Pratt, McGuigan, & Katzeva, 2001; Rohs, Langone, & Coleman, 2001). Evaluation of the retrospective pretest-posttest method resulted in positive results with adults addressing various behaviors such as parenting (Pratt et al., 2001), nutrition and resource management (Raidl et al., 2004; Rockwell & Kohn, 1989), food safety and menu planning (Rohs et al., 2001). The retrospective pretest-posttest method may be a promising avenue for youth program evaluations, especially for program content where overestimation of initial capabilities are likely.

Two major literature reviews of dietary and physical activity evaluation tools for low-income youth and adults discuss the importance and need for low respondent burden measures for these audiences (Contento, Randell, & Basch, 2002; McCleland et al., 2001; Townsend, 2006). While the retrospective pretest method may be less burdensome, we found no studies comparing this method relative to the traditional pretest-posttest method with youth for dietary and physical activity behaviors and self-efficacy. Given the importance of evaluation and

federal reporting for Extension programs, it is valuable to determine if the retrospective pretest method is viable with adolescents.

Purpose

The purpose of this study was to investigate the retrospective pretest-posttest method as an appropriate alternative to the traditional prospective pretest-posttest for evaluation of a youth development intervention with adolescents.

Methods and Procedures

Procedure

All participants completed an evaluation instrument (traditional prospective pretest) assessing dietary and physical activity behaviors and self-efficacy, followed by a 9-lesson dietary and physical activity intervention, called EatFit (Horowitz, Shilts, & Townsend, 2004). Upon completion of the intervention, participants completed a second and identical evaluation instrument which served as a traditional posttest. The following day, participants completed another evaluation tool, this time formatted as a retrospective pretest. This version was similar to the pre and posttests but the question headings read, "These questions are asking about your food/physical activity choices before EatFit. Think back 6 weeks, before you had any EatFit lessons. Fill in the bubble that best describes your food/physical activity choices before the EatFit classes began." The Extension staff person teaching the intervention was a community nutrition educator for California Youth Food Stamp Nutrition Education (FSNE) and was trained and certified to teach the intervention. The study protocol was approved by the Institutional Review Board at the University of California, Davis.

Sample

The sample was drawn from a low-income ($\geq$50% qualified for free or reduced price school lunch), rural K-8th grade elementary school in Northern California. The participants were all 7th and 8th grade students (n=188) participating in physical education. Of the 188 potential participants, 28 participants did not return both consent and assent forms and 6 did not complete the evaluation instruments leaving a total number of 154 participants.

Measures

A self-administered instrument assessed participants' dietary behaviors (19 items), physical activity behaviors (4 items), dietary self-efficacy (19 items), and physical activity self-efficacy (4 items). The items in the dietary and physical activity behavior sections were adapted from the Centers for Disease Control Youth Risk Behavior Survey (YRBS) (Center for Disease Control and Prevention, 2007). The YRBS dietary and physical activity items were modified slightly to include specific targeted behaviors of the intervention. Self-efficacy was defined as confidence to perform a targeted behavior and was determined by asking participants to self-report confidence to perform targeted behaviors (Bandura, 1986). Response range for the behavior-related items was an 8-point scale signifying the number of days per week the participant engaged in the targeted behavior, i.e., 0-7 days per week. The response range for the self-efficacy items was a 4-point scale, i.e., 1 equaling not at all confident to 4 being totally confident.

Reliability testing of the Youth Risk Behavior Survey (YRBS) items with a nationally representative sample of adolescents indicated Kappas ranging from 91.1-64.2% (Brener, Collins, Kann, Warren, & Williams, 1995). Using the concurrent method of Willis (1994), all

items adapted for this study were cognitively tested (Contento et al., 2002). In individual interviews with 8th grade students (n=16), items were revised and retested using 4 questions:

- *What does the question mean to you using your own words?*

- *How did you come up with your answer?*

- *Think about other students in your grade at school. Are there any difficult words for them?*

- *How would you make this question clearer to them?*

Items were evaluated for content validity by three experts in behavioral nutrition and found to represent the corresponding construct domain. The instrument was pilot tested with 6-8th graders (n=34) (Shilts, Townsend, & Horowitz, 2002).

A reliability assessment of the revised instrument was conducted to establish that the items were measuring phenomena in a reproducible and consistent way (Carmines & Zeller, 1979; Litwin, 1995). Seventh and 8th grade students (n=46) completed the instrument on two occasions, three weeks apart, with no intervention. Reliability coefficients were .73 for the dietary behavior items, .55 for the physical activity behavior items, .59 for dietary self-efficacy items and .48 for physical activity self-efficacy items. Scales and instruments used with adults are thought to have good test-retest reliability with coefficients of .7 or greater (Litwin, 1995). The coefficients for the dietary behavior items met this criterion. The other coefficients are lower than .7, indicating more random error associated with the items. Because this reliability assessment was conducted with 12-14 year olds, we are considering them marginally acceptable for our purposes. The retrospective version of the evaluation instrument was additionally cognitively tested with adolescents using the same methods as previously described and then revised (n=12).

Intervention
The youth development intervention is a National 4-H juried curriculum called EatFit and is designed to improve the dietary and physical activity behaviors of adolescents 11-14 years old (Horowitz et al., 2004; Shilts, Townsend, & Horowitz, 2004). The intervention includes nine experiential lessons driven by Social Cognitive Theory (SCT) and uses web-based assessment (www.eatfit.net) to assist participants in dietary analysis and goal setting (Horowitz, Shilts, & Townsend, 2005). A description of the intervention has been reported previously (Horowitz et al., 2004; Shilts et al., 2004). This intervention was designed specifically for three U.S. Department of Agriculture youth programs in California: EFNEP, FSNE and 4-H.

Analysis
Statistical analyses were conducted using SAS PC version 8.1 (SAS Institute, Inc). Double data entry in two separate files was performed and each file was compared for differences using the *compare procedure*. Paired sample *t* tests compared the difference in mean scores between the traditional pretest and the retrospective pretest for each variable, as well as between the retrospective pretest and posttest and the traditional pretest and posttest. Pearson correlation was used to explore the relationship between the two pretest methods to investigate if they were comparable measures.

Results

The mean age of the participants was 13 ± .7. More than half (52%) were female. Participants self-reported as non-Hispanic white (69%), Hispanic (14%), multi-ethnic (14%), Asian/Pacific Islander (2%), and American Indian (2%) [Table 1].

Gender		n	%
	Male	74	48.1
	Female	80	51.9
Ethnicity			
	American Indian	3	1.9
	Asian	3	1.9
	White	106	68.8
	Hispanic	21	13.6
	Multi Ethnic	21	13.6
Age			
	12	39	25.3
	13	80	51.9
	14	34	22.1
	15	1	0.6
Grade			
	7th	68	44.2
	8th	86	55.8

Mean scores for each test (retrospective pre, traditional prospective pre, post) and differences are reported in Table 2. Paired sample t tests reported non-significant differences between the two methods (retrospective and traditional prospective) for dietary behavior ($p = .58$) and dietary self-efficacy ($p = .22$), yet significant differences were found for physical activity behavior ($p = .02$) and physical activity self-efficacy ($p = .002$) [Table 2].

| Variable | Pre | Retro | Post | ←------------- Differences ------------→ | | |
				Retro- Pre	Pre- Post	Retro- Post
Dietary Behavior	63.42 ±15.19	62.76±13.85	67.49±13.91	-0.66±14.60	4.07±12.70***	4.77±13.75****
Physical Activity Behavior	19.82±5.63	18.68±5.53	18.64±6.21	-1.14±5.87*	-1.17±5.91*	-0.04±5.49
Dietary Self-Efficacy	54.90±9.72	53.94±10.14	57.25±9.99	-0.95±9.71	2.29±7.85***	3.44±8.45****
Physical Activity Self-Efficacy	13.97±2.40	13.37±2.55	14.20±2.31	-0.68±2.57**	0.16±1.73	0.91±2.45****

$*p < .05, **p < .01, ***p < .001, ****p < .0001$

The correlations (Pearson correlation coefficient) between the retrospective pretest and the traditional prospective pretest for each variable were: dietary behavior (r =.50, $p<.0001$), dietary self-efficacy (r =.52, $p<.0001$), physical activity behavior (r =.44, $p<.0001$) and physical activity self-efficacy (r =.57, $p<.0001$). These results indicate that the pretests were moderately correlated.

Discussion

Our results suggest that the retrospective pretest method was as good a measure of dietary self-efficacy and behavior in adolescents as the traditional pretest method, and may be better at attenuating response-shift bias when assessing physical activity self-efficacy and behavior.

Correlations between the retrospective pretest and the traditional prospective pretest investigated if participants had reliable recall retrospectively relative to the prospective method. To illustrate that the retrospective pretest was as good as the traditional prospective pretest, the test scores would have the same mean (paired *t* test) and would be correlated. The paired *t*-test revealed no differences between the retrospective pretest and the traditional pretest for dietary self-efficacy and behavior variables and they were significantly correlated. The results suggest that the retrospective pretest for the dietary variables was comparable to the traditional pretest and could be substituted when appropriate.

Bias is inherent in all self-report instruments regardless of how administered (Hill & Betz, 2005). Bias is systematic error that reduces the validity of an evaluation tool. The traditional prospective pretest may encounter a response-shift related to participants' changed standards of measurement after the intervention (Rohs et al., 2001). With the retrospective pretest-posttest method, the standard of measurement is the same for both tests. However, the retrospective format is vulnerable to other threats to validity such as motivational bias (Hill & Betz, 2005). The ultimate goal of a well-developed evaluation tool is to minimize the sources of bias, while addressing administration and client burden issues.

A common issue with the retrospective pretest method with adults is overestimation of program effect caused by motivational factors such as justification of effort or socially desirable change (Hill & Betz, 2005). Motivational bias may influence the outcome of a lifestyle intervention such as EatFit. When adolescents have spent time and effort participating in EatFit and then are asked to rate their physical activity change or improvement from before to after the program, behavior and self-efficacy change scores may be inflated as a result of this particular bias (Hill & Betz, 2005). However, this type of bias could affect both testing formats with an inflated posttest. Our results suggest that this type of bias was not present for the dietary behavior and self-efficacy measures.

The pattern of results for physical activity was different from the pattern for dietary items. In comparison to the dietary variables, the physical activity variables were significantly correlated, but the paired *t* tests indicated different means, with students scoring themselves lower on the retrospective pretest. This difference may indicate that physical activity is particularly vulnerable to response-shift bias found in other traditional pre-post test studies of adults resulting in an underestimation of the program results. This interpretation seems reasonable given that the traditional prospective pretest results showed students decreasing physical activity behaviors while making no change in self-efficacy after receiving nine lessons of a nutrition and physical activity intervention. In addition, the results from the prospective pretest method do not support the Social Cognitive Theory's (SCT) construct where change in self-efficacy precedes change in behavior (Bandura, 1986). However, the retrospective pattern of results is consistent with SCT, with a statistically significant increase in physical activity self-efficacy but not for physical activity behaviors. The correlation between change in physical activity behavior and change in physical activity self-efficacy using the retrospective pretest was significant (r = .41, *p* < .0001), indicating that behavior change was related to change in self-

efficacy as anticipated by SCT. The same was true for the relationship between change in dietary behavior and change in self-efficacy ($r = .50$, $p < .0001$).

Although the students made significant improvements in dietary behaviors after receiving the EatFit intervention, they did not do so for physical activity behaviors. It is possible that the nature of the intervention impeded the impact of the program since the intervention took place during physical education class. The EatFit lessons were substituted for the participants' normal physical activity which may have contributed to a decrease in their ratings of physical activity level. In addition, the time period of the intervention occurred during an extremely rainy season of the year, increasing barriers to physical activity.

Limitations
A major weakness of our study was that there was no gold standard against which to compare the two test formats. Observational data would serve such a role. Future research should incorporate sources of objective criteria with which to compare both types of traditional prospective and retrospective self-report test data.

Conclusion

Our results indicate that the retrospective pretest-posttest method of data collection is a viable substitute for the traditional prospective pretest-posttest method to measure dietary and physical activity self-efficacy and behaviors in adolescents.

Implications

Quality and meaningful learning is the goal of all youth development programs and activities such as 4-H, after school programs, Youth FSNE and Youth EFNEP. The traditional prospective pretest-posttest method of evaluation has probably been the most utilized but not without limitations. The ability to reduce the testing burden on the youth participant while maintaining the ability to assess knowledge or attitude change is extremely valuable. By reducing the "test" to a one time event 4-H staff might be able to increase data collection from volunteer leaders. Increasing data collection opportunities will allow staff to better evaluate a larger variety of programs and projects being offered and may also provide insight into volunteer leader's skills and training needs.

The use of the retrospective pretest would work well for all types of Youth programs including:

- Junior Master Gardener
- Wildlife Habitat Evaluation Program
- Environmental Education
- Shooting Sports
- Animal Science - Large Animal and Small Animal
- Engineering and Technology
- Family and Consumer Science
- Plant Science
- Health and Leisure
- Social Science - Personal Development and Resource Science.

In addition, the study indicated this method was a good measure for the EatFit intervention and may be applicable to other nutrition programs used in Extension such as Power Play and Jump Start. By reducing the testing to a one time event, the learning time can actually be increased. This is a valuable marketing strategy for staff trying to promote these programs to teachers.

Other Cooperative Extension programs would benefit from these findings. The data collected from an evaluation can provide valuable information for program improvement and enhancement. In addition, evaluation is essential when applying for continued support. The retrospective pretest-posttest method is an appropriate method for an organization to get an accurate picture of participants' perceptions of benefit in addition to participant reports of skills and behaviors. Participants can complete the evaluation in one relatively short session; this can be beneficial when working with any youth group including camps, sports, scouts, etc… In these non-formal educational settings, this method might be more readily accepted by participants as it is less burdensome and "academic" as compared with the traditional pretest-posttest method.

References

Aiken, L.S., & West, S.G. (1990). Invalidity of true experiments self-report pretest biases. *Evaluation Review, 14*(4), 374-390.

Bandura, A. (1986). *Foundations of Thought and Action: A Social Cognitive Theory.* Englewood Cliffs, NJ: Prentice-Hall.

Brener, N.D., Collins, J.L., Kann, L., Warren, C.W., & Williams, B.I. (1995). Reliability of the Youth Risk Behavior Survey questionnaire. *American Journal of Epidemiology, 141*(6), 575-580.

Campbell, D.T., & Stanley, J.C. (1966). *Experimental and Quasi-experimental Designs for Research.* Chicago: Rand McNally.

Carmines, E., & Zeller, R. (1979). *Reliability and Validity Assessment.* Newbury Park, CA: Sage Publications.

Center for Disease Control and Prevention (2007). *Youth Risk Behavior Survey.* Accessed: July 2, 2007. Available online at:
http://www.cdc.gov/HealthyYouth/yrbs/pdf/questionnaire/2007HighSchool.pdf

Contento, I.R., Randell, J.S., & Basch, C.E. (2002). Review and analysis of evaluation measures used in nutrition education intervention research. *Journal of Nutrition Education and Behavior, 34*(1), 2-25.

Cook, T.D., & Campbell, D.T. (1979). *Quasi-Experimentation: Design and Analysis for Field Settings.* Chicago: Rand McNally.

Hill, L.G., & Betz, D.L. (2005). Revisiting the retrospective pretest. *American Journal of Extension, 26*(4), 501-517.

Horowitz, M., Shilts, M.K., & Townsend, M.S. (2004). EatFit: a goal oriented intervention that challenges middle school adolescents to improve their eating and fitness choices. *Journal of Nutrition Education and Behavior, 36*(1), 43-44.

Horowitz, M., Shilts, M.K., & Townsend, M.S. (2005). Adapting a diet analysis program for an adolescent audience. *Journal of Nutrition Education and Behavior, 37*, 43-44.

Howard, G.S., & Dailey, P.R. (1979). Response-shift bias: a source of contamination of self-report measures. *Journal of Applied Psychology, 64*(2), 144-150.

Howard, G.S., Ralph, K.M., Gulanich, N.A., Maxwell, S.E., Nance, D., & Gerber, S.L. (1979). Internal invalidity in pretest-posttest self-report evaluations and the re-evaluation of retrospective pretests. *Applied Psychological Measurement, 3,* 1623.

Litwin, M.S. (1995). *How to Measure Survey Reliability and Validity.* Thousand Oaks: Sage Publications.

McCleland, J.W., Keenan, D.P., Lewis, J., Foerster, S., Sugerman, S., Mara, P., et al. (2001). Review of evaluation tools used to assess the impact of nutrition education on dietary intake and quality, weight management practices, and physical activity of low-income audiences. *Journal of Nutrition Education, 33*(S1), S35-S48.

Pratt, C., McGuigan, W., & Katzeva, A. (2001). Measuring program outcomes: using retrospective pretest methodology. *American Journal of Evaluation, 21*, 341-349.

Raidl, M., Johnson, S., Gardiner, K., Denham, M., Spain, K., Lanting, R., et al. (2004). Use retrospective surveys to obtain complete daa sets and measure impact in extension programs. *Journal of Extension, 42*(2). Available online at: http://www.joe.org/joe/2004april/rb2002.shtml

Rockwell, S.K., & Kohn, H. (1989). Post-then-pre evaluation. *Journal of Extension, 27*(2). Available online at: http://www.joe.org/joe/1989summer/a1985.html

Rohs, F.R., Langone, C.A., & Coleman, R.K. (2001). Response shift bias: a problem in evaluating nutrition training using self-report measures. *Journal of Nutrition Education, 33*(3), 165-170.

SAS Institute, Inc. (Version 8.1). Cary, NC.

Shilts, M.K., Townsend, M.S., & Horowitz, M. (2002). Pilot study of the EatFit intervention to determine sample size and protocol for a randomized controlled trial. *Center for Advanced Studies in Nutrition and Social Marketing, University of California, Davis.* Available online at: http://socialmarketing-nutrition.ucdavis.edu/publications.htm#review6

Shilts, M.K., Townsend, M.S., & Horowitz, M. (2004). An innovative approach to goal setting for adolescents: guided goal setting. *Journal of Nutrition Education and Behavior, 36*(3), 155-156.

Smith, T.A., Genry, L.S., & Ketring, S.A. (2005). Evaluating a Youth Leadership Life Skills Development Program. *Journal of Extension, 43*(2), Available online at: http://www.joe.org/joe/2005april/rb2003.shtml

Stipek, D. (2002). *Motivation to Learn: Integrating Theory and Practice*. 4th ed. Boston: Allyn & Bacon.

Townsend, M.S. (2006). Evaluating food stamp nutrition education: process for development and validation of evaluation measures. *Journal of Nutrition Education and Behavior, 38*, 18-24.

Willis, G. (1994). *Cognitive Interviewing and Questionnaire Design: A Training Manual (Working Paper Series No. 7)*. Hyattsville, MD: Centers for Disease Control and Prevention, National Center for Health Statistics.

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Measuring the Influences of Youth Participation in Ohio 4-H Camps

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Measuring the Influences of Youth Participation in Ohio 4-H Camps

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Abstract: Findings from a multi-component 4-H camp marketing and enrollment study of Ohio 4-H camps are highlighted. Significant influencers on the camp enrollment decision (parents, other adults, peers, siblings, and the respective camper) are evaluated as well as the effectiveness of various marketing techniques. The data found in this study indicates that the decision to enroll in camp is most influenced by the respective 4-H camper; however parents are also a strong factor in the choice to participate in 4-H camps. Alumni parents report significantly higher influence in the camp enrollment decision than those parents who are not alumni of 4-H. Personal methods of promoting camps were rated the most effective in reaching potential camp audiences.

Background

4-H camping is an extracurricular activity choice that involves hundreds of thousands of youth annually in a youth development experience under the direction of 4-H programs nationwide. According to National 4-H Enrollment Statistics (USDA, 2005), 299,297 youth participated in overnight 4-H camps in 2005. Fifty-eight percent of these youth were female and 42% were male. During the same time period Ohio 4-H camps reached 31,709 youth (59% female and 41% male) (Ohio State University Extension, 2005). Typical 4-H camps are operated for four to five days offering broad youth development experiences, outdoor education and life skill programming. Efforts usually are directed by a mixture of professional staff with youth and adult volunteers.

Why 4-H camp participation is valuable?
Youth participation in leadership activities and special interest clubs has been positively related to student academic achievement, school engagement, and educational aspirations (Lamborn, et al (1992). Bartko & Eccles (2003) found adolescents that participated in a number of constructive, organized activities, combined with relatively little participation in passive, unstructured activities showed healthy behavior and development as well as good academic

performance. Involvement in 4-H activities can be attributed to decreased deviance and increased positive skill development. Astroth & Haynes (2002) found that youth involved in after-school programs (such as 4-H) were less likely to be involved in a wide range of at-risk behaviors such as drinking alcohol, shoplifting, damaging property, smoking, or abusing other drugs. They also found that 4-H'ers, when compared to non-4-H youth, are more likely to succeed in school, be more involved as leaders in their communities, help others in their community, and be seen as a role model by other kids. Research evaluated the impact of participation in 4-H camping programs has revealed that 4-H campers grow socially and develop life skills such as personal responsibility, positive decision-making, and taking initiative(Arnold, et.al, 2005; Garst, B. & Bruce, F.A., 2003).

Retaining current 4-H participants
According to Thompson (1998), "The three reasons non re-enrollees ranked as most important in their decision to not re-enroll were (1) they were too busy; (2) other activities were more important; and (3) they did not have enough time for 4-H activities." The researcher concluded that it is not how many activities teens are involved with, but how important 4-H is to them in comparison to the other activities that determine whether they remain in 4-H. Thompson (1998) reports "Ohio 4-H has had little problem attracting preteen 4-H members to the program, but has experienced difficulty retaining the members through the teen years." Thompson (1998), citing a study by Nichols (1973) reported that "members with high participation levels were less likely to drop out and that participation levels were inversely related to their age at initial enrollment." Thompson also cites Beasley (1980) stating "Peer influence is an important factor in recruitment and retention." In Leeds' (1997) study of 4-H members in Union County, Ohio, she found "The high school age participants expressed frustration that 4-H sometimes felt as though it was focused toward younger members." Enrollment trends in 4-H camping reflect these perceptions as camp participation is skewed with a greater participation rate found by youth under the age of 13 (Ohio 4-H Blue Ribbon Youth Enrollment ES-237 Report, 2007).

Why youth participate
The motivation for youth to participate in free-time activities such as camp /or 4-H is conceptualized by Deci & Ryan (1985) using the self-determination theory. They explain the participation of individuals is understood by their natural tendency to take part in experiences to meet their needs to seek out new experiences and pursue interests. They rate types of motivation within a scale ranging from "amotivation" to intrinsic motivation. Those described as "amotivated" may be reacting to lack of control, such as a parent forcing their participation. Those on the other end of the scale (intrinsically motivated) are participating due to the inherent satisfaction of the activity and enjoyment of participating. According to the Eccles' expectancy-value model (Eccles & Harold, 1991), youth respond to the varying levels of support that parents provide to activity choices that youth have. Those activities that parents believe their children are suited for, or can be successful in, will be provided more support by the parents.

Research has found that gender can be predictive of youth extracurricular activity involvement. Mahoney, et al. (2003) found consistently higher participation rates by girls in extracurricular activities. Friends have been found to have a stronger influence on participation choice for girls (Raymore, et al, 1994). Higher socioeconomic status not only directly enables youth to financially participate in activities, but has been related to their confidence and approach to trying new things (Raymore, et al, 1994). Current enrollment data for Ohio 4-H camps reveals a skewed enrollment rate with significantly larger number of female youth participating. A family financial status may play a major factor in the decision to enroll in 4-H camping

programs and may applied in the nature and strength of parental influence in the camp enrollment decision.

Peer influence

The impact of the friend group, or peers, can be a powerful influence in a young person's life. Learning how to interact with others, supporting and identifying interests, and developing autonomy without control of parents or adults are roles of the peer group (Castrogiovanni, 2001). The social group or peer structure endorsement of an activity is positively related to participation in extracurricular activities and non-school clubs (Huebner & Mancini, 2003). Lingren (1995) found that peer influence can keep youth active in extracurricular activities ranging from religious activities to 4-H clubs and school sports. When evaluating the impact of peers, Black (2002) suggests that peer pressure is a stronger predictable factor during the transition from childhood to adolescence than in preteen and teen years.

In a study evaluating the nature of parent and friend relationships within adolescents, Laursen, et al. (2000) found that early adolescents report strong peer and parental reciprocity or mutuality and cooperation. As youth aged, particularly with females, the level of reciprocity became greater with peers than with parents. Rennekamp (1990), studying decision-making practices of teens found, "51% of respondents indicated friends had greater influence, while the remaining 49% cited parents as having more." However, the impact of peer pressure during later adolescence is described as overestimated as youth make more autonomous and personal decisions with less direct influence of the peer group (Black, 2002).

Parental influence

Parents are important socializing agents, providing encouragement for their children to get involved in extra-curricular activities (Brustad, 1988). Parental endorsement of activity choices has been related to higher levels of participation (Huebner & Mancini, 2003; Mahoney & Stattin, 2000). Parental warmth towards their children and parental community involvement were both found to be positively correlated to youth involvement in extracurricular activities (Fletcher, Elder & Mekos, 2000). Eccles et al. (1993) developed an expectancy-value model, connecting parental behavior toward a respective activity and the involvement of youth in that activity choice. Youth tend to follow a similar value structure of their parents, choosing to take part in those activities that their parents support.

In a study of fifth through eighth graders in Arizona, Hultsman (1993) found that parental influence was perceived as a greater influence than other groups (significant other adults and peers) in the decision not to join an activity. The constraints such as transportation and cost of participation can be influential in the decision of parents to restrict involvement of their youth in a potential activity. Howard & Madrigal (1990) found that the decision to participate in an extracurricular activity is first pre-screened by mothers. They found that mothers made early decisions about potential activities before allowing children to be involved in final decision-making processes. According to Hultsman (1993), it is suggested that marketing efforts of programs should shift from parents toward youth as youth age they gradually become stronger influencers in the purchasing of leisure experiences.

Marketing 4-H Camps

According to Chappell (1994), effective marketing doesn't just happen; it is a planned process without a specific easy answer. Marketing Extension programs involved identifying the target audience, designing the message to reach them, and getting the message to them in a way that causes them to choose to take action (Skelly, 2005). In the past it may have been enough to simply offer quality programs and wait for the audience to walk through the door; now Extension staff needs to reach out to busy potential clientele seeking their participation.

A study conducted by Wingenbaugh, et al. (2000) evaluated marketing strategies for recruiting 4-H members in West Virginia. The top factors influencing respondents to join 4-H included: sounded fun (65.1%), friends were in it (61.7%), to meet new friends (56%), parent or guardian wanted me to join (49.1%), and family was already involved (41.1%). When evaluating youth responses rating the importance of individual marketing methods used to secure their membership as a 4-H club member the highest responses were related to friends or classmates informing them about 4-H, information on the internet, and 4-H-related displays. Moderately rated responses were related to other adults (non parents) telling them about 4-H, radio/video promotions, and parents telling them about 4-H. Relatively low-rated methods for attracting youth were letters sent home, newspaper advertisements and 4-H promotional items (Wingenbaugh, et al., 2000).

Research objective

To date, little research has been done evaluating the nature of the camp enrollment decision and the effectiveness of camp marketing techniques. The goals of this research are to determine the nature of significant influencers on who decides to participate in 4-H summer camps in Ohio and to evaluate the effectiveness of various marketing techniques used to reach the decision makers in the camp enrollment decision.

Methods and Procedures

The researchers developed a multi-component on-line based survey instrument. A stratified random sample of counties in Ohio was selected to assure representation from each of the 12 Ohio camp facilities. After obtaining OSU IRB approval, parents of participating campers (712) were invited to complete the on-line instrument through email invitation with 273 participants. Three survey reminders were sent to parents encouraging their participation. One participant per county was awarded a $25 gift certificate, at random, to recognize their involvement.

The survey consisted of multiple Five-point anchored Likert-type questions, developed to measure level of influence (from "No Influence" to "High Influence"), level of effectiveness (from "Not Effective" to "Very Effective"), level of importance ("Not Important" to "Very Important") degree of improvement ("Not at All" to "Very High") and level of agreement (from "Strongly Disagree" to "Strongly Agree"). Various demographic questions were also included in the survey to analyze subsets of the population and ensure diversity in sample response. Descriptive methods were used to analyze group response rates. Means score tests were run to compare variable responses. Cronbach's Alpha was used to determine the reliability of this instrument at .719.

The typical respondent to our survey was the child's mother, with 88% of those responding. Fathers completed 10% of surveys and legal guardians 2% of the sample. Reponses represent thirteen counties across the state of Ohio with 40% of families residing on farms, 44% in small towns or other rural locations, and 17% living in larger towns or cities. Results reflect 36% of male campers and 64% female campers. Age range was from 8-14 years of age. Of those completing surveys, 36% indicated that their child attended camp for the first year, 20% their second year, and 44% three years or more. The typical family income was $40,000 to $80,000 and the typical camp fee paid to participate in a summer 4-H camp was $75 to $150.

Research Questions

1. How strong is the influence in the camp enrollment decision (parent, child, peers, other parents, club advisors, or siblings)?

2. Are there differences in the nature of influence or the decision to enroll in summer 4-H camps based on child age?

3. Does the gender predict differences in the nature of significant influence in the camp enrollment decision?

4. Are there differences in the influence of camp enrollment of children based on the alumni status of their parents?

5. What methods of marketing are rated most effective in reaching 4-H camp families?

Results

1. How strong is the influence in the camp enrollment decision (parent, child, peers, other parents, club advisors, or siblings)?

The nature of influence from parents, the respective child, friends, and other adults on the camp enrollment decision was evaluated. The highest influencers, as reported by the parent, were the respective child, followed by the parent (Table 1). When rating the influence of their child in the camp enrollment decision 90% of parents rated their child as having a high or moderately high influence. The parents themselves rated their relative influence in the camp enrollment decision highly as well, with 76% selecting moderately high to high ratings on the influence scale. The impact of the respective child's peer group, although lower than that of the child themselves or of the parents, is still considerably high with over half (56%) of parents reporting a moderately high to high influence of their child's peer group on the camp enrollment decision.

The child's 4-H club advisors and siblings were moderately influential in choice to participate in 4-H camp. Other childrens' parents were low on the influence scale. The relatively high levels of personal and parental influence on the camp enrollment decision supports earlier findings of Brustad (1988), Huebner & Mancini (2003), and Mahoney & Stattin (2000).

Table 1
Who Influenced the Camp Enrollment Decision

Factor (n=257)	No Influence 1	2	3	4	High Influence 5
My Child	3%	2%	5%	21%	69%
Parents/Guardian	9%	4%	12%	23%	53%
Child's Friends	19%	11%	15%	25%	30%
Advisors	20%	13%	20%	20%	26%
Siblings	44%	8%	8%	14%	26%
Another Parent	59%	7%	12%	10%	12%

2. Are there differences in the nature of influence or the decision to enroll in summer 4-H camps based on child age?

The age of the child had little influence on the nature of influence rating provided by parents related to their respective child's enrollment in 4-H camps. In one category, a significant difference was found with sibling influence, (Table 2). Parents of the oldest campers reported the highest rates of sibling influence on the camp enrollment decision (p<.05). There was not a statistical difference found in influence based on the camper's age of parents, child's friends, advisors, the respective child, or other parents.

Table 2
Differences of Influence of the Camper's Siblings in the
Camp Enrollment Decision by Age

	N	Mean	F=3.519 (p≤.05)
Campers 8-10	82	2.38	
Campers 11-12	47	2.49	
Campers 13-15	68	3.10	

3. Does the gender predict differences in the nature of significant influence in the camp enrollment decision?

There was no statistical difference when evaluating the factor of gender. Responses from parents of male and female children indicated similar influence of parents, siblings, child's friends, advisors, the respective child, or other parents in the camp enrollment decision.

4. Are there differences in the influence of camp enrollment of children based on the alumni status of their parents?

T-tests were run to determine if there was a significant difference in the rated influence of significant groups on the camp enrollment decision based on the alumni status of the respective camper's parent. Parents who were alumni of 4-H indicated a higher influence on the camp enrollment decision than those who were not 4-H alumni (Table 3, p< .05).

Table 3
Difference of Parental Influence on Camp Enrollment Decision
Based on the Parental Alumni Experience with 4-H

	N	Mean	F=5.519 (p≤.05)
Non 4-H Alumni Parent	134	3.91	
4-H Alumni Parent	117	4.22	

T-tests also determined that the rate of influence of other parents was rated higher by those parents who were not 4-H alumni, when compared to those that were alumni of 4-H (Table 4, p< .05).

Table 4
Difference of Influence of other Parents on Camp Enrollment Decision
Based on the Parental Alumni Experience with 4-H

	N	Mean	F=9.095 (p≤.05)
Non 4-H Alumni Parent	108	2.34	
4-H Alumni Parent	82	1.72	

There was no significant difference found in the influence of siblings, individual child, advisors, or child's friends when comparing groups based on the alumni status of the child's parents.

5. What methods of marketing are rated most effective in reaching 4-H camp families?

There are various methods used across Ohio to market 4-H camps to potential campers and their parents. When asked how they learned about 4-H Camp, 56% found out about camp from their 4-H club advisor, 51% from a 4-H newsletter, 24% from a specific 4-H camp mailing, 19% from the child's friend, and 12% from another parent (Table 5).

Table 5
How Did your Child Learn about 4-H Camp?

(n=270)

4-H Volunteer/Advisor	56%
4-H Newsletter	51%
Camp Mailing	24%
Child's Friend	19%
Another Parent	12%
Brochure	7%
Website	6%
Newspaper/Radio/TV	1%
Other	15%

Respondents were permitted to select more than one option

There are multiple methods to market 4-H camps to particular groups. Parents were asked to evaluate the respective marketing methods that are utilized in terms of their effectiveness. Each mode was evaluated on a Likert-based 5-point scale with 1 being described as "not effective" and 5 described as "very effective." 4-H camp parents rated "Word of Mouth" as the most effective method with 90% of parents rating it as a 4 or 5 on this scale (Table 6). Other highly rated methods were 4-H club advisors, camp counselors/teen leaders, brochure/flyer, and 4-H newsletter. Mass media methods were not rated as highly as those directly targeted towards parents or those of personal methods.

Table 6
What is the Most Effective Way to Promote 4-H Camp?

(n=270)

Method	Not Effective 1	2	3	4	Very Effective 5	Not Applicable
Word of Mouth	1%	2%	6%	15%	75%	0%
4-H Club Advisor	0%	4%	5%	24%	66%	1%
Camp Counselors	2%	2%	10%	28%	58%	1%
4-H Newsletter	1%	4%	17%	24%	52%	1%
Brochure/Flyer	2%	5%	19%	33%	40%	1%
School Visit	9%	14%	20%	19%	27%	11%
Mass Mailing	7%	15%	25%	24%	25%	4%
Web Site	9%	20%	28%	20%	18%	5%
Newspaper	14%	22%	25%	17%	16%	6%
TV	24%	19%	23%	9%	10%	14%
Radio	29%	26%	19%	9%	7%	10%

Implications

The enrollment decision data found in this study indicates that the decision to enroll in camp is most influenced by the respective 4-H camper; however parental input is a strong factor in the choice to participate in 4-H camps. This finding is consistent with Howard and Madrigal (1990), who found that parents may serve as a "pre-screener" taking an active role in limiting choices for their children and focusing their opportunities on those that the parents value or can accommodate due to schedule or cost factors. Applying this finding, camp promoters should concentrate their efforts primarily at youth, however keeping in mind that parents tend to first screen and limit choices for their children. Brochures, informational meetings, and general advertisement should have the "child in mind", however should also address the preliminary concerns that parents identify.

When evaluating the nature of the parent's alumni status with 4-H in terms of the influence on the camp enrollment decision, it was found that parents who are alumni of 4-H report a higher influence on this process than those parents who are not personally familiar with 4-H. Many parents encourage their children to participate in similar activities that they benefited from while a child. They may appreciate the value of the experience; therefore, take a more active role in the final decision to enroll in camp.

Although the overall impact on the decision to enroll in camp from other parents was low, non 4-H alumni parents indicated a higher influence of other parents in the camp enrollment decision. 4-H opportunities may be "foreign" to families that do not have a family history of involvement. These new families may seek out advice and recommendations of other parents who have participated in the past. Those that are alumni have their own past experiences to judge the value and fit of 4-H camping for their respective child.

Although various marketing methods are used to promote the availability of 4-H camping programs to potential youth and their families, personal methods are the most effective. Program planners should pay special attention to the potential of expanding enrollment and reaching additional families through direct channels (youth camp counselors, 4-H camp families, and 4-H club advisors).

Results of this study can provide a framework for other youth serving programs to evaluate the decision of youth to participate and the effectiveness of their marketing techniques in reaching their audiences. With an ever-increasing array of opportunities for youth and their families to participate in, it is important for youth development programmers to be proactive in seeking the feedback of their clientele.

References

Arnold, M.E., Bourdeau, V.D. & Nagele, J. (2005). Fun and friendship in the natural world: The impact of Oregon 4-H residential camping programs on girl and boy campers. Journal of Extension, 43,6. Website assessed 10/16/2007, http://www.joe.org

Astroth, K. & Haynes, G. (2002). More than cows & cooking: Newest research shows the impact of 4-H. Journal of Extension, 40,4. Website assessed 1/20/2003, http://www.joe.org

Bartko, W. & Eccles, J. (2003). Adolescent participation in structured and unstructured activities: A person-oriented analysis. Journal of Youth and Adolescence, 32(4), 233-241.

Black, S. (2002). Rethinking peer pressure. American School Board Journal, 189(4). Retrieved December 21, 2006, from: http://www.asbj.com/2002/04/0402research.html

Brustad, R. (1988). Social interactions in coaching your child's team: Harmony or hassle (Part 1). Institute for the Study of Youth Sports. Retrieved May 11, 2002, from: http://ed-web3.educ.msu.edu

Castrogiovanni, D. (2001). Adolescence: Change and Continuity. Retrieved December 21, 2006, from: http://www.oberlin.edu/faculty/ndarling/adpeer1.htm

Chappell, V.G. (1994). Marketing Planning for Extension Systems. Journal of Extension, 32; 2. http://www.joe.org

Deci, E.L. & Ryan, R.M. (1985). Intrinsic motivation and self determination in human behavior. New York: Plenum.

Eccles, J. & Harold, R. (1991). Gender differences in sport involvement: Applying the Eccles' Expectancy-Value Model. *Journal of Applied Sport Psychology*, 3. 7-35.

Eccles, J.S., Wigfield, A., Harold, R.D., & Blumenfeld, P. (1993). Ontogeny of children's self-perceptions and subjective task values across activity domains during the early elementary school years. Child Development, 64, 830-847.

Fletcher, A., Elder, G., and Mekos, D. (2000). Parental influences on adolescent involvement in community activities. Journal of Research on Adolescence, 10 (1), 29-48.

Garst, B, & Bruce, F.A. (2003). Identifying 4-H camping outcomes using a standardized evaluation process across multiple 4-H educational centers. Journal of Extension, 41,3. Retrieved October 16, 2007, from: http://www.joe.org

Howard, D., & Madrigal, R. (1990). Who makes the decision: the parent or the child? The perceived influence of parents and child on the purchase of recreational services. Journal of Leisure Research, 22, 244-258.

Huebner, A. and Mancini, J. (2003). Shaping structured out-of-school time use among youth: The effects of self, family, and friends systems. Journal of Youth and Adolescence 32: 453-463.

Hultsman, W. (1993). The influence of others as a barrier to recreation participation among early adolescents. Journal of Leisure Research, 25 (2) 150-164.

Lamborn, S.D., Brown, B.B., Mounts, N.S. & Steinberg, L. (1992). Putting school in perspective: The influence of family, peers, extracurricular participation, and part-time work on academic engagement. In F.M. Newman (Ed.), *Student engagement and achievement in American secondary schools* (pp. 153-191). New York: Teachers College Press.

Laursen, B., Noack, P., Wilder, D. & Williams, V. (2000). Adolescent perceptions of reciprocity, authority, and closeness in relationships with mothers, fathers, and friends. International Journal of Behavioral Development, 24 (4) 464-471.

Leeds, C.F. (1997). *Perceptions of Union County 4-H members about the 4-H program.* Thesis, The Ohio State University.

Lingren, Herbert. (1995). "Adolescence and Peer Pressure." Nebraska Cooperative Extension, NF95-211, April 1995.

Mahoney, J., Cairns, B., and Farmer, T. (2003). Promoting interpersonal competence and educational success through extracurricular activity participation. Journal of Educational Psychology 95(2): 409-418.

Mahoney, J., and Stattin, H. (2000). Leisure activities and adolescent antisocial behavior: The role of structure and social context. Journal of Adolescence 23: 13-27.

Ohio State University Extension (2005). Ohio 4-H statistical report. Retrieved December 21, 2006 from: http://www.ohio4h.org/about/statistics.html

Ohio State University Extension (2003 - 2007). Ohio 4-H Youth Enrollment Program: ES- 237 Report. Retrieved November, 2007, from: http://www.ohio4h.org/blueribbon/contact.html

Raymore, L., Godbey, G., and Crawford, D. (1994). Self esteem, gender and socioeconomic status: Their relation to perceptions of constraints on leisure among adolescents. Journal of Leisure Research 26: 99-118.

Rennekamp, R. (1990). Influences on teen decisions. *Journal of Extension*, 28,3. Retrieved April 21, 2002, from: http://www.joe.org

Skelly, J. (2005). Social Marketing: Meeting the Outreach Challenges of Today. Journal of Extension, 43,1. http://www.joe.org.

Thompson, P.L. (1998). *Factors related to the retention of Ohio teen 4-H members.* Thesis, The Ohio State University.

United States Department of Agriculture (2005). Annual 4-H Youth Development Enrollment Report. Retrieved December 21, 2006, from: http://www.reeis.usda.gov/

Wingenbaugh, G., Nestor, C., Lawrence, L., Gartin, S., Woloshuk, J., & Mulken, P. (2000). Marketing strategies for Recruiting 4-H members in West Virgininia. Journal of Agricultural Education, 41 (1) 88-94.