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Editor's Comments:

The Spring Issue provides readers with an overview of several recent youth development research projects, innovative program findings and suggestions for evaluation strategies. We begin with the work of Walker and Larson, highlighting their study of how youth workers appraise and respond to the dilemmas of practice encountered in youth programs. Silliman and Guin discuss the process for developing learning circles as a means to build program evaluation capacity. A model of knowledge for YD professionals comprised of five knowledge domains is discussed by Femi Vance while Cheeseman and Ohannessian examine parental limit settings. Professionals searching for innovative program designs will appreciate the Bullying Prevention Program shared by Lynette Black and the Teen Relationship Retreat introduced by Brower, et al. Standardized assessments of youth development indicators, qualitative outcomes of Fishing Programs, and the utilization of clickers for data collection are also addressed in the Spring Issue.

Manuscripts for the Spring and Summer 2013 issues are now being accepted in the following areas:

- **Feature Articles** ~ informational, explanatory, or critical analysis and interpretation of major trends or comprehensive reviews. Include clear implications for youth development practice and programming. 2,000-5,000 words
- **Program Articles** ~ discuss programs and outcomes or describe promising programs and pilot projects that have clear implications for youth development research, practice and programming. 1,500-4,000 words
- **Research and Evaluation Strategies** ~ describe innovative methodologies and strategies in the collection and analysis of quantitative or qualitative research and evaluation data. 1,500-4,500 words
- **Resource Reviews** ~ present analyses of materials, such as books, curricula or videos. 300-800 words

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Tracking Evaluation Capacity with Youth Professionals [Article 120701FA002]
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A pilot program mentoring youth professionals through "learning-by-doing" projects yielded consistent increases in evaluation knowledge and skills over three years. Self-assessed skill improvements were greatest for preparatory processes (planning, focusing, design, selecting methods) and reporting competencies that are more often emphasized in organizational evaluation requirements. Smaller increases in data collection and analysis skills were also perceived by participating youth professionals. Focus groups with each of six evaluation "learning circle" groups revealed benefits of participation in the evaluation "learning circle," as well as needs for evaluation training and tools, and challenges faced within the organizational culture.

An Emerging Model of Knowledge for Youth Development Professionals [Article 120701FA003] Page 35
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A model of knowledge for youth development professionals that is comprised of five knowledge domains: 1) Foundational Knowledge of Positive Youth Development; 2) Knowledge of Youth; 3) Knowledge of Group Facilitation; 4) Knowledge of Contexts and Organizational Systems and; 5) Specialized Youth Development Knowledge is proposed in this paper. The model is intended for use in youth development programs, which have been associated with better outcomes for

participants when compared to other types of youth programs. The development of the knowledge base is framed by seminal research on teacher knowledge and informed by practice-oriented research in the out-of-school time field and literature on the quality of youth development programs.

Parental Limit Setting as a Moderator of Adolescent Paid Work and Alcohol Use [Article 120701FA004] Page 56

Cheeseman, Kelly A.; Ohannessian, Christine

Highlighted within this paper is an examination of whether parental limit setting moderates the relationship between paid work and alcohol use during adolescence. The sample included 1,001 10th and 11th grade students from public high schools in the Mid-Atlantic region of the United States surveyed in the spring of 2007. Results indicated that parental limit setting significantly moderated the relationships between paid work and frequency of alcohol use for girls and paid work and quantity of alcohol consumption for girls and boys. In general, adolescents who spent less time working and had more parental limits drank the least, whereas adolescents who spent more time working and had less parental limits drank the most. Findings from this study suggest that parental limit setting may protect working adolescents from substance use involvement.

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Soule, Katherine; Goldenberg, Marni

Numerous fishing education programs in the United States strive to impart hard skill development, as well as life values to youth. This study employs utilizing semi-structured interviewing techniques and means-end analysis to evaluate the effects of youth participation in fishing components of NOLS courses. Interviews were conducted over five years to study benefit retention across time. The fishing component led to thirteen consequences, most frequently to youth feeling a sense of fun and excitement, developing hard skills, and having a new experience/opportunity. In turn, these consequences led youth to a number of values, including transference of information learned or benefits to other areas of their lives, an increased self-respect/esteem/confidence, self-fulfillment, a sense of accomplishment, and self-awareness. These results provide educators and program managers with information to direct programming development for youth attainment and retention of specific participation outcomes.

An Exploratory Study of the Five Cs Model of Positive Youth Development Among Indiana 4-H Youth [Article 120701FA006] Page 82

Robinson, Abby; Esters, Levon T.; Dotterer, Aryn; McKee, Renee; Tucker, Mark

The purpose of this study was to explore the levels of positive youth development (PYD) among Indiana 4-H club participants. Questionnaires were collected from a convenience sample of [State] youth (n = 453). Findings indicated that youth who participated in the 4-H program reported significantly higher total positive youth development than those who had never participated in 4-H. Youth who participated in the 4-H program also reported significantly higher scores on four of the Five Cs of PYD (Confidence, Connection, Character, and Caring). The findings of this study contribute to the Developmental Systems Theory by confirming the role that 4-H has in contributing to positive youth development. Recommendations are provided to guide future research related to the Five Cs aspect of positive youth development among 4-H youth.

Measuring Life Skills: Standardizing the Assessment of Youth Development

Indicators [Article 120701FA007] Page 99

Duerden, Mat D.; Witt, Peter A.; Fernandez, Mariela; Jolliff Bryant, Marie; Theriault, Daniel
While the development of life skills (e.g., communication, problem solving, etc.) is a commonly targeted youth program outcome, the lack of standardized conceptualizations and instrumentation make it difficult to compare impacts across programs and develop validated best practices. In order to promote a more unified approach to life skill development, literature reviews were conducted for 10 life skill domains to identify common definitions and, if available, appropriate outcome measures. Data were then collected from an ethnically diverse sample ($N = 758$) of elementary, middle, and high school aged youth for the 10 identified instruments. Analyses were conducted to ascertain the psychometric qualities of each measure, the interrelationships among measures, and the measures' relationships with gender, ethnicity, and school level. Results are discussed in terms of their relevance to life skill theory and measurement.

Program Articles

Got Dating: Outcomes of a Teen 4-H Relationship Retreat [Article 120701PA001]

Brower, Naomi; MacArthur, Stacey; Bradford, Kay; Albrecht, Clint; Bunnell, Jolene . . . Page 118

To support youth in developing healthy relationships, state and county staff collaborated to offer a statewide overnight teen retreat to teach health relationship skills. Evaluation of 64 youth participants from rural and urban counties found significant increases in posttest knowledge of relationship skills for both male and female youth. Youth also reported that the content was very helpful and worth repeating. Program success may be attributed to addressing the interesting and needed subject of dating relationships as well as involvement of state ambassador and collegiate 4-H members as teachers. Implications and replication suggestions are outlined.

Jump-Starting Youth Community Leadership: An Evaluation of a Leadership Development Program for Lesbian, Gay, Bisexual, Transgender & Ally Youth

[Article 120701PA002] Page 125

Diaz, Elizabeth M.; Kosciw, Joseph G.

The GLSEN Jump-Start National Student Leadership Team, a leadership development program for lesbian, gay, bisexual, transgender (LGBT), and ally youth designed to promote direct action community organizing and community engagement. This article examines the benefits of the program for youth's socio-political development. Data came from a multi-year evaluation that examined changes over time (baseline, immediately post-program, and one-year follow-up) in community engagement between a program group ($n = 103$) and a comparison group of youth ($n = 47$). Results indicate that the program may support LGBT and ally youth's socio-political development and have positive implications for their development as community leaders, but these benefits may not be sustained after program completion. Implications for further research and program development for LGBT youth are explored.

Reducing Bullying Through Leadership Skills Development [Article 120701PA003]

Black, Lynette Page 137

The heart wrenching and disturbing statistics regarding bullying in the schools is a reason for concern. Looking at a popular definition of bullying: aggressive intentional behavior involving an imbalance of power or strength (Stop Bullying.gov), one can see a lack of caring and compassion for others. The 4-H Study of Positive Youth Development (Lerner, et al., 2008) indicates the 4-H Youth Development Program is successfully guiding youth onto the best trajectory for positive youth development. As a result of the Lerner PYD study, one rural school

in Oregon invited an Extension 4-H Educator to teach leadership skills to children in grades 4-8. The goal of the training was to increase caring and compassion through interactive, teambuilding activities thereby reducing bullying. Evaluation results indicated a significant impact by the program on youth defining their ability to positively work with others.

Research and Evaluation Strategies

Engaging Youth in Evaluation: Using Clickers for Data Collection

[Article 120701RS001] Page 143

Borden, Lynne M.; Wiggs, Christine Bracamonte; Schaller, Amy; Schlomer, Gabriel L.

Now, more than ever, evaluation is an essential component for all programs. Although the need for outcome data is clear, collecting data from youth populations is often difficult, particularly among youth who are vulnerable and/or disenfranchised. While the use of paper-and-pencil (PAP) surveys is a commonly used method of data collection, different technological methods, such as online surveys, text messaging, and personal digital assistants (PDA's), are increasingly employed in data collection efforts. This article explores the use of audience response systems ("clickers") as an innovative data collection method that is especially suited for use with youth. In this paper we examine qualitative findings from key informant interviews regarding data collected from youth participants on a youth program quality measure using clicker technology. Findings from the study indicate that the use of clickers may increase youth engagement in and improve the efficiency of the data collection process.

Youth Worker Reasoning about Dilemmas Encountered in Practice: Expert-Novice Differences

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Abstract: This study examines one aspect of youth worker expertise, the ability to appraise and respond to the dilemmas of practice encountered in youth programs. To understand how expert youth workers differ from novices in their reasoning about these dilemmas, a sample of expert and novice practitioners read vignettes of dilemma situations and described their appraisals of the situations and how they might respond to them. Quantitative analyses confirmed four hypothesized differences between the two groups. Experts identified more considerations in the situations and generated more possible responses. Experts' responses were also more likely to be youth-centered and address multiple considerations. Qualitative analyses suggested that these differences were attributable to the experts having more elaborate mental models that allowed them to understand varied human systems – individual youth, group dynamics, parents, funders, etc. – and to tailor their responses accordingly. The experts engaged in more forecasting of events, anticipating contingencies, and formulating decision trees that took possible contingencies into account. Although preliminary, the findings have implications for how youth workers are trained.

Introduction

The field of youth development is giving increased attention to the question of how best to equip practitioners who staff youth programs. Recent efforts have sought to clarify the essential knowledge and core competencies that are key to youth work practice (Astroth, Garza & Taylor, 2004; Stuart & Carty, 2006). Research in other fields of practice – including education, health professions, and engineering – suggests that the expertise of practitioners is defined, in part, by their skills in appraising and responding to the diverse situations, problems, and dilemmas they face in their work (Ericsson, Charness, Feltovich, & Hoffman, 2006; Fook, Ryan & Hawkins,

2000; Weiss, Kreider, Lopez, & Chatman, 2005). Similarly, an important element of youth workers' expertise may reside in their abilities to appraise and formulate responses to the array of *dilemmas of practice* they encounter in their daily work with youth in programs (Larson & Walker, 2010; Walker & Larson, 2006).

This mixed methods study investigates how expert youth workers differ from novices in their reasoning about the dilemmas encountered in youth programs. Following methods employed to study expertise in other fields of practice (Ericsson et al., 2006), we focus on dilemma situations faced by front-line practitioners who supervise youth programs. A sample of peer-nominated expert and novice youth practitioners were asked to read vignettes of representative dilemma situations, then to describe their appraisals of the situations and how they might respond to them. We employed quantitative and qualitative analyses to identify differences between the reasoning provided by the two groups. The objective was to test four preliminary hypotheses and to use qualitative comparison to develop further theory and hypotheses about how experts differ in how they approach dilemmas of practice.

Background

Dilemmas of Practice

We define dilemmas of practice as significant challenging situations and problems occurring in daily practice that call for decision-making by the practitioner, including whether and how to respond to the situation in ways consistent with professional obligations and goals. Across fields it is recognized that the dilemma situations encountered in practice are often complex, unstructured, and require pragmatic rather than formal reasoning. Different dilemmas present idiosyncratic considerations, as a function of the context, specific circumstances, the unique people involved, and the differing dynamics at work. In some situations, multiple competing professional obligations and goals may be in play; and these may shift over time as the situation evolves (Ross, Shafer, & Klein, 2006; Schön, 1983; Sternberg et al., 2000)

The same appears to be true for the dilemmas encountered in youth programs. Youth workers encounter challenging situations that are unstructured and can involve competing relational, institutional, pragmatic, ethical, and other considerations (Banks, 1999; Camino, 2005; Halpern, 2009). These include, for example, situations that involve grappling with relating to youth as a friend versus an authority figure (Walker & Larson, 2006), struggling to keep youth's work in the program on track while keeping youth invested (Larson, Walker & Pearce, 2005), and feeling torn by funding requirements that conflict with youth's developmental needs (Jeffs & Banks, 1999). Youth work is embedded in complex overlapping ecological contexts, and youth workers are expected to be responsive to diverse people, points of view, and warrants across these contexts (White, 2007).

In order to investigate the range and nature of the dilemma situations faced by youth program leaders, Larson and Walker (2010) created a database containing 250 dilemmas reported by skilled leaders over the course of their daily work. These were obtained from ongoing interviews with 19 leaders in 12 urban and rural arts and leadership programs for high-school-aged youth. To obtain a framework for thinking about the diversity of these dilemma situations, Larson and Walker (2010) conducted a grounded theory analysis to categorize the dilemmas in their database. This analysis suggested that the dilemmas could be classified according to five different ecological systems in which the problem of the dilemma was situated. These systems included program activities, program norms, youth's personalities and relationships, the organization in which the program resides, and systems external to the program including

community systems and youth's families. It should be noted that some dilemmas involved multiple systems, for example, a leader might have struggled with how the situation affected the progress of program activities, as well as program norms or the reactions of youth's families. These five categories are preliminary and incomplete, nonetheless they provide a provisional framework for identifying the diverse types of dilemmas that youth workers need to be able to think about in daily practice.

Practitioners' Expertise in Addressing Dilemmas of Practice

What differentiates how "expert" youth practitioners appraise and respond to these dilemmas? We are aware of no prior research that systematically compares expert and novice program staffs' reasoning in these situations. Three decades of research on expertise across a wide range of disciplines, however, provides a foundation of knowledge about how experts think about and address situations in different fields (Ericsson, et al. 2006). This research consistently shows that expertise involves not just "knowing that" but "knowing how": it involves knowledge and skills both for understanding and for action (Sternberg et al., 2000). This research also indicates that there is typically no one "right" response to many dilemmas. Highly regarded experts in a field may have different responses to the same situation, as a result of different interpretations, values, and other factors (Dörner & Schölkopf, 1991).

This wider research on expertise, coupled with the literature on youth practice, suggested four initial hypotheses about differences in how novice and expert youth workers might reason about these dilemmas. The first was that experts would *identify more considerations* in dilemma situations. The wider research consistently finds that experts in a field have more situational awareness; they see more nuances in situations faced in practice (Endsley, 2006; Ross et al., 2006), partly because they look at situations from multiple perspectives (Fook, Ryan & Hawkins, 2000; Levin, 1995).

Second, the literature suggested that expert youth workers would *generate more possible responses*. Research across fields finds that experts have a wider repertoire of tactics (Ross et al., 2006). They are also more able to create novel responses adapted to the complexities of situations (Fook et al., 2000). In contrast, novices typically apply a smaller number of rote, context-free rules (Fook et al., 2000; Levin, 1995).

Third, we hypothesized that expert youth workers would be more likely to *generate youth-centered responses*. The general literature on expertise observes that in many professions decisions are shaped by values that define the mission of that field (Fook, et al., 2000). Being youth-centered has that status as defining value of the youth work profession (McLaughlin, 2000; White, 2007). Furthermore, qualitative research suggests that effective youth workers "see potential not pathology," put youth's interests first, and support youth's efficacy (McLaughlin, et al., 1994 p. 96). Larson and Walker (2010) found that the skilled leaders in their research found ways to solve dilemmas in their daily practice that involved engaging with youth, turning situations into opportunities for development, incorporating youth into the solution, and advocating for youth.

Fourth, we hypothesized that experts would be more likely to *formulate responses that balance multiple considerations*. The research on expertise indicates that experts are more able to address, adjudicate, or "balance" diverse considerations (Sternberg, 1998). Likewise, descriptive studies of effective youth program leaders suggest that they balance competing considerations, such as supporting and challenging youth or balancing the needs of individuals with those of the group (Grossman, Campbell, & Raley, 2007; Larson & Walker, 2010).

In addition to testing these four basic hypotheses, our aims included generating further preliminary grounded theory about the nature of youth workers' expertise. Description is an important early stage in any area of study. We felt it important to describe and begin to conceptualize the qualitative differences in the two groups' patterns of thinking about the dilemmas.

This Research

The strategy of this study was to compare the reasoning of peer-nominated novice and expert youth workers. This has been a common approach in research on practitioner expertise (Ericsson, et al., 2006). Following the procedures of other studies, we employed written vignettes of dilemmas chosen to be representative of those encountered in practice; and research participants were asked to answer questions about these dilemmas and how they would respond (Ericsson & Smith, 1991; Harrington, 1995; Wilks, 2004). Quantitative analyses were used to test the hypotheses that the experts would differ from novices on the four features identified above. Exploratory qualitative analyses were then performed to identify underlying patterns that contributed to the differences found by these tests. As in other early research on practitioner expertise, strong relationships between participants' expertise and their age, education, and experience in the field (variables that often contribute the development of expertise) limit our ability to differentiate effects for expertise from those for these variables.

Method

Sample

The sample consisted of 81 youth workers from organizations that provided programming for middle and high school aged youth. These programs were primarily in urban areas and served ethnically diverse urban youth. The sample included front-line staff from the national youth organizations (e.g., Boys & Girls Clubs, YMCA), city youth organizations (Parks and Recreation, Community Education), and community youth programs (e.g., leadership, arts, mentoring). This included 43 paid staff identified as expert youth practitioners and 38 identified as novices. The sample was recruited by leaders in the youth development field from three intermediary youth organizations in Minneapolis-St. Paul, New York City and the San Francisco Bay Area that provide support, training and resources to youth-serving organizations and programs. In most instances these leaders first worked with administrators of youth organizations in their city to identify "expert" practitioners (defined as "the most skilled, savvy practitioners; those we turn to when faced with a dilemma"), and these experts then nominated counterpart "novices" from their organization (defined as those still developing their understanding of youth development theory and practice). Twenty-seven matched pairs (an expert and novice) were identified in this way. In addition, 16 experts and 11 novices were identified without a pairing (i.e., a paired person was not identified or did not participate).

Not surprisingly, the experts were substantially older, had worked with youth for much longer, and had completed a higher level of education than their novice counterparts (Table 1). It also should be noted that the novices were not neophytes; they had an average of 2.6 years of paid work with youth, as well as an average of 1.6 years of volunteer work with youth. Nonetheless, the large differences in age, experience, and education – as found in other studies of practitioner expertise – should be kept in mind, and we will return to it later. Approximately half of the sample was from Minneapolis-St. Paul, and a quarter each from New York City and the San Francisco Area.

Table 1
Participant demographic information

	Novices	Experts
Number of study participants	38	43
Gender (% female)	66	63
Average age (years)	23.6	32.7
Average length of employment at current organization (years)	1.6	4.7
Average length of employment in paid work with youth (years)	2.6	9.3
Average length of volunteer work with youth (years)	1.6	6.8
Percent who completed 4-year college degree or more	44	77
Percent who completed some college or a 2-year college degree	32	23
Percent who completed high school degree or less	24	0

Procedures

To evaluate how expert and novice youth workers reason about dilemmas of practice, each participant in the research read and responded to two vignettes of dilemmas situations via an on-line questionnaire. These two vignettes were randomly selected for each participant from a set of five real practice situations from Larson and Walker's (2010) database. The five vignettes (Appendix A) were chosen to be representative of each of the five ecological categories of dilemmas in that data base.

For each vignette, participants were asked to type out responses to five questions regarding the considerations and possible actions they would think about in the situation:

1. What concerns and priorities would you have in this situation? (Please brainstorm and list all that come to mind.)
2. Of the concerns and priorities you listed in #1, which would be most pressing for you, and why?
3. What possible responses would you consider in this situation? (Please brainstorm and list all the possible responses that come to mind.)
4. Of the possible responses you listed in #3, which would you choose, and why?
5. What central point would you make to a beginning practitioner about what to do, or not do, in this situation?

Participants response to these to the two vignettes took about 30 minutes. Most of the data used to evaluate our first hypothesis came from question 1 and most of the data used to evaluate the other three hypotheses came from question 3. But in some cases pertinent information was also found in responses to the other three questions.

Data Coding and Analyses

The unit of analysis for both the quantitative and qualitative analyses was a participant's response to a single vignette.

Quantitative tests of the hypotheses. To test the hypotheses, we first created numeric scores representing the four features on which differences were expected. Coding rubrics were created to operationalize each feature. To assess *number of considerations* and *number of possible responses* (Hypotheses 1 & 2) the coding rubrics specified criterion for counting distinct instances of each. Thus, for example, the instructions for counting number of responses indicated that when a participant identified a set of responses that were linked in some way (e.g., actions ordered in deliberate sequence or alternative responses that were contingent on circumstances), each response should be counted as separate.

For the other two hypothesized features, holistic 4-point scoring rubrics were employed. Coders assessed the extent to which a participants' set of responses to the vignette contained elements of each feature. For Hypothesis 3, *youth-centered responses* were defined as those that gave youth and their developmental needs and interests focal importance (McLaughlin, 2000). Coders were instructed to first look for four dimensions of youth-centered responses identified by Larson and Walker (2010):

- a) engaging directly with youth,
- b) turning the dilemma into an opportunity for youth's development,
- c) incorporating youth into the solution or response to the situation, and
- d) advocating on behalf of youth as well as teaching youth to advocate for themselves.

Coders then scored a person's responses to the vignette on a scale from 0, "No comments about the youth's needs, interests and involvement," to 3, "Reference to all dimensions of youth-centered response, or depth on at least two dimensions." The coding instructions included prototypes for each of the four points on this scale, developed from transcripts from a pilot study.

For Hypothesis 4, *responses that balance multiple considerations* were defined as those that involved taking into account, addressing, or balancing multiple perspectives and concerns. This could occur, for example, when responses entailed: challenging yet supporting youth, accommodating individuals' interests and needs with those of the group, and balancing the needs of youth with the constraints imposed by funders, administrators, or another community organization. As with hypothesis 3, coders rated responses on a scale from 0, "No comments about taking into account, addressing to balancing multiple concerns," to 3, "Reference to all dimensions of multi-pronged response, or depth on at least two dimensions. Prototypes were identified for each point on the scale.

After initial training and practices sessions, two raters independently coded all four of these features for all the data. The raters agreed at a rate ranging from 50-70% across scales. Raters then compared codings and resolved disagreement through consensus. The raters were blind to respondents' novice/expert designation.

To test whether scores for these features differed between novices and experts, we used multilevel regression models that took into account the nested nature of the data (Raudenbush & Bryk, 2002). Models were tested separately for each of the four features. In initial analyses

we used only the sample for which we had novice-expert pairings (N=27) and attempted to estimate three-level models with within-respondent (level 1), between-respondent (level 2), and between pair (level 3) effects. However, these models yielded insignificant and unreliable estimates which could be attributable to the small sample size and use of three levels.

Therefore the final analyses employed the entire sample and two-level models with within- and between-respondent effects. These analyses including dummy variables for four of the five vignettes, which were tested in Model 1. In Model 2, a variable was then added for a between-respondent variable, coded as expert (=1) versus novice (=0), and the test of the hypothesis was whether the effect of this variable was significant. To test the first two hypotheses, we used Poisson models to evaluate the dependent variables because number of considerations and number of responses are measured as counts (Cameron & Trivedi, 1998). For ease of interpretation, we report exponentiated coefficients (incident rate ratios, IRR), which are interpreted similar to odds ratios wherein a one unit change in the independent variable brings about a change in the incidence rate (count of the dependent variable). To test the last two hypotheses (for youth-centered and balancing responses), we use ordered logistic (proportional odds) regression and present results as odds ratios. Results of these tests for Model 2 are shown in Table 2. In Model 3, variables for participant's age, education, and years of experience were added as controls, and those findings are reported in the text. All models were estimated using STATA 10.0 (see Rabe-Hesketh & Skrondal, 2008).

Table 2

Comparison of experts 'versus novices' descriptions of their considerations and responses for the dilemma situations presented in the vignettes

	Novices		Experts		Test of Novice-Expert Difference	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
<i>Poisson models</i>					<i>IRR</i>	<i>(se)</i>
Number of considerations	3.50	1.67	4.30	2.13	1.24*	(0.11)
Number of possible responses	2.56	1.53	3.63	2.52	1.42**	(0.19)
<i>Logistic regressions</i>					<i>OR</i>	<i>(se)</i>
Multi-pronged responses	.83	.89	1.36	.93	4.64*	(3.03)
Youth-centered responses	1.28	.89	1.68	.96	8.58***	(5.79)

Test is based on Model 2 in which dummy variables for 4 of the 5 vignettes were included as controls but are not shown in the table.

* $p < .05$; ** $p < .01$; *** $p < .00$

Qualitative hypothesis generating analyses. Exploratory qualitative analyses were aimed at better understanding the type of thinking lying behind the significant differences that emerged from the quantitative tests. For each significant hypothesis, the pertinent qualitative data were evaluated in order to identify underlying structural and thematic patterns related to the difference found between experts and novices. The iterative methods of grounded theory and related approaches were employed (Coffey & Atkinson, 1996). The pertinent data were first carefully read and open coded to generate preliminary ideas about possible differences. When

differences were suggested, conceptual and operational definitions were developed to code instances of them, and comparisons were made. Our development of these definitions and interpretation of findings were influenced, in some cases, by the literatures on expertise and youth practice (Auerbach & Silverstein, 2003). The aim of these analyses was in part to generate new hypotheses for future research. The qualitative analyses progressed from empirical analyses, reported in the body of the section for each hypothesis, to theoretical postulation, presented in the final paragraph for each hypothesis (Strauss & Corbin, 1998).

Results

Hypothesis 1. Number of Considerations

The first quantitative analysis tested the prediction that experts would identify more considerations in the dilemma vignettes than the novices (Table 2). In the initial step without expertise in the equation (Model 1), we found no significant differences in number of considerations that respondents reported between the five vignettes (i.e., all vignettes yielded a comparable number of considerations). In the test of the hypothesis (Model 2) we found that addition of the variable expert (vs. novice) accounted for a significant increase in the explained between-person variance. The incident rate ratio of 1.24 indicates that being an expert was related to a respondent identifying 24% more considerations in the dilemmas. In Model 3, in which participants' ages, education, and years of experience were added as controls, the effect for expertise became non-significant, indicating that this effect could not be differentiated from the effect of these other variables.

The qualitative analyses suggested two characteristics of the experts' appraisals that contributed to this difference. First, the experts differed from novices in identifying considerations that covered a *wider range of ecological domains*. These domains included the sponsoring organization (rules, norms, mission, funding), the psychological dynamics of the youth (personalities, emotions, maturity), the young persons' families' (parental consent, attitude, beliefs), the community, and macro-system factors (culture, religion, social class). Second, the experts identified *more considerations that went beyond immediate concerns in the situation*. The considerations the experts described more often dealt with the situation's possible root causes (why the youth, staff, or people in the community acted as they did) and its future impacts on the youth and the program. It should be noted, however, that both of these differences (as well as those for subsequent hypotheses) are differences of degree. Most novices identified more than one consideration and a few novices described the kinds of wider-ranging concerns reported by the experts.

These differences are illustrated by one expert's appraisals of Vignette #4, in which the organization's CEO mandated that a music CD the youth were going to make would be focused on the topic of "role models," a topic the youth did not like. The novices' considerations for this vignette often focused solely on how to implement the CEO's decision, while the experts considered the motivations of the youth and CEO, as well as how the CD would contribute to the organization's future funding and reputation. For example, one expert's considerations included:

- 1) how youth might feel "trophyed" and "taken advantage of,"
- 2) why the community provides youth few role models,
- 3) the difficulties of attracting and retaining low income urban youth,
- 4) how the program's funders think, and
- 5) how to cultivate the relationship between the youth and the Executive Director.

This list shows both the diversity of ecological domains that this expert considered, as well as his/her concern with root causes of the dilemma and its future impacts.

A second illustration is provided by appraisals of Vignette #2 in which a young man, Charles, was disruptive to the group and disrespectful to staff. Novices were more likely to focus on the immediate issue of disciplining Charles, while experts had more broad ranging concerns, including the causes and possible sequela of the situation. For instance, one expert's considerations included potential causes for Charles's behavior (an undiagnosed condition, problems like drugs or gambling, difficulties he might be facing meeting basic needs like food and safety), Charles's perception of how his behavior impacted the group, parents' possible reactions, and the safety of program staff and participants.

In sum, the expert youth practitioners did not just generate more considerations, they formulated the dilemmas in terms of a wider swath of ecological systems and past-to-future time. Research across fields suggests that novices are more likely to focus on superficial features of a problem, while experts are more able to see its "deep structure" (Sternberg et al., 2000). Our findings suggest that in the field of youth practice this means that experts are more likely to conceptualize a problem from the perspectives of more people and levels of analysis. The experts' thinking also involved reasoned speculation about *possible* and *potential* causes and impacts. This is consistent with research suggesting that expertise includes use of *reasoned imagination* to develop plausible hypotheses (Byrne, 2007; Dörner & Schölkopf, 1991). We suggest that experts' greater understanding of the "deep structure" of pragmatic problem involves developing theories about the processes at work.

Hypothesis 2. Number of Responses

In the initial step of the analyses for number of responses (Model 1), we found no significant differences between vignettes. The test of the hypothesis (Model 2), however, showed that addition of the variable for expert (vs. novice) contributed significantly to the equation. Similar to the findings for number of considerations, the experts identified a higher number of responses to the vignettes. The incident rate ratio indicated that experts generated 42% more responses (Table 2). In Model 3 the effect for expertise became non-significant, indicating that this effect could not be differentiated from those for participants' ages, education, and years of experience.

Our qualitative analysis suggested that the experts generated more responses due to three factors. First, consistent with the literature on expertise, they provided *a broader range of responses*. They appeared to have a larger repertoire of varied strategies. Second, they gave more responses because they described *more contingencies that influenced their actions* (i.e., if-then conditions). They described alternative responses dependent on specifics of the situation (if this happens, then...) and on one's objective. For example, in response to Vignette #1 involving a summer camp, one expert said, "If the camp is for educational purposes, the activities should If it is purely recreational, the activities should..."

Third, the experts generated more responses because they more often described *courses of action with multiple steps*. These sometimes included branching situational contingencies. The following example of a highly elaborated plan by an expert in response to Vignette #2 illustrates a plan with multiple steps that depend on multiple contingencies (italics added to identify contingencies):

When Charles got fired up ... I would call for additional support help (*if available*) and separate Charles from the other members of the group (*either* ask the group to go around the corner with staff or ask Charles to go around the corner from the group. It is important to remove the audience). Give Charles *a chance to cool off, as long as* this is safe for staff (John and others) – *this may mean* slight acceleration before de-escalation. *Once* Charles starts to de-escalate, remind him of the agreement he made, ask him *what else* might be making him so upset. *If* Charles identifies other factors, develop a plan with him to assist in addressing those other factors. *If* Charles does not identify other factors influencing him, John would need to stay with him until he continues to de-escalate (historically it sounds like he does this) and *then wait* until Charles is in the state of remorse or apology. This is *when* Charles will be able to really “hear” John. *Then* a plan can be made with Charles to follow through with and act on.

One can see that this expert is able to envision an elaborate decision-making tree of anticipated contingencies and responses.

In contrast, the novices had less detailed responses with fewer contingencies and steps. Their responses were also more likely to emphasize adherence to rote, context-free rules or general slogans or truths. For Vignette #2, with Charles, one novice’s response was:

Do not allow youth to ‘act out’ and not respond to that behavior. Immediately responding to defiant behavior, for me, is the most pressing issue... As long as everyone follows the rules we can stay focused and attempt to have fun.

In response to Vignette #3 about a youth who dominated group discussions with violent stories, a novice emphasized: “Always stay positive. Make her talk about how she can improve her behavior.” Observe that there is little reference to situational contingency in these responses.

As we found for Hypothesis 1, these results suggest that expert youth practitioners have more elaborate mental models of how situations unfold. In our instructions, we encouraged participants in the study to list many alternative responses to the vignettes (“Please brainstorm and list all the possible responses that come to mind”). But, although these experts demonstrated having a broad repertoire, they did not spend time generating widely different choices. Rather – similar research on expertise in other fields (Ross et al., 2006) – they worked from one or a few possible courses of action and thought through what was likely to happen and how they would respond to the most likely contingencies.

Hypothesis 3. Youth Centered Responses

Consistent with the third hypothesis, the experts reported significantly more youth-centered responses than novices (Table 2). In the initial step (Model 1), we found that the rate of youth-centered responses differed significantly by vignette (Vignette #2, about Charles, yielded lower scores for youth-centered responses). With this effect controlled, addition of the variable for being an expert (vs. a novice) in Model 2 was associated with a significant increase in explained variance. Experts described more youth-centered responses. In Model 3 the effect for expertise became non-significant, indicating that the effect for expertise could not be differentiated from age, education, and years of experience.

The qualitative analyses found that the most salient difference was that experts more often described responses that *converted the dilemmas into opportunities for youth development*. Both novices' and experts' responses included addressing the immediate problem, however the experts responses also included using the situation to help youth learn. This is illustrated by responses to Vignette #5, in which the immigrant parents of a youth, Lydia, wanted her to quit the program. In response to this situation, both novices and experts recognized a need to communicate the value of the program to parents. But the novices often wanted to talk directly to the parents themselves, while the experts more often proposed strategies that included Lydia. One typical response by a novice was, "I would try to inform the parents more about the program, so they would see the benefits."

In contrast, the experts more often proposed supporting or providing guidance to Lydia so she could handle the situation. One expert's youth-centered response involved "working with Lydia to help her answer the question 'what is this doing for you?' so she can try to convince her parents herself." Another emphasized helping Lydia learn "self-advocacy skills in navigating two very different worlds—family/home culture vs. youth program culture." Both novices and experts often proposed a three-way meeting including Lydia, her parents, and themselves. But the experts were more likely to envision coaching Lydia in advance, so that she would be able to speak for herself at this meeting.

This same contrast was evident in the response to other vignettes. For Scenario #4 in which youth were not motivated by the Executive Director's topic for their CD, one novice's concerns seemed to focus on getting the CD done himself, while experts more often wanted to use the situation to teach youth about how administrators and funders think, and even about grant writing. In response to the daycamp vignette (#1), novices suggested adult-centered responses, for example, "[The leaders] should remain controlled and confident; the project will meet great success if they simply maintain order and give a light (but stern) disciplinary 'helping hand' in such an effort." In comparison, one expert's described it as "a teachable moment" and said:

I would bring the kids together in a series of ice breaking activities that make our commonalities and ultimate purpose in running the camp apparent. The point is to show youth that our intention is to learn, and roadblocks are OK, as long as we come together as a team ... teams struggle too.

Facilitating youth development is a core objective of the profession. These findings suggest that novices readily shift their focus to more basic goals such as keeping order. But expert youth practitioners looked for ways to achieve *both*. They found creative solutions to engage and support youth in learning how the youth can help address the dilemma themselves. Our final hypothesis deals with this capacity of experts to address two goals at once.

Hypothesis 4. Balancing Multiple Considerations

The quantitative analyses also confirmed the fourth hypothesis (Table 2). In Model 1, we found significant differences between vignettes in how much they yielded balancing responses. (Vignette #4 about the CEO and the CD yielded significantly higher scores for balancing than all four other vignettes). When the variable for expert (vs. novice) was added to the equation in Model 2, it accounted for a significant increase in explained variance. Experts scored significantly higher on the balancing scale than novices. However, this effect became non-significant in Model 3, indicating that it could not be differentiated from age, education, and years of experience.

The follow-up qualitative analyses suggested that this finding is a corollary of the experts identifying a wider range of considerations in the dilemmas. Their set of responses to each vignette were *more likely to address multiple concerns, including balancing concerns that were in conflict with other*. The dilemma in Vignette #3 was that a youth, Jackie, often dominated group discussions by sharing her violent experiences with the youth. The novices more often focused their responses exclusively on Jackie's behavior, typically on how to reduce her storytelling. The experts more often identified the situation as one in which the needs of Jackie and the group were in tension and both needed to be accommodated. One said her/his goal was: "trying to find a balance in making sure Jackie gets the right attention and that the other girls get heard." Similarly, in the situation between Lydia and her parents, the novices were more likely to dismiss the parents as simply being uninformed, whereas the experts emphasized a need to understand and respect their perspective.

In the following response to the daycamp vignette, one expert explicitly identifies multiple balancing acts that the leaders should try to achieve with their responses:

Youth need to be able to plan activities and make their own decisions. They also need guidance and support from an experienced adult. If they are not led in a specific direction or motivated by a leader, they will have difficulties accomplishing their goals. The youth want to have ownership in planning the camp, which is important, but they also need to learn about what goes into planning a successful camp experience. By learning about the needs of children, the youth will be better prepared make plans and follow through with them.

This leader seeks to balance youth making their own decision with adult guidance and youth ownership with helping youth learn, among other things.

In sum, the experts tended to develop responses that addressed considerations across a wider range of people and ecological systems. The planned courses of action integrated concern for parental, organizational, pragmatic, and developmental goals and imperatives.

Discussion

This study suggests distinct differences in how expert and novice youth workers appraise and respond to dilemmas of practice encountered in youth work. The peer-nominated "experts" in our sample generated more considerations and more possible responses to vignettes of challenging situations. They were also more likely to formulate responses that were youth-centered and that addressed multiple considerations. Limits of the study need to be kept in mind. In particular the small data set did not allow us to differentiate these differences from difference in age, education, and experience between the two groups. Nonetheless these findings suggest some features that may define effective reasoning and response to dilemmas of practice. These findings may also have implications for how youth workers are trained.

The four features that significantly differentiated the reasoning of experts suggest elements of effective youth work practice. The experts' identification of more considerations suggests that skilled youth workers have a broader understanding of the issues and concerns embedded in youth practice. Their generation of more responses suggests that they have a wider repertoire of strategies to consider and choose from in ways that may be better fitted to specific situations. Their greater tendency to convert challenging situations into youth-centered learning

experiences reflects skills to achieve the fundamental aims of youth work. And their greater development of responses that balance multiple considerations reflects a versatility to manage complex situations.

A central theme suggested by these four differences – most evident in our qualitative findings – was that the experts were distinguished by what might be called ecological intelligence, or “ecological rationality” (Gigerenzer, 2008). Whereas the novices more often applied context-free rules, the experts’ appraisals and responses to the different vignettes reflected contextual sensitivity to the multiple people and ecological system dynamics that were pertinent to their work. The findings suggested they had knowledge and skills for understanding the varied systems – individual youth, group dynamics, parents, program managers, funders, etc. – and tailoring their responses accordingly. As found in other fields of expertise, they were able to take a pluralistic perspective, tolerate contradictions, and address or balance competing demands and obligations (Fook, et al., 2000; Levin, 1995; White, 2007).

This ecological intelligence appeared to involve, not solely knowledge of these different systems, but possession of elaborated mental models of how different systems worked and the leverage points for influencing them. These were evident in the experts more frequent formation of hypotheses about root causes of youth’s or other people’s behavior, hypotheses that, in real life situations, might help them better know what questions to ask or information to seek. These mental models were also evidence in the experts, greater engagement in forecasting events, anticipating contingencies, and formulating decision trees that took these possible contingencies into account. Ross and associates (2006) found that experts in other fields used their models of how things worked to run mental simulations and refine their course of action. That appears to be what these expert youth workers were doing. Whereas novice responses appeared to have a more narrow and less dynamic view of the dilemma situations that seemed to lead to more rigid and less nuanced solutions, we believe these mental models accounted for the experts’ ability to generate more flexible and contextually-sensitive responses.

This preliminary study begins to identify some of the ways that expert youth development practitioners excel. But the study is limited by the sample and methods employed. The small size and the large differences between the two samples in age, education, and experience limited our ability to differentiate the effects of expertise from these other variables -- which likely contribute to the development of expertise. Research with better matched samples is needed. Alternatives to use of peer nomination as a measure of expertise should also be explored. In addition, it should be asked how appraisals and formulations of responses to vignettes as a task in a study correspond to how practitioners act in real life situations. Priest and Gass (1997) describe how a rationale decision-making process can sometimes breakdown due to stress, haste, misinformation, and role overload. Another goal for future research is to understand how to transform less skilled or experienced youth workers into more proficient ones.

These findings suggest that it may be important to train youth workers in skills for ecological thinking; that new youth workers should learn to attend to the complexity of the real world of daily practice and to develop capacities to balance diverse and competing considerations while keeping youth at the center. It has been suggested that discussion and analyses of dilemmas should be a component of youth work training (Banks & Nohr, 2003). In other fields of practice—education, business, medicine—challenging situations and cases are often used to help trainees develop abilities to think about the real-world complexities of practice (Banks &

Nohr, 2003; Weiss et al., 2005). Research in these areas suggest that “deliberate practice” that gives trainees, or even experienced professionals, with the range of situations encountered in their field is important to their development (Ericsson, 2006). This research also suggests that the goal is not to teach novices that there is one right solution for every situation, but rather to help them develop abilities to see the underlying complexity of situations and generate alternative responses to address the array of considerations.

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Appendix A

Five Dilemma Vignettes

1. The high-school-aged youth in a rural leadership program were in charge of planning a 2 ½ day summer daycamp for 4th graders. The youth had worked side-by-side with Mr. Baker, the advisor, in planning the daycamp in prior years. So he decided they were ready to take control over development of the camp this year. He told them it would be “their camp”—and the youth relished the challenge. In the first stage, they were very excited in generating ideas.

However, once the topics to be covered with the children were chosen, many youth acted as though the task of planning the daycamp was done. Some lost interest as the work of preparation turned out to be less fun than spinning out ideas. The group seemed unable to take things to the next step of planning out specific activities. When some youth suggested specific ideas, conflicts emerged.

The 4th graders were registered and the dates for the daycamp were approaching. Up until now, Mr. Baker had tried to let youth work through things on their own, but he could see that there were many details of the daycamp that youth had not thought through.

2. Youth in a six-week summer employment program were paid for their participation. John, the program director, had communicated clear expectations for professional behavior and for the activities youth would work on over this period.

One young man, Charles, who was from out of the neighborhood, was disruptive to the group. He was dragging his feet during activities, putting his head down, and initiating side conversations during group discussions. When things happened that bothered him, he acted out rather than voicing his concerns in a constructive way. He was a particularly charismatic young man, and his negative attitude and off-task behavior was often picked up by other youth. John lamented that in a longer program he'd have greater latitude to “massage” the situation, but in six weeks there was little time to do this and Charles’ behavior was interfering with the youth carrying out the intended activities.

John had private conversations with Charles and “put it on the table.” John re-emphasized the expectations for youth in the program and tried to get Charles’ side of things. John shared his account of Charles’ behavior, and asked him if it was accurate. Charles agreed and seemed eager to do better. But his behavior didn’t change. A few days later he got “fired up” because his paycheck was delayed and he started cursing at program staff.

3. The mission of Sisterhood, an urban program for high-school-aged young women, is to help them think critically about issues of identity, race, and gender, and how these issues relate to their own lives. One young woman, Jackie, has a history of violent behavior. In the words of the program advisor, Lynn, “She is in continual, constant conflict with other girls.”

Jackie brings sagas of her fights to the group and can dominate the discussions in what appears to be efforts to impress others. For example, she describes being beat up and stalked in her community, and shows her stitches from being thrown against a wall by another girl. Lynn sees the group as the one place in Jackie’s life where she has positive female relationships. And Jackie describes the program as helping her learn to “think

before she acts” and try to “lead my life positively.” Lynn often talks with her outside of group time, but wants to better figure out how to support Jackie within the group and whether and how to try to regulate her behavior in the group meetings.

4. The Studio is a youth organization aimed at helping urban youth (particularly those who have dropped out of high school) connect to careers in media arts. The magnet for this program is their state of the art sound studio, which draws youth in by tapping into their interest in recording careers. Twenty youth have registered for Janet’s class where they are to produce a music CD of songs they compose.

The agency’s CEO has dictated that the theme of the CD will be the youth’s role models. Like many urban organizations, The Studio survives from grant to grant. The CEO’s priority is trying to keep the money coming into the organization, and she views role models as a wholesome topic that will appeal to their funders.

But the youth don’t like the topic and can’t get started on their songs. Most insist that they don’t have anyone whom they considered to be a role model. Janet approaches the CEO, but she is unwilling to change the topic. Janet has to figure out how to explain the situation to the youth and get the CD made.

5. El Concilio is a youth leadership council that involves neighborhood youth in community service and in planning events. Lydia, a 14-year-old girl, came to the adult advisor Cesar before a meeting with tears in her eyes. She told Cesar that her parents said she could not attend the youth council anymore.

Lydia’s parents are immigrants from a rural cultural background where youth programs don’t exist, and young people are expected to work and contribute to their families. Her parents had recently seen through the program’s window that the group of co-ed youth on the council was having “too much fun.” They doubted that the youth were doing positive things and were concerned that the program would be a negative influence on their daughter. The girl’s parents wanted her to quit the council. They asked her: “What is the council going to do for you?”

Cesar had to decide how to respond to the situation.

Tracking Evaluation Capacity with Youth Professionals

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Tracking Evaluation Capacity with Youth Professionals

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Abstract: A pilot program mentoring youth professionals through “learning-by-doing” projects yielded consistent increases in evaluation knowledge and skills over three years. Self-assessed skill improvements were greatest for preparatory processes (planning, focusing, design, selecting methods) and reporting competencies that are more often emphasized in organizational evaluation requirements. Smaller increases in data collection and analysis skills were also perceived by participating youth professionals. Focus groups with each of six evaluation “learning circle” groups revealed benefits of participation in the evaluation “learning circle,” as well as needs for evaluation training and tools, and challenges faced within the organizational culture.

Introduction

This paper describes the context and process for developing learning circles of community-based youth professionals to build program evaluation capacity. Improvements in evaluation skills among learning circle members and perceptions of goals, activities, and benefits of learning circle teams are presented. Discussion focuses on implications for practice, research, and policy.

Evaluation skills represent a critical competency for Cooperative Extension’s 4-H Program and other youth-serving organizations to address the dual challenges of program accountability and quality improvement (National Association of Extension 4-H Agents, 2006; National Professional Development Task Force, 2004). Capacity-building is a priority for these organizations (Bialeschki & Conn, 2011; Rennekamp & Engle, 2008; Taylor-Powell & Boyd, 2008). Several professional organizations identify competencies considered essential for evaluation practitioners (Archer, Bruns, & Heaney, 2007; Arnold, et al., 2008; OPEN Initiative, 2007). Although *routine reporting* of outcomes necessitates a working knowledge or practical awareness of evaluation concepts and procedures, *program leadership* for youth programs

typically requires functional knowledge or mastery of theory and practice in both programming and evaluation (Arnold, et al., 2008). For most community-based professionals, limited training, support, and ongoing job demands make it difficult to achieve functional capacity.

Learning circles which partner a capable, adaptable mentor with highly-engaged professionals and focus on project-based collaboration are identified as both attractive and effective means to strengthen skills and capacities among Extension professionals (Baughman, et al., 2010). This type of small group “learning by doing” or project-based mentoring has been shown effective in building evaluation capacity, particularly when combined with structured opportunities to learn the language and logic of evaluation (Arnold, 2006; King & Volkov, 2005).

According to Brooks (2010), a combination of face-to-face contacts and web-based informational and interactive tools are effective elements in the successful facilitation of university faculty development. Further, Schlager, Fusco, and Shank (2002) report that web-based learning communities are effective for supporting and training new teachers, particularly in “learning the ropes” in their first job. Several training platforms are available for learning about program evaluation online (Archer, Bruns, & Heaney, 2007; Centers for Disease Control, 2011; CYFAR, 2011), with some providing evidence of effectiveness (Fleming & Easton, 2009; Kreis & Wilke, 2009).

Development of NC 4-H Evaluation Learning Circles (E-LC)

Building on these insights, North Carolina 4-H initiated evaluation learning circle teams in January of 2009. Agents with 5-15 years’ experience were invited to share in monthly online training sessions and to join self-directed, collaborative, project-based teams mentored by a campus-based specialist. Participants received no incentives other than the opportunity to learn and work together on a professional development and program accountability priority. Groups met online for instruction and discussion at first, but quickly made their own arrangements to balance online and face-to-face meetings by forming regional teams.

In Year 1, 12 staff (6 teams) participated in a monthly webinar on evaluation skills and developed evaluation plans, with one team completing a program evaluation. Nine staff continued in the network in Year 2, joined by 6 peers (6 teams). Teams became more autonomous, with the specialist/mentor acting as consultant rather than as convener. Web-based training was available through the eXtension Evaluation Community of Practice (eXtension Evaluation Community of Practice, 2011), but team members more consistently participated in online or face-to-face mentoring sessions with the specialist every 4-6 weeks. All webinars and online meetings were conducted using Elluminate!Live software. Four teams completed program evaluations and two others identified improvements needed to complete a plan. At the beginning of Year 3, 13 staff continued, joined by 6 peers. Six groups developed logic models, evaluation plans and instruments. Five groups implemented evaluations for programs including 4-H camp and club impact, presentation skills, goal-setting/achievement skills, science fair, youth leadership and service.

Research and Practice Questions

This study sought to determine whether E-LC members were gaining evaluation skills as well as to discover their perceptions of the context, activities, and benefits in E-LC teams.

Methods

Sample

Twenty-one of 24 youth professionals who participated in Evaluation Learning Circle (E-LC) teams during its first three years completed an Evaluation Skills Self Assessment (ESSA) pre-test. Fifteen completed an ESSA one year post-test (9 after Year 1, 6 after Year 2). Seven completed the ESSA post-test after one *and* two years. Attrition in Years 1 and 2 resulted from medical leave (N = 2) or job changes (N = 3). Six new participants joined or formed learning circles at the beginning of Year 3. Participants ranged in age from 27 to 50 years, 2-27 years of experience. Most participants (N = 21) were Caucasian, 3 were African-American. Fourteen were located in rural communities, 2 in urban, and 8 in mixed rural-urban counties. When they joined an E-LC team, 11 held bachelor's degrees, 8 master's degrees, and 2 doctoral degrees. Of those who continued to Year 3, 5 of the Year 1 cohort held masters or doctoral degrees, and 2 completed an advanced degree during the year. Of those in the Year 2 cohort, only 2 held an advanced degree, although 6 completed their advanced degree during that year.

Instruments, Procedures, and Analysis

Participants completed an Evaluation Skills Self-Assessment (ESSA) (Arnold, et al., 2008) during each year of their participation in the E-LC. This tool, presenting 41 items on knowledge and skills in seven phases of evaluation, was developed by a team of evaluation specialists to target needs for training and document skill growth. Participants rated themselves from "Know Nothing" (0) to "Understand the Basic Concept" (1) to "Can Implement Concept with Assistance" (2) to "Can Implement the Concept Independently" (3). Participants completed the ESSA on joining E-LC teams, then annually thereafter. Data analysis, using SPSS-PC for Mac focused primarily on descriptive statistics given the small convenience sample and attrition within annual samples. Friedman non-parametric t-tests with paired samples were conducted on pre/post scores to track evidence for skill change.

Online focus groups were conducted at the end of Year 2 by a professional evaluator. Members from each E-LC team were asked about prior evaluation experience, goals and expectations for participation with the E-LC, evaluation training and resource needs, perceived benefits of participating in the E-LC, and the evaluation challenges of NC's 4-H agents. Focus group data was collected using Elluminate Live!, a web-based conferencing, video, voice, and file share system. Although the focus group sessions were scheduled for one-hour, each focus group lasted from 1.5 to 2 hours, even when a smaller number of participants were present. Focus group recordings were transcribed and a content analysis of the participant responses was performed.

Results

Evaluation Skills Self-Assessment

Frequency analysis of ESSA pre-tests for those participating in the first three years of the project (N = 21) revealed that at the start of the project most were "Unfamiliar" (0 on the 0-3 scale) or simply "Understand the basic concept" (1 on the 0-3 scale) At initiation, participants were most familiar with skills related to "Communicating Results" (X = 1.63), with estimates of skills for Planning, Focusing, Design, Selecting Methods, Data Collection, and Analysis phases between 1.15 and 1.44/3.0. Over 50% of respondents rated themselves below the level of "Can Implement with Assistance" for most items. A large minority of respondents (40-49%) rated themselves below the "Can Implement" level on other skills such as Using a Logic Model, Determining Readiness for Evaluation, Developing Survey Questions, Matching Reporting to Audience Needs, and Developing Recommendations. A small minority of respondents (25-35%)

rated themselves below the "Can Implement" level on only two items: Understanding the Purpose of Evaluation and Developing Evaluation Questions.

Subsequent analyses focused on continuing participants. Among the first and second year cohorts who completed an initial assessment and a one-year post test (N = 15), a clear trend toward higher scores on the ESSA was evident for all phases of evaluation. As indicated in Table 1, increases in six of seven categories were statistically significant despite the low numbers of participants. After one year of "learning by doing," over 50% of participants rated themselves in the "Can Implement" categories on 30 of 41 items (excepting Observation Methods and most Data Collection and Analysis items).

Self-ratings of the first cohort (N = 7; see Table 1) were lower at initiation and at the end of Year 1 than for the whole group (N = 15; see Table 2). However, as indicated in Table 2, cohort 1 self-ratings for most areas were significantly higher after Year 1 and after Year 2 relative to initiation. A majority of cohort 1 participants rated themselves as "Can Implement" on 28/41 items at the end of Year 1 and 32/41 items at the end of Year 2.

As noted in the project description, these professionals gained experience in designing and implementing a program evaluation or from critique and correction of evaluation design that was not ready to implement.

Table 1

Paired-Samples T-tests on Self-assessed Evaluation Skills
for Long-term Learning Circle Members (N=7)

Evaluation Skills	Year 1	Year 2	Year 3
Planning	2.86	3.86	5.67*
Focusing	6.33	11.83^	12.6*
Design	8.14	12.42	12.84*
Selecting Methods	7.14	15.29^	15.33*
Collecting Data	4.86	8.86^	9.00+
Analyzing and Interpreting	4.29	6.29	8.33+
Communicating Results	4.00	6.28^	7.50*

+ statistically significant > .05, * statistically significant > .01, Year 1-3
^ statistically significant > .01, # statistically significant > .01, Year 1-2

Table 2

Paired-Samples T-tests on Self-assessed Evaluation Skills
For Mid-term Learning Circle Members (N=15)

Evaluation Skills	Year 1	Year 2
Planning	3.60	5.20+
Focusing	7.50	12.07*
Design	8.67	12.67*
Selecting Methods	10.00	15.53*
Collecting Data	5.53	8.00+
Analyzing and Interpreting	5.67	7.29
Communicating Results	4.67	6.53+

+ statistically significant > .05, Year 1-Year 2
* statistically significant > .01, Year 1-Year 2

Focus Groups

Content analysis revealed three predominant categories related to the needs and challenges of evaluation capacity building: Organizational Culture, Evaluation Tools, and Evaluation Training Needs. The majority of focus group participants' experiences with evaluation were limited to on-the-job and in-service training.

There were 76 comments reflective of Challenges to Evaluation; 48 comments related to Organizational Culture; 39 comments related to Evaluation Training Needs; 32 comments related to Evaluation Tools; and 41 comments related to the Benefits of E-LC Participation. The most frequently identified Challenge to Evaluation was time. In addition to time, communication and language difficulties, fear, and requirements for reporting were frequently mentioned.

Within the theme of Organizational Culture, participants most often discussed their need for cooperation, coordination, and support from state-and county-level leaders, the lack of time for evaluation work, and a perceived disconnect between reporting outcomes and the subsequent use of those reports. Learning Circle members reported that differing program emphases and evaluation standards among national, state, and county leaders regarding evaluation activities and outcomes made it difficult for them to identify and collect data on program outcomes. Many felt overwhelmed by expectations (perceived or real) to "evaluate everything," "evaluate something" (with insufficient guidance or flexibility on how evaluate), or "evaluate different things" (e.g., differing indicators at different levels). Their rapid work cycle and changing program priorities typically resulted in limited or no reflection on outcome reports.

Participants identified several Evaluation Training Needs including a need for training on basic evaluation processes. Explicitly stated desire for information and training on when to use various types of evaluation, how to analyze and report outcomes, and how to use evaluation data to show program value were the predominant Evaluation Training Needs.

Within the theme of Evaluation Tools, focus group participants identified a need for packaged program templates to include built-in evaluation protocols and measures; an adaptable but consistent reporting system to capture short- and long-term outcomes; and state-created measurement tools for specific program areas.

The amount of variance in comments related to experience, goals, needs, and challenges was greater than the variance in the perceived benefits of participation in the E-LC groups. There were five clearly identified Benefits of E-LC participation that echoed from each focus group:

- 1) E-LC participants perceived an increase in the amount and quality of support from colleagues,
- 2) E-LC participants reported an increase in support and training from a state specialist,
- 3) E-LC participants identified an ability to better understand the need for and value of statewide program fidelity,
- 4) The ability to partner and collaborate with colleagues was enhanced through E-LC participation, and
- 5) Participants in the E-LC reported feeling more valued and validated with regards to their competency and qualifications to perform program evaluation in general.

Discussion

This evaluation capacity-building pilot project engaged 12 Extension 4-H youth professionals in Evaluation Learning Circles (E-LC) in the first year, another six in each succeeding year, with 21 of 24 participants still engaged in Year 3. Participants who joined E-LC teams tended to be internally motivated and self-directed in convening their groups, with the evaluation specialist acting as mentor and consultant rather than convener of E-LC teams. Most E-LC members began with relatively little training or experience in program evaluation. Team members recognized that building skills in programming and evaluation is a long-term process including concept and skill learning as well as hands-on trial and error. Teams met, on average, every 4-6 weeks. Active and maturing teams invested 10-20 hours in planning, implementation, and professional development between meetings while start-up groups generally gave five or less hours during the planning phase of their work.

All participants shared in developing logic models that some teams were able to implement as multi-county programs with evaluations. Some participants attended training webinars, conference workshops, and/or self-directed learning regarding evaluation skills and issues. Some consulted on specific programs or issues with an evaluation specialist. Thus the learning experiences of participants varied greatly in the first two years of the project. Nevertheless, having a "smorgasbord" of learning and project options seemed to facilitate learning across a multitude of schedules, learning styles, and program emphases.

Evaluation Skills Self-Assessment (ESSA)

By their own assessment, E-LC members were relatively unfamiliar with evaluation competencies when they joined an E-LC team. The first cohort rated themselves lower than the second at initiation, which was somewhat surprising given their greater experience. Older, more experienced professionals may not have had the same opportunities to learn about evaluation as younger professionals but may have had more opportunities to recognize their need for training. Since the majority of Cohort 2 was pursuing advanced degrees, other learning experiences may have augmented learning in E-LC teams. However, graduate work also placed more demands on their time, so the practical, collaborative experiences may have provided a relevant, timely application of their classroom learning.

After one year, most participants indicated that they understood the basic concepts and skills involved in the preparatory phases of evaluation, but felt less capable in collecting and analyzing data and reporting results. This pattern is not surprising given that teams tended to spend the most time in learning and applying skills in preparation phases. Significantly, skill gains typically represented changes from "Unfamiliar" or "Understand Concepts" to "Can Implement with Assistance." Consistent with Arnold (2006) and Baughman, et al. (2010), short-term mentoring in evaluation skills did not result in immediate competence and independence. Nevertheless, those in teams who completed projects reported the greatest gains in skills, with those who completed plans or logic models also citing positive gains. This correlation of accomplishments with perceptions is typical of project-based learning (Thomas, 2000). For practicing professionals, "learning by doing" proceeds somewhat slower than more structured approaches since it is typically "squeezed in" to professional schedules rather than "set apart" like a workshop or graduate course. More intensive training and mentoring might have yielded greater gains but may have resulted in greater attrition as demands exceeded available time. Moreover, the program relevance and rewards, including opportunities to report on program results, and personal mentoring and shared experience with colleagues represent key advantages of the "hands-on" approach. Practitioners' gains in the second year, continued

participation into a third year, as well as addition of new teams each year illustrates the value they place on long-term mentoring and practice.

The present study represents a pilot project with a small, self-selected group of youth professionals engaged in learning at their own pace. Nevertheless, sustained and self-directed learning is unusual (Baughman, et al., 2010) and slow growth in evaluation competencies is typical (Arnold, 2006). Peer and expert support as well as practical, self-assessed gains in confidence and skills, and completed evaluation projects offer significant incentives for participation. Results underline the importance of sustained engagement for iterative skill-building and team-building. Team members who built trust and understanding of key concepts and valued projects over an extended time reported the most changes to practice and to continued participation in an E-LC team. The climate and outcomes fostered by E-LC teams provide a promising model for youth organizations to build evaluation skills on the job. Capacity-building efforts might also benefit from testing, expert observation, and more in-depth self-reflection. These methods might provide a more accurate and detailed record of changes, noting not only progress in skill-building but capacity to apply knowledge and skills as a guided or independent learner. Much valuable insight might be gleaned from more careful examination how E-LC teams learning and interact through hands-on projects. More detailed examination of organizational dynamics and change would provide insight on the context and effects of E-LC team development.

Limitations

This study is a pilot project with a convenience sample, involving no organizational incentives and operating with relatively few structured learning activities. Outcomes and experiences reported reflect a holistic learning process including training, mentoring, mutual assistance, and self-directed learning that are not assessed separately. At this point there is no standard to suggest what type and amount of learning activity is needed to achieve specific levels of competence.

Test effects consistent with repeated assessments, social desirability effects, and inexperience in judging evaluation capabilities could inflate or deflate estimates of personal competence. Since the study included no independent assessment of skills, reported gains may reflect confidence resulting from project completion as well as genuine changes in knowledge or ability. However, project completion provides some evidence of competence, so scores are likely not simply a product of social desirability. Other outcome measures such as expert observation, interview, or judging of evaluation products might better corroborate or augment self-assessment and focus group results.

Implications

This report presents processes and outcomes of a pilot project with preliminary but promising implications for practice, research, and policy, as summarized below.

Practice

A principal lesson of this study is that engagement of youth professionals in evaluation learning, like engagement of youth for evaluation, requires greater-than-average commitment but promises greater-than-average reward. "Hand-selecting" team conveners and members who are experienced, motivated, respected, and capable of self-directed learning improves chances for sustainability. Enabling teams to select relevant projects enhances motivation and learning in-context, but teams may require guidance to meet evaluation standards of feasibility, utility, propriety, and accuracy (Yarborough, Shulha, Hopson, and Caruthers, 2011).

Learning circles may not work for everyone. Those best served will be able to commit to extended learning (vs. a short-term workshop), shared effort (vs. turnkey technology), and “going with the flow” and innovation (vs. packaged training). Team learning will require consensus, shared effort, and mutual support, which can be challenging for independent learners. Youth professionals who value immediate results may need short-term indicators of progress, for themselves and their project, in order to sustain engagement in team building and iterative learning. Those who value “learning by doing” will also need to invest some effort in concept learning to grasp the vocabulary, tools, and strategies that underlie program evaluation. A mentor-expert must be available, adaptable, accepting, astute to context and team dynamics as well as to evaluation issues. Team members should expect a mentor to be directive on skills and ethics but flexible in guiding other learning experiences.

Learning circle teams foster greater efficiency since they combine program planning and improvement, evaluation training, and accountability, including use of larger data pools, enable flexible scheduling and online resource availability. Best practices and ethics can be experienced, not just studied. A wide range of professional skills and youth or volunteer outcomes can be tracked in the context of ongoing programs across extended time. Such efforts are especially needed since there is little evidence on “what works best” for evaluation education.

Research

The ESSA identifies necessary evaluation competencies, but more research is needed to document typical skills of youth professionals or how, and how much, skills can be enhanced or applied over time. Focus groups, expert observations, and assessment of professional portfolios will add to understanding the goals, strategies and experiences, resources, and benefits of E-LC teams that contribute to sustainability, professional growth, and improved outcomes with volunteers and youth.

Policy

Agencies and professional organizations should consider the relatively low costs and high benefits, including relevance, convenience, empowerment, team building, and data pooling associated with supporting learning circles. Moreover, the model of field-generated organizational learning and capacity-building that might be applied across a variety of subjects and skills provides a valuable paradigm for continuing professional education in many youth-serving organizations.

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An Emerging Model of Knowledge for Youth Development Professionals

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An Emerging Model of Knowledge for Youth Development Professionals

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Abstract: A model of knowledge for youth development professionals that is comprised of five knowledge domains: 1) Foundational Knowledge of Positive Youth Development; 2) Knowledge of Youth; 3) Knowledge of Group Facilitation; 4) Knowledge of Contexts and Organizational Systems and; 5) Specialized Youth Development Knowledge is proposed in this paper. The model is intended for use in youth development programs, which have been associated with better outcomes for participants when compared to other types of youth programs. The development of the knowledge base is framed by seminal research on teacher knowledge and informed by practice-oriented research in the out-of-school time field and literature on the quality of youth development programs.

Introduction

After-school programs are becoming more common in children's out-of-school time (OST) experiences. Research estimates that nearly 10 million children participate in youth programs annually (Yohalem, Pittman, & Edwards, 2010) and increasingly, these programs are regarded as developmentally enriching contexts, where youth can be nurtured academically, socially, emotionally and civically (Bodilly & Beckett, 2005; Durlak & Weissburg, 2007; Grossman et al., 2002; Little & Harris, 2003; Miller, 2003; Vandell et al., 2005; 2006). Experts and practitioners assert that program staff or youth practitioners are critical in shaping programs into contexts that promote positive development (Birmingham, Pechman, Russell & Mielke, 2005; Bowie & Bronte-Tinkew, 2006; Stone, Garza, & Borden, 2004) and researchers in the after-school field acknowledge the importance of staff by including staff background, education, and training in definitions of program quality (Vandell, Reisner, Brown, Pierce, Dadisman, & Pechman, 2004).

Despite the central role of program staff in delivering quality youth programs, the field is just beginning to examine the practices of these educators. An important component of this

practice-oriented research is an understanding of the knowledge that these professionals draw upon during their daily work (e.g. Larson, Hansen, & Walker, 2005; Larson & Walker, 2010; Walker & Larson, 2006). Unfortunately, very little is known about the professional knowledge base that staff use to inform their practices. The purpose of this paper is to begin to articulate the knowledge used by program staff when implementing high quality programs.

Researchers of formal schooling are far more advanced in their understanding of the knowledge and instructional practices that are effective in classrooms than scholars in the youth development field are about youth practitioners. The literature on teacher education describes a knowledge base that supports effective teaching (Shulman, 1986; Wilson, Shulman, & Richert, 1987) that has influenced research, practice, and the professionalization of teaching (Ball, Thames, & Phelps; 2008).

As educators in non-formal educational environments, youth practitioners also have a knowledge base that guides their practice but that has yet to be defined for the field. The importance of explicitly articulating this knowledge base for program staff is three fold.

- First, a knowledge base that is grounded in theory and empirical research will help youth practitioners perform in ways that support the developmental goals of the programs in which they work. In a policy climate that demands evidence of the effectiveness of youth programs, refining staff practices to enhance the healthy development of children and adolescence is critical, not only for program participants but also for the sustainability of youth programs.
- Second, a deeper understanding of the professional knowledge base of program staff can contribute to the professionalization of the youth development field by describing the disciplinary expertise that should be acquired to work in the field. Research can contribute to the development of this disciplinary expertise by exploring the relationships between youth practitioners' knowledge and their practice.
- Third, advancing a knowledge base for program staff will move the field toward a common language about the work of supporting healthy development in the out-of-school time hours. A common language can then be used to focus and guide discussion and reflection among program staff to improve practices (Stone, Garza, & Borden, 2004).

This paper moves forward with the important work of defining the knowledge base for youth practitioners with the intention of stimulating scholarly dialogue in the youth development field about this issue.

Before beginning, let's clarify for whom this knowledge base is intended. The ensuing knowledge base was developed for adults who work in youth development programs. Professionals who work with youth have multiple job titles (National Institute for Out-of-School Time, 2006), such as youth workers, youth practitioners, and after-school professionals to name a few. The remainder of this paper will not use any titles that do not suggest that specialized knowledge or practice is needed to deliver quality youth programs (i.e. youth worker or youth practitioner). Instead, *youth development (YD) professionals* will be used to refer to program staff in informal educational settings. This title identifies a specific field (youth development) and denotes expertise (professional) within that field. Huebner, Walker, and McFarland (2003) define YD professionals as individuals who work in informal educational settings that provide opportunities and supports for the healthy development of children and adolescents. YD

professionals can serve at multiple levels of youth-serving organizations (YSO) providing direct service and/or developing and managing programs.

YD professionals work in a variety of settings but this paper focuses on the knowledge needed to work in youth development programs. Much like the terms used for YD professionals, the definition of a youth development program varies and researchers and practitioners are still developing a clear, succinct definition. In this paper, a youth development program refers to a program whose goal is to promote positive youth outcomes *and* prevent risky behaviors in youth. Positive outcomes are when youth build competencies in key developmental areas such as educational attainment, health and safety, social and emotional development, and self-sufficiency (Hair, Moore, Hunter, Kaye, 2002). In contrast, risky behaviors are those that hinder positive outcomes, such as substance abuse and poor school attendance, that can lead to maladjustment. Youth development programs achieve their dualistic goal by providing “supportive and empowering environments where activities create multiple opportunities for a range of skill-building and horizon-broadening experiences” (Roth & Brooks-Gunn, 2003a, p.110). While the model of knowledge described in this paper is intended for YD professionals working in youth development programs it may also be applicable in other organized activities, such as sports, mentoring, or tutoring.

The pages that follow delineate a model of knowledge for YD professionals beginning with a review of the research on teacher knowledge to provide a theoretical lens and organizational framework. This is followed by a description of the practices of YD professionals that support the goals of positive youth development programs. Then the emerging model of knowledge is presented through an examination of the literature on the practice of YD professionals and research about high-quality youth programming. The paper closes with directions for future research.

Conceptual Framework

Models of knowledge for classroom teachers became popular after Lee Shulman’s seminal piece, *Those Who Understand: Knowledge Growth in Teaching* (1986), in which he presented the first model of teacher knowledge. According to Shulman (1986), there are three interrelated domains of teacher knowledge that support effective teaching and the consequent student learning.

- The first domain, *content knowledge*, is an understanding of the facts and concepts of a particular subject matter and an understanding of how key principles are organized and how new knowledge is legitimized.
- *Curricular knowledge*, the second domain, is an understanding of the purpose, strengths, and limitations of the available curricular tools used to teach a given topic. Strong curricular knowledge also requires that teachers have an understanding of the curriculum used for different skill levels and how the curriculum relates to other topics encountered by students.
- The final and most complex domain, *pedagogical content knowledge* (PCK), refers to knowledge about teaching a specific subject matter and includes methods of representing concepts clearly to others, understanding what promotes or hinders learning a specific topic, and which instructional strategies will foster understanding in students.

In later work, Wilson et al. (1987) continued to articulate how this knowledge base is used by teachers and its implications for practice. They argued that teachers draw on their knowledge to “transform content for the purposes of teaching....and to foster the development of subject matter knowledge in students” (p. 110). In other words, the model of teacher knowledge describes what teachers should know to support student learning. Shulman (1987) and his colleagues (e.g. Shulman & Sykes, 1986) continued to refine his initial model of teacher knowledge and later the model was expanded to include a knowledge of: (a) general pedagogy such as classroom management and structure; (b) students’ characteristics; (c) educational goals; (d) educational contexts from classroom to neighborhood culture; and (e) other content.

This revised model stimulated a wealth of scholarly inquiry. During this time, the model of teacher knowledge continued to evolve with empirical evidence that both supported and revised the models set forth by Shulman and his colleagues. Carlsen’s (1999) examination of PCK and related domains of teacher knowledge is the most useful for identifying agreement across studies and across time. His analysis reveals that the most consistent domains in the model of teacher knowledge are (a) general pedagogical knowledge; (b) content knowledge; (c) pedagogical content knowledge; (d) curricular knowledge; (e) knowledge of educational goals; and (f) knowledge of students. More recently, Ball, Thames, and Phelps (2008) found evidence of two new domains of content knowledge (common content knowledge and specialized content knowledge) and two additional domains of pedagogical content knowledge (knowledge of content and students and knowledge of content and teaching) from a practice-oriented exploration of teacher instruction in mathematics classrooms.

The evolving model of teacher knowledge has been and continues to be constructive for the teaching profession. The impact of Shulman’s work on teacher education, professional development initiatives, and teacher practice is particularly notable. Teachers report professional development that addresses content knowledge as being useful to their work (Scribner, 1999) and strengthening the focus on content knowledge in teacher professional development is considered an effective training strategy (Garet, Porter, Desimone, Birman & Yoon, 2001). As for the practice of teaching, Ball et al. (2008) credit Shulman’s work with helping professionalize teaching by highlighting a specialized knowledge that is used to educate students and influence quality standards for the profession. They also assert that Shulman’s work created a link between knowledge and practice by demonstrating that both are needed to develop pedagogical content knowledge, the specialized domain of knowledge for teaching a specific subject. The influence of the model of teacher knowledge is far-reaching and serves as an example of the types of advances that could occur within the youth development field as a result of scholarly dialogue about the knowledge used by YD professionals.

The value of the model of teacher knowledge also lies in its definition and organization. Broadly, a model of knowledge can be described as a tool that identifies and defines the knowledge that is central to a profession. Moreover, the tool is organized to easily identify individual domains of knowledge and to distinguish them from one another. Perhaps some scholars will argue that the model of teacher knowledge has more to offer the youth development field than just definition and organization and imply this model can also be applied to the work of YD professionals. It is likely that there will be similarities between the domains of teacher knowledge and those to be described for YD professionals due to a shared goal; that is to nurture learning and development in children and adolescents. Yet, within this goal of promoting healthy development, differences exist between teaching and youth development programs. In school settings, academic and cognitive development tends to take precedence over growth in other developmental areas. In contrast, youth development programs adopt a more holistic approach

and explicitly address multiple developmental areas in their interactions with youth. The nuanced differences between the developmental goals of teaching and youth development programs suggest that there will be differences between the model of teacher knowledge and the one for YD professionals. The distinct contexts in which youth development programs are implemented is another difference that prohibits direct application of the model of teacher knowledge to YD professionals. Teachers and YD professionals tend to work in contrasting (although we hope complementary) contexts with their own opportunities and constraints that require specific types of knowledge.

In comparison to the teaching literature, there is minimal research in the youth development field that discusses the knowledge used by YD professionals. The available literature is limited because of its narrow focus on a specific program model (e.g. Stone & Rennekamp, 2004) and/or a heavy emphasis on skill and circumscribed use of current research (Vance, 2010). Therefore, the literature on staff practices and quality youth programming is examined to identify individual domains of knowledge that can be combined to form a knowledge base for YD professionals.

Approach to the Literature Review

The model of knowledge for YD professionals is developed, in part, by adopting a data driven approach used in the research on teacher education. Ball and Cohen (1999) argue that “teaching happens in the particulars” (p. 10) and that much of what teachers need to know can be learned during and from practice. From this perspective, it may be possible to identify the knowledge that teachers use from the particulars of their work. It follows then that consulting literature that focuses on the substance of YD professionals’ work with young people can identify the knowledge domains that they use. Much of this type of literature comes from qualitative research on youth programs.

At the same time a theory driven approach is used in which empirical research and theoretical articles about the quality of youth development programs are reviewed. This approach was informed by a characteristic of effective teacher professional development. Hawley and Valli (1999) identified eight features of high quality professional development; one of which is to provide links between formal knowledge and theory (acquired through research and academic study) and practical knowledge and skills. This characteristic of effective professional development underscores the importance of opportunities for practitioners to engage with the theoretical and empirical foundations of their field. Therefore, this paper draws on theoretical articles that have an explicit youth development focus as well as the body of research on the quality of youth programs. By taking both a data driven and theory driven approach, this paper attempts to gain insight from blending the knowledge from both research and practice, demonstrating a respect for each to contribute equally to the youth development field. Before presenting the emerging model of knowledge the central tasks of youth development work are highlighted.

The Practice of Youth Development Professionals

At its core, the practice of YD professionals is about designing and implementing program activities (that usually occur in groups) that provide youth with opportunities for learning and development (Astroth, Garza, & Taylor, 2004; Huebner et al., 2003). Program activities serve to attract youth to the program and keep them engaged (Benson, Scales, Hamilton, Sesma, Hong, & Roehlkepartain, 2006; Larson, et al., 2004; Larson & Walker, 2010; Roth & Brooks-Gunn, 2003a; 2003b; 2003c). These activities tend to be structured and the specific content of each

activity is secondary to the types of learning opportunities and developmental supports that are provided (Roth & Brooks-Gunn, 2003a; 2003b; 2003c). In fact, the specific content will have to be tailored to the community, culture, interest, and other individual characteristics of youth which means no one type of content is paramount (Roth & Brooks-Gunn, 2003a; 2003b; 2003c). The literature highlights the specific features that program activities should possess to achieve the goal of enhancing learning and providing developmental supports for youth.

First, YD professionals should design program activities that meet the specific developmental needs of the young people that they serve so that the activities are appropriately challenging for youth (Camino & Zeldin, 2002; Larson, Hansen et al., 2005; Yohalem, 2003). A review of evaluation findings for youth development programs found that the programs that successfully improved youth outcomes were also those that had explicit focus on the developmental needs of their participants (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004). This finding suggests that YD professionals should have a thorough enough understanding of child and adolescent development to design activities that can address the developmental needs of their youth.

Second, the literature suggests that programs should encourage youth to direct their own learning through their thoughts, actions, and interactions (Benson et al., 2006; Hamilton, Hamilton, & Pittman, 2004; Larson, Hansen, et al., 2005). This type of active learning has been associated with building competencies and a drop in risky behaviors (Benson et al, 2006). One way that YD professionals can encourage active learning is to facilitate youth-adult and youth-youth partnerships (Camino, 2005; Larson & Walker, 2005; Larson Walker, & Pearce; 2005). Some evidence suggests that quality youth-adult partnerships can lead to youth empowerment and skill development in targeted areas (Larson, Walker, et al., 2005). Furthermore, youth report that working in contexts that provide opportunities to collaborate with adults and peers enhance 21st century skills like initiative, time management, and the ability to work in teams (Dworkin, Larson, & Hanson; 2003).

Partnerships with adults and peers should give young people opportunities to work with others in ways that encourage their input and builds upon their strengths while also teaching them new skills (Huebner et al., 2003). Forming and maintaining these partnerships can be difficult because there does not appear to be a one size fits all approach, nevertheless, research offers some promising strategies. Camino (2005) asserts that strong youth-adult partnerships are likely to form when adults and youth work alongside one another to achieve collective goals such as finishing a project. Larson, Walker et al. (2005) contend that adults who facilitate these partnerships should understand "youths' cultural framework, developmental levels, preferences, and other group and individual factors" (p.71) to help establish connections with youth and facilitate connections between youth. YD professionals can also incorporate knowledge about youths' everyday lives into activities as well as knowledge about the multiple contexts that youth encounter on a daily basis (e.g. families, schools, and neighborhoods) to promote collaboration and involvement in activities (Stein, Wood, Walker, Kimball, Outley, & Baizerman, 2005; Walker, Marczak, Blyth, & Borden, 2005). One challenging aspect of managing these partnerships is maintaining a professional relationship with youth that is also personal enough to inspire connection and build trust (Larson & Walker, 2010; Walker & Larson; 2006).

Third, Roth and Brooks-Gunn (2003a; 2003b; 2003c) argue that program activities that are authentic, provide opportunities for skill-building, broaden youths' horizons, and improve developmental supports in multiple contexts are the ideal for youth development programs. Authentic activities are challenging for youth and connect to real life experiences such as future

employment and conflict resolution. Determining which activities will be considered challenging will depend on the developmental needs of youth. Skill building activities are those that provide opportunities for youth to hone or develop new skills. Activities that broaden horizons expose young people to new experiences, people, places and ideas. Finally, activities should increase developmental supports in multiple contexts (e.g. school and family), by attempting to change the norms, attitudes, or skills of adults in other settings. Examples of such activities are parenting classes or teacher training. This fourth feature complements what the National Research Council (NRC) and Institute of Medicine (IOM) (2002) has termed integration in which programs work with families, schools, and other community organizations to provide and coordinate developmental opportunities for youth. Roth and Brooks-Gunn (2003b; 2003c) found few programs that exhibited all four characteristics, however, they represent exemplary features of activities in youth development programs.

In addition to implementing program activities, YD professionals must also manage the program atmosphere, which serves as the backdrop for their daily work with young people. YD professionals should establish a program atmosphere that is supportive and empowering (Roth & Brooks-Gunn, 2003a; 2003b; 2003c) and includes positive group culture and social norms (Larson & Walker, 2010). Establishing and maintaining youth-adult and youth-youth partnerships are critical to developing a supportive atmosphere and youth participation is necessary to create an empowering environment. This emphasizes the importance of peer and adult partnerships. Moreover, youth development programs that exhibit positive group norms were more likely to achieve the developmental goals of their programs (Catalano et al., 2004). Creating prosocial norms requires that YD professionals set realistic behavioral expectations and also hold youth accountable for meeting them. To that end, YD professions must constantly negotiate the balance between promoting norms and maintaining consistent expectations (Larson & Walker; 2010).

Another important aspect of YD professionals' work is interacting with the organizations and systems that influence youths' daily lives and how they experience the program. Larson and Walker (2010) conducted program observations and interviews to understand the dilemmas faced by YD professionals. They found that struggling with the influence that other contexts had on program implementation was a common predicament encountered by YD professionals. For example, YD professionals had to address parental concerns about the program, be aware of personal and school activities that limit youths' participation, and support youth as they negotiate relationships with adults outside of the program. In addition, YD professionals also had to learn to work within organizational priorities and constraints, such as limited resources, to provide youth with enrichment activities. This may also entail explaining these constraints and priorities to young people.

The above description focuses only on the central tasks performed by YD professionals, it does not encompass every aspect of the profession. In fact, YD professionals report juggling multiple roles within their organizations (Madzey-Akale & Walker, 2000) such as recruiter, advocate, volunteer coordinator, and fundraiser (Yohalem, Pittmann & Moore, 2006). Yet, the focus of this paper is not on the multiple roles performed by YD professional; instead the intent is to articulate the knowledge that is necessary for the central tasks of the daily work with youth.

In summary, these central tasks include:

- Designing program activities
- Building relationships with youth and supporting the development of peer relationships

- Involving youth in their own learning and
- Establishing a supportive and empowering atmosphere including positive expectations and social norms.

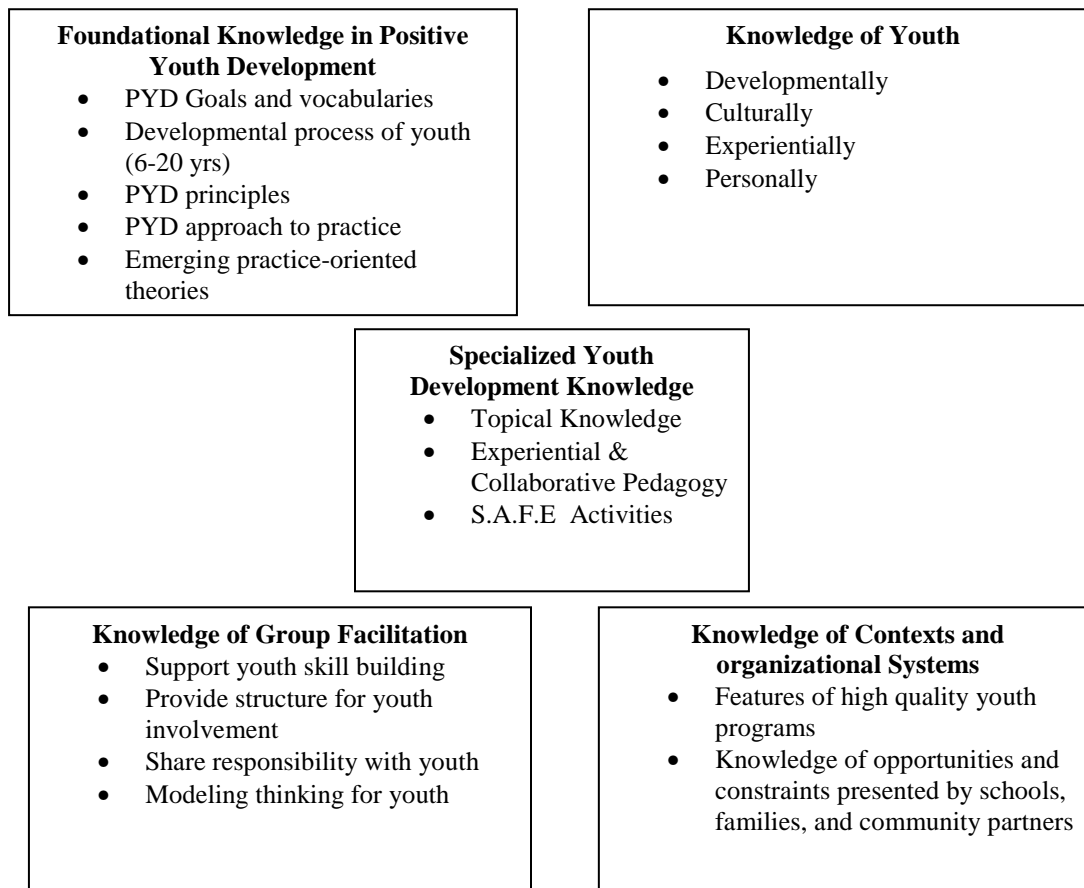
It is these central tasks that the model of knowledge for YD professionals is intended to inform.

Emerging Model of Knowledge for Youth Development Professionals

The proposed model of knowledge consists of five domains: 1) Foundational Knowledge in Positive Youth Development 2) Knowledge of Youth; 3) Knowledge of Group Facilitation; 4) Knowledge of Contexts and Organizational Systems and; 5) Specialized Youth Development Knowledge. Each domain is described in Figure 1. below.

Figure 1

Model of Knowledge for Youth Development Professionals



Foundational Knowledge of Positive Youth Development

The foundational knowledge of positive youth development (PYD) can best be described as a deep understanding of the multiple dimensions of PYD theory, particularly how it relates to practice. The proposed components of foundational knowledge are discussed below.

Positive Youth Development Goals and Vocabularies. The PYD philosophy underlies the practice of YD professionals. Broadly, the goal of PYD theory is to foster healthy development in young people by supporting youth through the developmental process in ways that build upon their strengths *and* reduces risky behaviors (Benson et al., 2006; Roth & Brooks-Gunn, 2003a). This broad goal has been characterized using different vocabularies (Benson et al., 2006). Two of the most common and widely research PYD vocabularies include the Forum for Youth Investment's 5 C's (Lerner, 2005; Phelps, Zimmerman, Warren, Jelicic, von Eye, & Lerner, 2009; Pittman, Irby, & Ferber, 2001) and the Search Institute's developmental assets (Benson, 2003; NRC & IOM, 2002). According to the 5 C's, the goal of PYD is for youth to strengthen their character, display competence and confidence, develop connections with adults and peers, and show caring for others (Pittman et al., 2001). A sixth C, contribution to self, family, and community is thought to develop when the five Cs are sustained over an extended period of time (Lerner, 2005; Pittman et al. 2001). Some evidence suggests that participation in youth programs can improve the 6 C's in young adolescents (Lerner, 2005; Phelps et al., 2009).

In contrast, developmental assets are individual strengths (internal) and ecological (external) supports that promote healthy development (Hamilton et al., 2004). From a PYD perspective, the goal is to increase the number of internal and external assets of youth. There is still some debate in the field about the number of developmental assets, however, the most established are the 40 assets set forth by the Search Institute (Benson, 2003). In their asset framework The Search Institute outlines 20 external and 20 internal assets (Benson, 2003). The external assets are divided into four broad categories including support, empowerment, boundaries and expectations, and constructive use of time. Similarly, the internal assets are divided into four broad categories; positive values, commitment to learning, social competencies, and positive identity. Youth should experience multiple internal and external assets across each of the eight sub-categories to maximize their benefits. Other researchers have found far fewer than 40 developmental assets. For example, Theokas et al. (2005) identified 14 developmental assets among a sample of 100,000 early adolescents. Nonetheless, research on developmental assets demonstrates that as youth experience more assets they are more likely to exhibit positive outcomes and less likely to engage in risky behaviors (Benson, 2003). Youth development programs are one context that provides external assets and opportunities for youth to build their internal assets (Lerner, 2005).

The positive links between participation in youth development programs and the development of the 5 C's and building developmental assets highlight the importance of the PYD approach to the practice of YD professionals. They should be aware of and have an understanding of the different vocabularies used to discuss the developmental goals of the PYD approach. Two have been mentioned here but there are others that exist in the field that may be relevant (Benson et al., 2006; Theokas et al., 2005). For example, behaviors associated with thriving have also been related to the PYD theory (King, et al., 2005; Theokas et al., 2005).

Positive Youth Development: Process, Principles, and Practice. Early contributors to the development of PYD asserts that the term "youth development" can be used in three different ways; as a process, as principles, and as a practice that shares common goals (Hamilton et al., 2004). YD professionals should understand each of the three facets of youth development. Hamilton et al. (2004) used the term process to refer to the developmental process from childhood (age 6) to young adulthood (approximately age 20) that encompasses cognitive, physical, social, emotional, and moral growth. YD professionals will rely on knowledge of the developmental process to shape program environments and design activities that meet the needs of youth.

The principles of PYD are also essential to the central tasks of YD professionals. These principles include:

- a) committing to fostering healthy development in youth;
- b) acknowledging that all youth need support for healthy development;
- c) using supportive relationships and challenging activities as developmental tools;
- d) emphasizing the strengths of young people; and
- e) actively engaging youth in their own growth (Hamilton et al., 2004).

Lerner (2005) posits that another defining principle of PYD theory is that healthy development is promoted and problem behaviors minimized when the strengths of adolescents match the supports available within a given context.

Practice, the third facet of youth development, is guided by the aforementioned principles and occurs at two different levels; in systems and in settings (Hamilton et al., 2004). At the systems level, practice is referred to as community youth development where organizations and institutions are connected to provide a range of contexts and resources that support the process of development (Camino & Zeldin, 2002; Hamilton et al., 2004). Benson (2003) refers to communities engaged in the intentional effort of youth development as asset-building communities. In their daily work YD professionals are entrenched in the community (or system) and may not recognize the integral role that they play in community youth development efforts (Camino & Zeldin, 2002). A knowledge of community youth development could broaden YD professionals' view of the field and expose them to potential careers working with and/or on behalf of youth.

The second level of practice occurs in settings or the locations where individual programs are implemented (Hamilton et al., 2004; Smith, Peck, Denault, Blazeveski, & Akiva, 2010). Settings are where YD professionals must use their knowledge to promote positive development in young people, where activities are designed around developmental processes, where collaboration builds relationships, where strengths are celebrated and skills sharpened, and where youth are invited to participate in this growth. While this may seem obvious it is worth noting YD professionals should have a comprehensive knowledge of the setting(s) in which they deliver programming.

Emerging Theories of Practice. PYD is a relatively new theory that has found the most traction within the youth development field. As the field matures other theories may unfold that YD professionals should learn about. One such example is the Theory of Developmental Intentionality (TODI) (Walker et al, 2005). TODI is an emerging theory that is based on youth development principles and informed by more classic developmental theories such as Vygotsky's (1962) zone of proximal development and Eccles and Midgely's (1989) stage-environment fit. TODI offers a concise description of how practice guided by the PYD philosophy matters for youth outcomes. TODI posits that youth engagement occurs when programs intentionally foreground youths' developmental needs by providing a fit between their needs and program content. Over time, youth's engagement leads to positive developmental processes. As youth take note of their own positive development they are motivated to continue their engagement with the program and this eventually leads to long-term positive outcomes for youth.

In summary, foundational knowledge is a deep understanding of PYD theory whereby YD professionals would be well versed in the different vocabularies used to describe the goals of

PYD, the developmental processes of youth, the key PYD principles, and the implications for practice. The foundational knowledge also includes being grounded in emerging developmental theories that can guide what Larson et al. (2004) calls “the art” of practice in the youth development field. Two approaches that could be used to strengthen foundational knowledge are to engage with the literature on PYD and seek exposure to programs that adopt an explicit PYD approach in their practice.

Knowledge of Youth

Knowledge of youth is important for designing challenging activities that will attract youth and retain their interest. (Lauver, Little & Wiess, 2004). Knowledge of youth is also critical for nurturing supportive relationships with young people. The literature points to four different ways in which YD professionals should know young people. That is, they should know them, (1) developmentally; (2) culturally; (3) experientially and; (4) personally.

In foundational knowledge, PYD and TODI were presented as theories that should underlie the practice of YD professionals. These theories make it clear that YDPS should keep the developmental needs of young people central as they design learning environments and program activities. In essence PYD and TODI indicate that YD professionals should have a broad understanding of the developmental processes of children and youth. Yet, the description of the central tasks indicates that they should also understand the *specific* developmental needs of the young people that they serve. In other words, YD professionals should be *experts on their youth*. This requires a thorough understanding of the developmental needs of the age group they work with the most. For some YD professionals this means elementary students and adolescents for others. To have a thorough knowledge of students, a YD professional should have both; a broad understanding of the child and adolescent development with an emphasis on the developmental period that corresponds to the age group(s) in which they serve.

Beyond the developmental needs, YD professionals should also know more personal attributes of the youth that they serve. One of the most important is to understand the culture of youth. Here, culture is used to refer both to what is currently common among youth and also one’s racial/ethnic, community, and family traditions. Youth culture is best described in clichés like, “what the kids are doing these days” or “what the kids are getting into” and really captures what children and adolescents find most intriguing at the moment. YD professionals will find knowledge of youth culture useful for building rapport with young people and also for informing the design of activities. A knowledge of family, community, and racial/ethnic traditions serve similar purposes. In particular, using culturally sensitive activities, language, and actions can provide a welcoming and affirming atmosphere for youth (NRC& IOM, 2002). Cultural knowledge in the form of racial/ethnic, community, and family traditions may also give YD professionals insights into the factors that promote youths’ involvement with the program. For example, some research shows that youths’ reasons to participate differ by their cultural backgrounds (Perkins, Borden, Villaruel, Carlton-Hug, Stone, & Keith, 2007).

Walker et al. (2005) and other scholars (e.g. Stein et al., 2005) argue that YD professionals should know about the everyday experiences of the youth that they serve. A thorough understanding of youths’ everyday experiences is characterized by knowing how a young person perceives the contexts and people in which (s)he interacts with. For example, a YD professional with extensive experiential knowledge of a young person would know what the youth thought of his/her teacher(s), what types of responsibility the child had at home and how the youth felt about accomplishing these duties, and important people in the young person’s life. Furthermore, YD professionals should also learn more personal characteristics of youth

such as their personalities, interests, challenges, and goals. As with the other aspects of this knowledge domain, experiential and personal knowledge help build relationships and design activities but they can also serve as guideposts when facilitating group work. For instance, knowing youths' emotional states and tracing it back to how they experience other contexts can help YD professionals decide which activities to pursue or how to tailor an activity to the current emotional climate of youth.

In general, knowledge of youth is for essential designing activities that motivate young people to stay engaged, facilitating collaborative activities, and building a foundation for supportive relationships to develop. Much of this knowledge domain must be gained through experience with youth but merely being around youth is not sufficient. YD professionals must make concerted efforts to get to know youth developmentally, culturally, experientially, and personally.

Knowledge of Group Facilitation

The central tasks indicate that YD professionals often work occurs in groups, large and small, while facilitating learning. Brown & Palinscar (1989) describe cooperative group learning as a process in which facilitators provide support, create participant structures, share responsibility, and model cognitive processes. This definition suggests that YD professionals should be familiar with the strategies or best practices used to accomplish the tasks involved in facilitating learning experiences.

Let's talk about what these group facilitation tasks may entail in a youth development program. Providing support for learning is ultimately the responsibility of the YD professional, yet, they must also understand how youth can support one another as they learn. YD professionals should also establish and maintain group norms for participating in activities. For example, in classrooms, raising your hand to speak is a normative way for students to participate in discussions. This approach may or may not be appropriate in a program setting but YD professionals should strive to find suitable ways in which youth can contribute to group activities that match the culture of the program. Sharing responsibility means that all group members are responsible for achieving the goals of the activity. YD professionals can share responsibility for program activities by balancing the amount of control that (s)he has with the amount of control given to youth. It is likely that the age and developmental stage of the children or adolescents will determine the amount of control given to youth. It is common for youth to assume more responsibility as they get older but a PYD approach supports younger children assuming some responsibility for achieving the learning goals of enrichment activities. As facilitators, YD professionals should model the behaviors and types of thinking that will prepare youth to achieve learning objectives. This can occur through discussion, examples, or even demonstrations. The key here is to provide youth with representations of the types of thinking and behaviors that will help them achieve the goals of each activity.

Group facilitation techniques will change depending on a variety of factors such as the contexts, the age of youth, and the type of activity. Even so, the key factors mentioned above will have to be addressed in almost all situations. Thus, the group facilitation domain of knowledge is characterized by an understanding of the components of cooperative group learning and promising strategies used to implement each component. Observation of program activities and reviewing practice-oriented research may provide support for a YD professional seeking to enhance their knowledge of group facilitation.

Knowledge of Contexts and Organizational Systems

Knowledge of contexts and organizational systems asks that YD professionals understand the diverse contexts that youth are encounter at a systemic level, starting with their programs. According to NRC and IOM (2002) youth programs that promote healthy development should provide: (1) physical and psychological safety; (2) appropriate structure; (3) supportive relationships; (4) positive social norms; (5) opportunities for skill building; (6) support for efficacy and mattering (7) opportunities to belong; and (8) integration of family, school, and community efforts. YD professionals can use these features as guidelines when designing program environments (as opposed to activities) and as standards to achieve in program implementation.

Knowledge of contexts and organizational systems is also needed to identify opportunities for the program to grow as well as any constraints that exist for expanding and improving the program. For example, YD professionals should have knowledge of the school and district regulations, school culture, and community resources that can impede and/or facilitate the implementation of the program. Imagine an existing program that serves youth who live too far to walk home after the program ends in the evening. Yet, the school district provides a "late bus" for athletes who stay after school for practice. Knowledge of the school system and how it aligns with the program can be used to solve this problem. But the solution to this dilemma involves more than just knowledge of the multiple contexts it also involves YD professionals becoming advocates for youth. In this example, it's likely that a YD professional would have to seek support and/or permission from school officials for program youth to ride the "late bus" with the athletes.

Other key contexts and organizations that youth encounter are businesses, community organizations, and their families. These contexts and organizations also provide constraints and opportunities for program implementation. For instance, some community organizations accept youth volunteers. Knowledge of the organizations and businesses within a community that welcome youth volunteers can facilitate the development of service projects within a program. Knowledge of contexts and organizational systems will most likely be gained through a combination of experience and familiarization with current research. The knowledge of particular schools, districts, businesses and organizations are probably best gained through experience within a community. However, research can also point to the features of high quality developmental settings and may also highlight common constraints and opportunities that arise within communities (e.g. Benson, 2003; Camino & Zeldin, 2002).

Specialized Youth Development Knowledge

As mentioned previously, Shulman (1986) advanced PCK as a knowledge domain that exemplified the expertise for teaching a certain subject. Specifically, PCK emerged as a combination of content knowledge and pedagogical strategies for teaching a specific topic. In TODI, Walker et al. (2005) begin to articulate a similar type of knowledge for youth programming. They assert that a youths' learning process in activities is influenced by the interplay between the environment, the subject matter of the program activity, and the pedagogical approach. Drawing from these earlier theories, I delineate a new domain of knowledge for YD professionals, *Specialized Youth Development Knowledge* (SYDK). This new domain of knowledge includes the previously described foundational knowledge, topical knowledge for a given activity, and a pedagogical approach.

According to TODI, the subject matter content is the main topic of the program or activity and should determine how the activity is delivered and the roles that young people can assume

(Walker et al., 2005). This definition adequately describes the type of knowledge that YD professionals should have about the topic of a given activity as part of SYDK. Nonetheless, the term topical knowledge will be used as an alternative to subject matter content. Subject matter content implies an expertise in traditional academic subjects such as math, science, English and social studies. While expertise in these areas can be useful when implementing activities they are not always necessary. In comparison, topical knowledge invokes a broader knowledge base that can include aspects of traditional academic subjects but is comprised of various themes such as video games, cooking, and poetry that can be used in program activities with youth. The intent is not to devalue expertise in academic subjects but to capture the tension between having in depth knowledge of one subject area and being familiar enough with a topic to shape an activity to promote skill-building. The distinction between the two terms is meant to emphasize that it is possible for YD professionals to facilitate an activity that will enhance math skills without having been a math major or improve youths' public speaking skills without having a degree in communications. Topical knowledge, then, is a general knowledge of the main content of the activity and the implications for youth involvement in the delivery of activities on the topic.

TODI also asserts that that the subject matter content (more aptly described as topical knowledge) is what attracts youth to the program, however, to design activities that appeal to young people and promote positive outcomes YD professionals must also rely on their foundational knowledge. Specifically, a YD professional would need to uphold the principles of PYD in the execution of activities and be intentional about the types of learning opportunities included in those activities to appeal to the developmental needs of youth. It is this mixture of knowledge that makes SYDK a unique domain of knowledge.

A specific pedagogy still remains undefined. The description of the central tasks of YD professional's practice highlights that group activities and collaboration are embedded in the profession. Thus, an appropriate pedagogy would be sensitive to these characteristics. Larson and Walker (2005) observed YD professionals using collaborative learning with their young people. This approach considers learning as a process that occurs through interactions with others. Larson and Walker (2005) emphasize that an experienced YD professional can guide the learning process through scaffolding, encouragement, modeling techniques and behaviors, and directing youth's attention. Yet, they critique collaborative learning for not addressing how to support emotional growth in young people. Stein et al. (2005) and Walker et al. (2005) suggest experiential learning as a pedagogy for youth programming. Experiential learning focuses on the interaction between the individual and their environment as the source for learning. This contextual interaction or experience is followed by reflection, which informs the understanding of abstract concepts (Smith, 2001). As the individual gains a deeper understanding of the concept, (s)he can apply it to new settings (Smith, 2001). Again, it's the mixture of knowledge that holds the most promise, collaborative learning techniques coupled with an experiential learning pedagogy can provide powerful learning opportunities for youth. In a combination of the two approaches, adults would guide collaborative experience, which allows youth to learn from all aspects of their environments including any emotions that may arise. Then, through reflection facilitated by a YD professional, young people would process what they learned and felt. A subsequent activity (shaped by a YD professional) would provide opportunities for youth to apply their new knowledge.

This brand of pedagogy would be incomplete without knowledge of how to structure activities that boost positive youth outcomes. Durlak and Weissburg (2007) found that S.A.F.E activities were associated with improvement in youth's personal and social skills. Programs whose

activities were *sequenced* or scaffold youth abilities to build a particular set of skills and used *active* forms of learning (e.g. experience) were more likely to improve outcomes for participating youth. Furthermore, these programs included at least one component that was *focused* on a developmental goal and included activities that *explicitly* targeted a specific skill. These activities features are not meant to replace the four activity features identified by Roth and Brooks Gunn (2003a; 2003b; 2003c) rather they are intend to complement them and support implementation of activities that promote positive outcomes for youth. Therefore, S.A.F.E. activities along with a collaborative, experiential approach describe the instructional strategies or pedagogy that seem most suited to the central tasks of YD professionals.

Much like PCK, *Specialized Youth Development Knowledge* emphasizes that different domains of knowledge are combined to foster growth and development in young people. Theoretically, foundational knowledge will work with topical knowledge to inform how content will be explored and topical knowledge and the pedagogical approach are coupled to design activities. There may be more ways in which these types of knowledge work together to guide the practice of YD professionals that have not yet been identified. Even at this nascent stage, the SYDK describes a form of expert knowledge that is needed by YD professionals to implement engaging high-quality activities but it is remains unclear how to develop SYDK in the YD workforce.

Discussion

A proposed model of knowledge for YD professionals is merely a starting point and raises several research questions. Do expert YD professionals exhibit the domains of knowledge in practice? If so, what serves as evidence of the proposed knowledge domains? How does this model of knowledge relate to program quality? What are the implications of this model for recruiting, hiring, and training future YD professionals? Together these questions may be the beginning of a practice-oriented research agenda about youth development programs. Currently, the field may not be ready to provide answers to these questions. Perhaps, our first step should be to continue to articulate a model of knowledge for YD professionals. It is in this spirit that I invite others, practitioners and researchers alike, to join me, in building upon, refining, and critiquing this model in an effort to define expertise in the youth development field.

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Parental Limit Setting as a Moderator of Adolescent Paid Work and Alcohol Use

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Parental Limit Setting as a Moderator of Adolescent Paid Work and Alcohol Use

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Abstract: Highlighted within this paper is an examination of whether parental limit setting moderates the relationship between paid work and alcohol use during adolescence. The sample included 1,001 10th and 11th grade students from public high schools in the Mid-Atlantic region of the United States surveyed in the spring of 2007. Results indicated that parental limit setting significantly moderated the relationships between paid work and frequency of alcohol use for girls and paid work and quantity of alcohol consumption for girls and boys. In general, adolescents who spent less time working and had more parental limits drank the least, whereas adolescents who spent more time working and had less parental limits drank the most. Findings from this study suggest that parental limit setting may protect working adolescents from substance use involvement.

Introduction

Adolescence is a period of biological and psychological developmental challenge (Cicchetti & Rogosch, 2002; Smetana, Campione-Barr, & Metzger, 2006). Some of the challenges that adolescents face include puberty, emotional changes, and changes in peer and family relationships (Call, Riedel, Hein, McLoyd, Petersen, & Kipke, 2002; Smetana et al., 2006). In addition, working for pay for the first time may be an additional challenge, as adolescents attempt to juggle working with school, peer, and family responsibilities (Steinberg & Dornbusch, 1991).

Historically, adolescence has been viewed as a period of 'storm and stress' (Hall, 1904). Arnett (1999) has identified risk taking behaviors as a central feature of the 'storm and stress' faced by adolescents. Some degree of risk-taking is normative during adolescence (Spear, 2000). One such normative risk-taking behavior is substance use. According to data from the Monitoring

the Future Study, in 2008, 58% of 10th graders and 72% of 12th graders had tried alcohol (Johnston, O'Malley, Bachman, & Schulenberg, 2009). Clearly, many adolescents experiment with alcohol. Alcohol use has been shown to increase during adolescence, peak during late adolescence and early adulthood, and decrease into adulthood (Sher, Grekin, & Williams, 2005). Importantly, research has shown that adolescent substance use predicts later alcohol abuse and dependence (Conrod, Castellanos, & Mackie, 2008; Kramer et al., 2008; Pitkanen, Kokko, Lyyra, & Pulkkinen, 2008).

Working for pay also is a normative event during adolescence. Previous research has found that adolescent paid work may be associated with multiple consequences for adolescents, both positive and negative. Moderate adolescent work (working less than 20 hours per week) has been linked to a reduction in high school dropout (Lee & Staff, 2007) and has been shown to be beneficial for adolescents during their transition to adulthood by teaching time management and responsibility (Bauermeister, Zimmerman, Barnett, & Caldwell, 2007). On the other hand, working more than 20 hours per week has been found to be associated with a number of negative consequences, including substance use (Dunn, 2005; Longest & Shanahan, 2007; Wu, Schlenger, & Galvin, 2003). For example, Apel and colleagues (2006) found that adolescents who worked more than 20 hours per week were more likely to use alcohol and drugs than adolescents who worked less than 20 hours per week. Longest and Shanahan (2007) also found an increase in adolescent alcohol use associated with adolescents working more than 20 hours per week. Results from these studies suggest that the relationship between paid work and adolescent adjustment varies depending on the number of hours worked (Bachman, Safron, Sy, & Schulenberg, 2003; McMorris & Uggen, 2000; Mortimer, Finch, Ryu, Shanahan, & Call, 1996; Steinberg & Dornbusch, 1991).

There are several possible explanations for the relationship between working (particularly many hours) and substance use during adolescence. One possible explanation relates to coworkers' influence on the adolescent. Consistent with social learning theory which purports that individuals learn through observing, communicating, and interacting with others (Bandura, 1969; Ward & Gryczynski, 2009), exposure to older workers may influence adolescent substance use as older workers may serve as models for younger workers (Dunn, 2005). In other words, older workers may model substance use in which younger workers then imitate. Another explanation is that working adolescents are more likely to have income that can be used for substance use than nonworking adolescents. Working adolescents also may have more access to substances than nonworking adolescents.

Another explanation is that adolescent entry into paid work results in a deterioration in parenting practices due to less parental supervision (Longest & Shanahan, 2007). More specifically, research has shown that working adolescents are less likely to be monitored by parents than nonworking adolescents (Shanahan, Elder, Burchinal, & Conger, 1996; Steinberg & Dornbusch, 1991). For example, Manning (1990) found that adolescents who were involved in paid work were less likely to have rules enforced at home than adolescents who were not involved in paid work. Pickering and Vazsonyi (2002) conducted a cross-sectional study examining adolescent work status and family characteristics (family process and family time) of 920 high school students. They found that adolescents who worked less than 20 hours per week reported higher levels of maternal control and supervision than adolescents who worked more than 20 hours per week. Pickering and Vazsonyi (2002) suggested that more parental monitoring resulted in adolescents working less than 20 hours per week. In other words, parents may have limited their adolescents' working hours to retain a high level of parental monitoring.

According to Hetherington (1993), parental monitoring becomes increasingly critical as children enter adolescence because they spend less time under the direct supervision of parents or other adults and spend more time with peers. Importantly, lower levels of parental monitoring during adolescence have been found to be related to more adolescent externalizing behaviors (Kim, Hetherington, & Reiss, 1999). Furthermore, limited monitoring knowledge has been found to be associated with greater adolescent risk (Cottrell et al., 2007; Rai et al., 2003; Stanton, Li, & Pack, 2002; Yang, Stanton, & Cottrell, et al. 2006), including alcohol and substance use (Stattin & Kerr, 2000) and delinquent behavior during adolescence (Pettit, Laird, Dodge, Bates, & Criss, 2001). The benefits of parental monitoring appear to persist throughout adolescence. In a six-wave longitudinal study examining 13-16 year-old adolescents, Barnes, Reifman, Farrell, and Dintcheff (2000) found that high parental monitoring was associated with low initial levels of adolescent alcohol misuse. In addition, high parental monitoring was related to a lower increase of alcohol use throughout adolescence. Kosterman and colleagues (2000) suggested that having good family management (part of which is parental monitoring) can inhibit adolescents from initiating substance use. Many studies also have demonstrated the protective effects of parental monitoring on delinquency. For example, Laird, Pettit, Bates, and Dodge (2003) conducted a study examining the effects of parental monitoring on adolescents' delinquent behavior and found that parental knowledge, as measured by adolescent reports, inhibited adolescents' future involvement in delinquent behavior. In other words, when parents were knowledgeable about their adolescents' activities, adolescents engaged in less delinquent behavior.

It is important to consider adolescent paid work, substance use, and parental monitoring separately for boys and girls. Although gender has not been systematically linked to adolescent paid work (Barnes, Hoffman, Welte, Farrell, & Dintcheff, 2007; Hilbrecht, Zuzanek, & Mannell, 2008), gender differences in substance use and parental monitoring have been observed. During adolescence, alcohol is the substance most experimented with and used by both boys and girls (Palmer et al., 2009). In addition, Palmer and colleagues (2009) reported similar levels of substance involvement, including alcohol, tobacco, and marijuana, for boys and girls during Wave 1 of their study, when the adolescents were 11-18 years of age. However, by Wave 2, when the adolescents were 16-25 years of age, a gender difference appeared such that more boys were using substances than girls. Other studies also have found boys to drink alcohol more frequently and more heavily than girls (Keyes, Grant, & Hasin, 2008; Nolen-Hoeksema & Hilt, 2006; Patock-Peckham, Cheong, Balhorn, & Nagoshi, 2001). Consistent with gender differences in alcohol consumption, Johnston et al. (2009) found that boys use illicit drugs more frequently than girls. These results indicate that while both boys and girls experiment with substances during adolescence, boys tend to have a greater involvement with substances in comparison to girls.

Gender differences also have been found for parental monitoring. In general, mothers report higher levels of parental monitoring for girls than for boys (Cottrell et al., 2007). In addition, Wu and colleagues (2004) found that girls have more limits set by their parents than do boys. Taken together, these findings suggest that girls are more closely monitored and have more limits placed on them in comparison to boys.

As discussed above, parental monitoring has been found to be related to the substance use of adolescents. While distinctly different than parental monitoring, parental limit setting is also related to adolescent substance use. Parental monitoring has been defined as parental knowledge about the whereabouts of their children, who they are with, and what they are

doing (Laird et al., 2003). On the other hand, parental limit setting has been conceptualized in this study as parents setting restrictions on their children and limiting their activities. Less research has been conducted on parental limit setting and its effects on adolescent substance use.

In sum, the present study was designed to extend the literature by exploring whether parental limit setting moderates the relationship between adolescent paid work and alcohol use. Although previous research has suggested links among these variables, this study explicitly examined the relationships among parental limit setting, adolescent paid work, and adolescent alcohol use while addressing some of the limitations of previous research. Prior work in this area has been limited by the examination of small samples (Brody, Ge, Katz, & Arias, 2000; Furman, Simon, Shaffer, & Bouchey, 2002; Pettit et al., 2001) and homogenous samples (e.g., not racially diverse) (Barnes, Hoffman, Welte, Farrell, & Dintcheff, 2006; Kim, Hetherington, & Reiss, 1999; Kosterman et al., 2000). In addition, some studies (e.g., Kosterman et al., 2000) have examined preadolescents or children (e.g., elementary school students) who are less likely to engage in substance use than adolescents. Many studies also have not taken the gender of the adolescent into account. Given these limitations, the present study examined a large, diverse sample of adolescents to address the following research questions:

- 1) Is paid work associated with alcohol use during adolescence?
- 2) Is parental limit setting related to alcohol use during adolescence?
- 3) Does parental limit setting moderate the relationship between adolescent paid work and alcohol use? and
- 4) Do these relationships differ by the gender of the adolescent?

Method

Participants

All of the participants were involved in a larger research project (The Adolescent Adjustment Project; Ohannessian, 2009) which began in 2006. The present study was based on data collected during the spring of 2007. The sample included 1,001 10th (58%) and 11th grade students from seven public high schools in the Mid-Atlantic region of the United States. Approximately one half of the adolescents (53%) were girls. The age of the students ranged from 15 to 17 years old, with a mean of 16.09 (SD= 0.68). The majority of the adolescents (59%) were Caucasian; 22% were African-American, 12% were Hispanic, and 2% were Asian (the remainder chose "other" to describe their race/ethnicity). Most of the adolescents reported that they lived with both of their biological parents (56%). Specifically, 89% reported that they lived with their biological mother, 61% with their biological father, 15% with a step-father, 4% with a stepmother, 2% with an adoptive mother, or 1% with an adoptive father. The majority of the adolescents' parents had completed high school (96% of mothers and 95% of fathers). In addition, some of the adolescents' parents had completed four years of college (26% of mothers and 24% of fathers) and a minority had attended graduate school (10% of mothers and 7% of fathers).

Measures

Paid work. All of the adolescents were asked to complete a measure assessing their participation in extracurricular activities. This measure consists of eleven items that reflect the frequency of participation in extracurricular activities, including one item regarding paid work. Adolescents were asked to rate their frequency of participation. Because there was a relative

lack of variation in the distribution, responses were collapsed into the following four categories: no involvement, once a week or less, 2-3 days per week, or 3 days per week or more.

Alcohol use. Adolescents also were asked to complete an alcohol use survey. Specifically, the adolescents were asked to report their frequency of alcohol consumption by responding to the question "How often did you usually have a beer/wine/liquor in the last 6 months?" The response scale was an eight-point scale ranging from *never* to *every day*. A composite score was created for frequency of alcohol use by summing the responses for beer, wine, and liquor to reflect total frequency of alcohol consumption. This composite score ranged from 0-21.

In addition to reporting their frequency of alcohol use, adolescents were asked to report their quantity of alcohol consumption by indicating how many cans of beer, glasses of wine, or drinks of liquor they had drank in the past six months. Specifically, they were asked "When you had beer/wine/liquor, on the average day, how much did you usually drink in the last 6 months?" A composite score was created for quantity of alcohol consumption by adding the responses for beer, wine, and liquor. Because this score was skewed, it was linearly transformed.

Parental limit-setting. The Parental-Limit Setting Measure (PLSM; Turner, Irwin, & Millstein, 1991) was given to adolescents in order to assess parental discipline style and monitoring. This measure is a 16-item self-report measure which asks respondents to indicate whether or not parents/guardians allow them to do specific activities. Examples of included activities are staying out with friends until midnight, sleeping over a friend's house, and riding in a car with friends. The items from the PLSM are summed to create a total score. The score ranges from 0-16, with a lower score indicating more parental limits. In the present sample, the Cronbach alpha coefficient for the PLSM was .78.

Procedure

Students in 10th and 11th grade attending one of seven public high schools in the Mid-Atlantic region of the U.S. were invited to participate in this study. Between March and May of 2007, students for whom parental consent was obtained, and who provided their own assent, were administered a self-report survey at school by trained research staff (all of whom were certified with human services training). Of the possible 1,462 students who were invited to participate in the study, 1,033 students provided their assent to participate (70.6% participation rate). From the 1,033 students who provided their assent, 1,001 15-17 years-olds completed the survey. Upon giving their assent, the research staff reassured the adolescents that their information was confidential, that participation in the project was voluntary, and that they could withdraw their participation from the study at any time. The protocol for this study was approved by the University of Delaware's Institutional Review Board. To further protect the privacy of the adolescents, an active Certificate of Confidentiality from the U.S. Government was in place for this project. The survey took approximately 40 minutes to complete. Upon completion of the survey packet, adolescents received a free movie pass for participating in the study.

Results

Bivariate relations. Correlations between all of the study variables are presented in Table 1. As shown, all of the variables were significantly correlated with one another ($p < .01$). In addition, the correlations were similar for boys and girls. Paid work was related to both the frequency and quantity of alcohol use for boys and for girls, indicating that adolescents who worked more used alcohol more than adolescents who worked less. In addition, parental limit setting was

related to both the frequency and quantity of alcohol use for boys and for girls, with more parental limits associated with less alcohol use.

Table 1
Paid Work, Frequency of Alcohol Use, Quantity of Alcohol Use, and
Parental Limit Setting: Correlations

Variables	1	2	3	4
1. Paid Work	-	.22**	.21**	.17**
2. Frequency of Alcohol Use	.18**	-	.73**	.16**
3. Quantity of Alcohol Use	.12**	.79**	-	.17**
4. Parental Limit Setting	.25**	.25**	.22**	-

** $p < .01$.

Analysis of variance models.

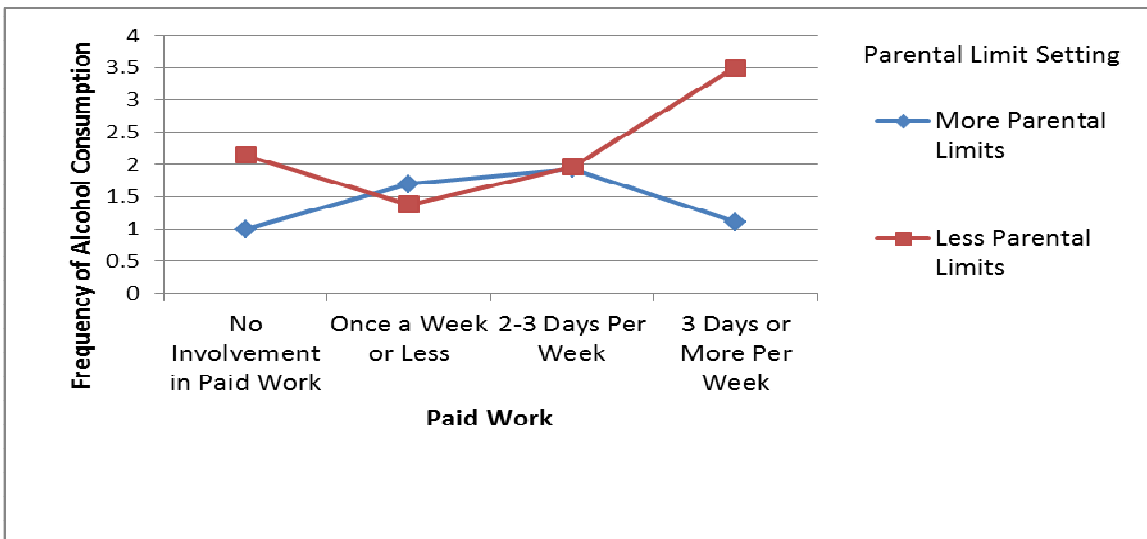
Gender differences. An Analysis of Variance (ANOVA) model was conducted to examine whether there were gender differences in parental limit setting and alcohol use. The overall models for parental limit setting and alcohol use were not significant. These results suggest that parental limit setting and alcohol use were similar for boys and girl.

A series of Analysis of Variance (ANOVA) models was conducted to examine whether paid work is related to alcohol use, whether parental limit setting is related to alcohol use, and whether parental limit setting moderates the relationship between paid work and alcohol use. Prior to conducting these analyses, the parental limit setting variable was dichotomized using a median split. Separate models were run for the frequency of alcohol use and the average quantity of alcohol consumed, by gender.

Frequency of alcohol use. The overall model for frequency of alcohol use for boys was significant $\{F(7, 379) = 5.89, p < .001\}$. In addition, a significant main effect was found for paid work $\{F(3, 379) = 8.23, p < .001\}$, indicating that boys who worked more drank more frequently than boys who worked less. A significant main effect also was observed for parental limit setting $\{F(1, 379) = 10.32, p < .001\}$, suggesting that boys who had fewer parental limits drank more frequently than boys who had more parental limits. The interaction between paid work and parental limit setting was not significant for boys.

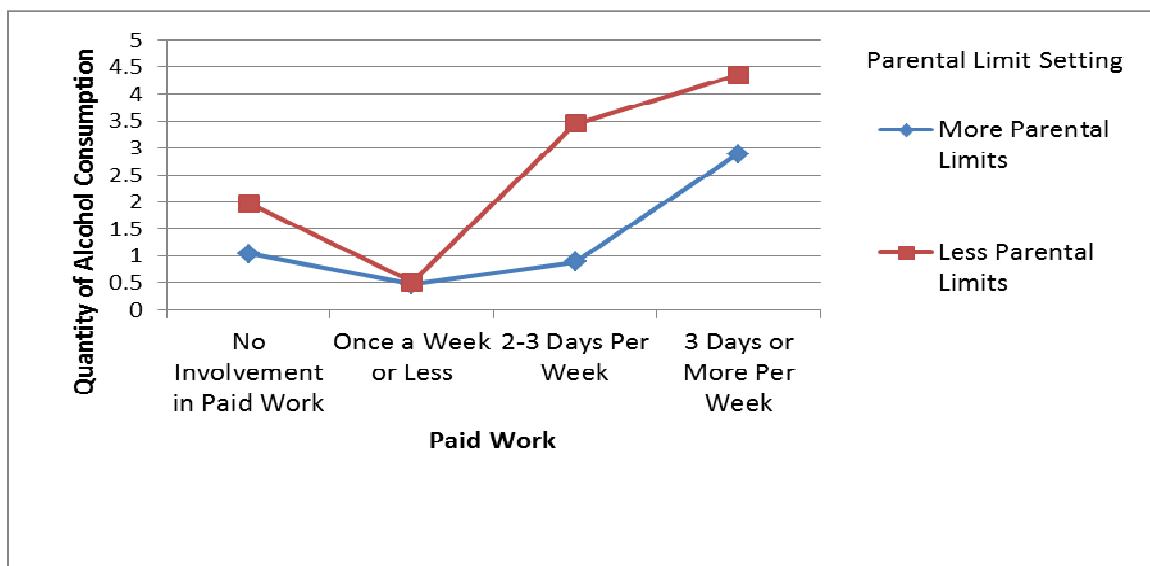
For girls, the overall model for frequency of alcohol use was significant $\{F(7, 451) = 5.87, p < .001\}$. The main effect for paid work was not significant; however, a significant main effect for parental limit setting was observed $\{F(1, 451) = 7.01, p < .01\}$, indicating that girls who had less parental limits drank more frequently than girls who had more parental limits. In addition, a significant interaction was found between paid work and parental limit setting for girls $\{F(3, 451) = 3.66, p < .05\}$, suggesting that girls who spent more time working and had fewer parental limits drank the most frequently, whereas girls who spent less time working and had more parental limits drank the least frequently (see Figure 1).

Figure 1
Frequency of Alcohol Use and Paid Work for Girls



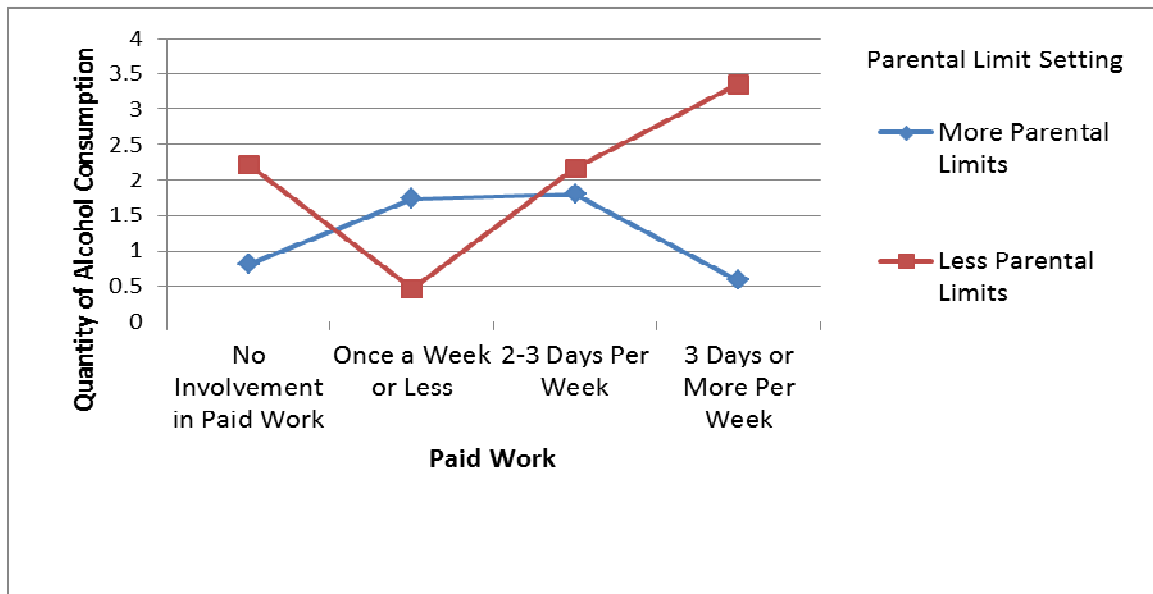
Quantity of alcohol consumption. The overall model for quantity of alcohol use was significant for boys $\{F(7, 364) = 7.20, p < .001\}$. A significant main effect was found for paid work $\{F(3, 364) = 9.36, p < .001\}$, indicating that boys who worked more consumed more alcohol than boys who worked less. A significant main effect also was found for parental limit setting $\{F(1, 364) = 8.24, p < .01\}$, suggesting that boys who had fewer parental limits consumed more alcohol than boys who had more parental limits. In addition, there was a significant interaction between paid work and parental limit setting for boys $\{F(3, 364) = 2.65, p < .05\}$, indicating that boys who worked more and had fewer parental limits drank the most, whereas boys who worked less and had more parental limits drank the least (see Figure 2).

Figure 2
Quantity of Alcohol Use and Paid Work for Boys



For girls, the overall model for quantity of alcohol use was significant $\{F(7, 423) = 6.92, p < .001\}$. The main effect for paid work was not significant; however, there was a significant main effect for parental limit setting $\{F(1, 423) = 8.57, p < .01\}$, indicating that girls who had fewer parental limits consumed more alcohol than girls who had more parental limits. In addition, a significant interaction was found between paid work and parental limit setting for girls $\{F(3, 423) = 4.88, p < .01\}$. Similar to boys, this interaction suggested that girls who worked more and had fewer parental limits drank the most, whereas girls who worked less and had more parental limits drank the least (see Figure 3).

Figure 3
Quantity of Alcohol Use and Paid Work for Girls



Discussion

In general, the results from this study are consistent with previous research. A primary aim of this study was to examine whether paid work is related to alcohol use during adolescence. Consistent with previous research (Dunn, 2005; Longest & Shanahan, 2007; Wu, et al., 2003), the results indicate that high levels of paid work are associated with high levels of alcohol consumption. It should be noted that most of the previous research on this topic (Apel et al., 2006; Bachman et al., 2003; Longest & Shanahan, 2007; McMorris & Uggen, 2000) has used the number of hours worked per week as the measure of adolescent paid work. In contrast, the metric used in the present study was the number of days worked per week. Nonetheless, results from this study are consistent with prior studies. For instance, Apel and colleagues (2006) found that adolescents who worked more than 20 hours per week were more likely to use substances in comparison to adolescents who worked less than 20 hours per week. Consistent with Apel et al.'s findings, in the present study, adolescents who worked more than 3 days per week were more likely to use substances than adolescents who worked less than 3 days per week. While direct comparison among studies cannot be made because of the difference in measurement, our findings add to the body of research in this area by considering another method of measuring adolescent paid work.

Consistent with previous research on parental monitoring (Barnes et al., 2000; Kim, Hetherington, & Reiss, 1999), the results from this study indicate that parental limit setting is associated with adolescent alcohol use. Previous research has found that parents who have less knowledge about their adolescents' whereabouts tend to have adolescents who engage in substance use (Stattin & Kerr, 2000). Similarly, in the present study, adolescents who had parents that set more limits tended to have lower alcohol consumption (frequency and quantity) than adolescents who had parents that set fewer limits on their adolescent. Although different measures of parenting were used in these studies, these studies indicate that parental supervision (especially monitoring and limit setting) may decrease an individual's involvement with alcohol during adolescence.

Of note, gender differences in parental limit setting and alcohol use were not observed in this study indicating that boys and girls had similar levels of parental limit setting and alcohol use. These findings are not consistent with previous research. Prior studies have found that boys tend to use alcohol more than girls during adolescence (Keyes, et al., 2008; Nolen-Hoeksema & Hilt, 2006; Patock-Peckham et al., 2001). Similar to the present study, Palmer and colleagues (2009) found no gender difference at Wave 1 when their sample was 11-18 years old, but a gender difference was found at Wave 2 when the youth were 16-25 years old. At Wave 2, boys had a higher rate of substance use than girls. The age of the present sample was similar to Palmer and colleague's sample at Wave 1. Therefore, the absence of gender differences in alcohol use may be related to the age of the adolescents. It would be informative to examine alcohol use in these adolescents as they progress through adolescence to explore when gender differences in alcohol use emerge.

As noted above, there were no gender differences in parental limit setting observed in this study. These results are in contrast to previous research that has found gender differences in parental limits (Wu et al., 2004) and in parental monitoring, a similar but slightly different construct (Cottrell et al., 2007). In the Wu et al. study, more limits were set for girls in comparison to boys. Similarly, in the Cottrell et al. study, girls were found to be more closely monitored by their parents than were boys. It should be noted that Cottrell and colleagues (2007) examined parental monitoring from a maternal perspective, whereas the present study examined parental limit setting from the adolescent's perspective. The difference in respondent could explain the differential results. In addition, the age of the participants differed across the studies. For example, Cottrell et al. examined a sample of 9-13 year-olds, whereas the present study examined 15-17 year-olds. Perhaps parents are more protective of younger adolescents, particularly girls, than they are of older adolescents. It also should be noted that while the measure used by Wu and colleagues (2004) assessed the same construct assessed in the present study, parental limit setting, the sample Wu and colleagues (2004) examined was a clinical sample of adolescents who were receiving treatment for substance use. Perhaps parents of youth experiencing problems are extra protective, especially if they are girls. Future research should address these possibilities.

In sum, the present study makes an important contribution to the literature because the moderating effect of parental limit setting on the relationship between paid work and alcohol use during adolescence was examined. Because adolescent paid work has been shown to be associated with an increase in the use of alcohol and drugs (Dunn, 2005; Longest & Shanahan, 2007; Wu et al., 2003), it is important to help families identify ways to buffer this negative consequence. In the present study, parental limit setting did not moderate the relationship between adolescent paid work and frequency of alcohol use for boys; however, it did for girls. More specifically, for girls, parental limit setting buffered the effects of paid work on the

frequency of alcohol use. For quantity of alcohol use, parental limit setting moderated the relationship between adolescent paid work and the quantity of alcohol use for both boys and girls, suggesting that parental limit setting may protect working adolescents from involvement with alcohol.

Although this study extends the current literature, a few caveats of the study should be noted. The present study relied on self-report measures. Therefore, the results should be validated using other forms of methodologies, such as parental reports. In addition, caution should be taken in regard to generalizing the findings of this study because the sample only included 10th and 11th grade students living in the Mid-Atlantic United States. Also, causal relations should not be inferred due to the cross-sectional design.

In light of these limitations, the present study makes an important contribution to the literature because the moderating effect of parental limit setting on the relationship between paid work and alcohol use was examined in a large, diverse sample of adolescents. In addition, gender differences were taken into account. Importantly, the results from this study have implications for the prevention of adolescent substance use. Although results from this study indicate that working many hours per week may be deleterious during adolescence, previous research has indicated that paid work may have positive effects, such as a reduction in high school dropout (Lee & Staff, 2007) and teaching time management and responsibility (Bauermeister et al., 2007). Therefore, it is not advisable to suggest that adolescents not engage in paid work. However, results from this study suggest that working during adolescence may be beneficial, given that work hours are not excessive and parental limits are in place (e.g., parents closely monitoring their adolescent's activities). Based on the findings from this study, substance use prevention programs should consider including parent education (e.g., discussing the importance of parental limit setting and parental monitoring) as a primary component. If parents are educated about the protective effects of parental limit setting, they may be more likely to set firm limits and monitor their adolescent's activities, and subsequently decrease their adolescent's use of alcohol.

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Qualitative Outcomes of Participation in Fishing Components of NOLS Courses

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Qualitative Outcomes of Participation in Fishing Components of NOLS Courses

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Abstract: Numerous fishing education programs in the United States strive to impart hard skill development, as well as life values to youth. This study employs utilizing semi-structured interviewing techniques and means-end analysis to evaluate the effects of youth participation in fishing components of NOLS courses. Interviews were conducted over five years to study benefit retention across time. The fishing component led to thirteen consequences, most frequently to youth feeling a sense of fun and excitement, developing hard skills, and having a new experience/opportunity. In turn, these consequences led youth to a number of values, including transference of information learned or benefits to other areas of their lives, an increased self-respect/esteem/confidence, self-fulfillment, a sense of accomplishment, and self-awareness. These results provide educators and program managers with information to direct programming development for youth attainment and retention of specific participation outcomes.

Introduction

In the United States, fishing is a popular recreational past-time. According to the U.S. Fish & Wildlife Service, one of every eight Americans fished in 2006, including 9.4 million youths aged 6-17 (USDI, 2006). The majority of these anglers were male (75%) and residents of metropolitan areas (73%). Freshwater fishing is the most popular form of fishing in the country, where anglers fish for black bass, pan fish, catfish, trout, crappie, and white bass (USDI, 2006).

This paper will highlight research which examined how participation in the fishing component of National Outdoor Leadership School (NOLS) courses affects youths' lives through analysis of connections between consequences of participation and value attainment. Initial data collection occurred at a NOLS program site in the Wind River Mountains of Wyoming during the summer of 2006. Follow-up telephone interviews were conducted with original study participants during

2007, 2008, 2009, and 2010. In utilizing a longitudinal approach, researchers studied how participant outcomes may have persisted four years after course participation. Researchers utilized means-end theory, which links the experience of fishing (the means) with the personal values of an individual youth participant (the ends). The fishing experience led directly to consequences, such as having fun, interacting with others, and hard skill development. These consequences led to values, which are an individual's desired end-state of mind, such as gaining self-respect/esteem/confidence, developing warm relationships with others, or having a sense of accomplishment.

Purpose Statement

The purpose of this study was to gain a better understanding of the outcomes (consequences and values) that youth experienced from participation in the fishing components of a NOLS wilderness adventure program. Additionally, the study considered the effects these outcomes have on participants' lives up to four years after course completion. This study sought to answer the following research questions:

- 1) What are the consequences and values of youth participation in the fishing component of NOLS courses?
- 2) Do youth outcomes associated with participation in the fishing component of NOLS courses endure 4 years after course completion?

Literature Review

This literature review looks at outcomes of participation in recreational fishing, as well as examining prior studies of fishing education program outcomes.

Recreational Fishing

Studies on recreational fishing have found that angler participation and satisfaction is related to enjoyment of the experience, setting, and related social interactions (Arlinghaus, 2006; Fair, 2006; Holland & Ditton, 1992; Spencer, 1993). Holland and Ditton (1992) analyzed how 166 anglers rated fishing satisfaction dimensions. They discovered that the most important dimensions were "enjoying a quality environment" and "feeling a sense of freedom." In this study, only 6% of the anglers felt that catching fish was the most important dimension for satisfaction. Spencer (1993) found that angler satisfaction on a lake in MN was related to fishing success, fish species, and angler residency. Additionally, he found that anglers were motivated to participate in a fishing experience for more than just the catch, as their motivations were related to being outdoors, participating in an interactive experience, and social factors.

In a more recent study, Fair (2006) examined the effects of participation in a substance abuse recovery camp through in-depth interviews. The camp's programming utilized fishing as a means to promote healing and self-sufficiency. She found that many participants enjoyed fishing and found it to be good therapy, which provided a way "to work out their frustration and grief" (p. 122). Arlinghaus (2006) found that the majority of participants (89.5%) agreed with the statement that "a fishing trip can be successful to me, even if no fish are caught" (p. 598). These study participants indicated that non-catch aspects of the fishing experience, such as relaxation, being outside by the water, and enjoying the company, played a strong part in their motivation to go fishing, as well as their satisfaction. Important non-catch aspects studied included: "relaxing in the outdoors at the water side," "fishing in pleasant company,"

“experiencing a natural setting,” and “enjoying clear water.” In reviewing prior research results, Floyd, Nicholas, Lee, Lee, and Scott (2006) found that recreational fishing provides participants with a variety of social benefits, relaxation, and an opportunity to enjoy nature.

Fishing Education Programs

Throughout the United States, there are many educational programs and groups that strive to impart the benefits of recreational fishing to youth through hard skill development, opportunity provision, and group community. Such opportunities are so important to youth development that the State of California has deemed that “Catch a Fish” be a right of childhood passage, which is included in California’s Children’s Outdoor Bill of Rights (California Roundtable on Recreation, Parks and Tourism, 2004). Prior research provides insight into the outcomes of participating in fishing components of outdoor education programs, such as Hooked on Fishing, Not on Drugs or the New York State Sportfishing, and Aquatic Resources Education Program. Results from prior studies suggest that youth participants developed hard skills, feel excitement about and enjoyment for fishing, and have a desire to fish again in the future (Flowers, 2010; Koupal & Krasny, 2003; Palmberg & Kuru, 2000; Siemer & Knuth, 2001).

Researchers often found that despite program objectives, participation did not increase youths’ sense of environmental stewardship compared to pre-studies or control populations (Flowers, 2010; Koupal & Krasny, 2003; Siemer & Knuth, 2001). Based on study results, Siemer and Knuth (2001) recommended further research to determine the specific effects of program participation rather than prior fishing experience. Flowers (2010) emphasized the importance of continued program evaluations and studies to determine if programming objectives are being met. Additionally, numerous researchers cited a need for longitudinal studies to evaluate program effectiveness and participation outcomes for boating, fishing, and stewardship education programs that “increase participation in fishing and boating as well as the stewardship of the aquatic and marine resources that support these activities” (Fedler, 2001, p.1).

Methods

Data were collected from participants who completed NOLS courses in Wyoming’s Wind River Mountains during summer of 2006. Participants came from 40 different NOLS courses that were fourteen days or longer, co-ed, and designed for students aged 14 years and older. In 2006, 281 youth participants aged 14-21 provided contact information to be included in annual follow-up studies through 2010. These students were contacted through a convenience sampling method as the courses came together at a program site near Lander, Wyoming and their participation was voluntary. Information collected included: age, gender, ethnicity, prior NOLS involvement, telephone number(s), mailing address(es), and email address(es).

Follow-up interviews were conducted in 2007, 2008, 2009, and 2010. Each year, all original youth participants were called but some were unreachable as their contact information had been changed or they opted to no longer participate. During these follow-up data collections, subjects participated in phone interviews that were completed based on the convenience of the participants. Participants were asked to provide their current age, email address(es), occupation, and whether they would recommend an NOLS program to people they know. Participants were also asked to remember three or four of the most meaningful components or experiences from their course. Once the participants provided their responses, they were asked a series of questions using the laddering technique for each component or experience they mentioned.

Using the laddering technique, researchers asked participants a series of open-ended questions. First, they asked participants to remember three or four attributes (or course components) from their NOLS experiences. The respondent was then asked why that attribute was important. After the participants responded, researchers asked again, "why is that important?" This process of asking, "Why is that important?" continued for each response given until the respondent could no longer provide a meaningful answer. This interview technique moves respondents up the "ladder of abstraction," linking the concrete course attributes they identified with the more abstract consequences and personal values. Through this line of questioning, participants were asked about each of the attributes they identified at the beginning of the interview. Ladders were coded with content codes and entered into the LadderMap computer program. The content codes were analyzed by an independent coder to determine intercoder reliability.

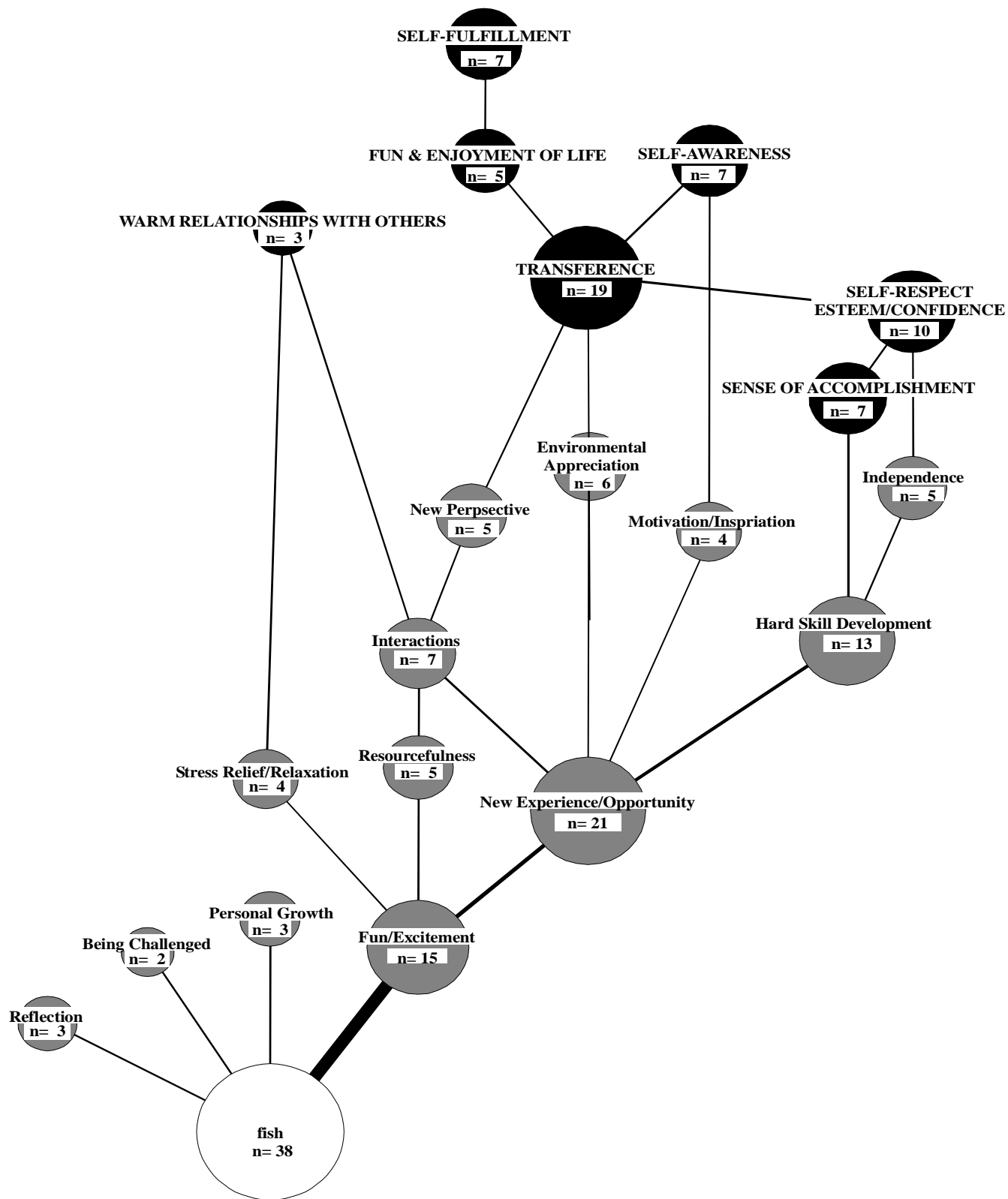
Participants were not asked to speak about fishing in particular and only mentioned the attribute if they felt that it was one of the most important aspects of their NOLS experience. During data analysis, researchers noticed that while fishing was not one of the most frequently mentioned attributes, some youth participants consistently cited fishing as one of the most important aspects of their NOLS course during annual follow-up data collections. This research focuses on those ladders associated with the attribute fishing. An implication matrix was created to assess the number of times fishing was linked with other concepts and a hierarchical value map (HVM) was created as a visual representation of the data. Researchers also used transcriptions from telephone interviews and interview scripts to identify meaningful quotes from youth interviews related to fishing components of NOLS courses.

Results

During the course of data collection, 38 participants (13.5%) identified fishing as one of the three most meaningful attributes of their NOLS course. Over the course of the five years study, these 38 participants mentioned the attribute fishing in 46 separate ladders. The majority of the youth (14-21 years old) that mentioned fishing were male (89.5%). While all ladders moved from the attribute level to consequences and values, some participants spoke mainly about the catch itself. One male explained that fishing was important to him because "It was just the best fishing from the whole time...I love fishing, and the fact that every single cast was a catch, and the fact that every single fish was from my fingertip to my elbow...I don't know, it was just great fishing." On the HVM, the attribute fishing led to thirteen consequences and seven values (see Figure 1).

Figure 1

Hierarchical Value Map for All Subjects (N=38), cut-off value of 2 (84% of data)



Consequences

Fishing led to 13 consequences. The most frequently mentioned consequences included: *new experience/opportunity*, *fun/excitement*, and *hard skill development*.

■ New Experience/Opportunity.

Fishing led to the consequence *new experience/opportunity* 21 times in 46 ladders (45.7%). In many cases, fishing on the NOLS course was a new experience for participants, who had never caught a fish before. These youth described the opportunity to try fishing as “really spectacular,” and “a unique experience for me.” One male youth explained “it was just cool coming from a prep school going into a totally different situation... It takes me out of my bubble, that I was in, in prep school and life at home.” Another said “I had never done anything like that...I just had never umm been in an environment where I had the ability to have fishing pole...”

■ Fun/Excitement.

Fishing led to the consequence *fun/excitement* 15 times (32.6%). Participants reported that fishing caused them to experience a sense of fun or enjoyment. One male participant explained “I don’t eat fish but fly fishing was still really enjoyable... something about just casting just back and forth, it’s, it’s just really calming and it’s great to just be on the side of a river or a small lake and you’re just enjoying being out there and you don’t really care if you catch food. But aside from that, it’s just a really, really fun experience to be able to relax and take a step away.”

■ Hard Skill Development.

Fishing led to the consequence *hard skill development* 12 times (26.1%). For participants who had fished previously, their experience allowed them to practice and improve their skills. One participant explained that “I love fishing. When I was younger I used to fish with my dad all the time and I had never tried fly fishing... so it was interesting to practice that and actually catch some.” Another said learning was important to him because “I had barely even been able to catch fish before.” Others talked about not only learning how to catch a fish but also how to prepare it for consumption. One explained “it’s cool to take food from the wild and work on the outdoor cooking skills.”

Values

Completing the “ladder of abstraction,” fishing was associated with seven values, most frequently: *transference*, *self-respect/esteem/confidence*, *self-fulfillment*, *self-awareness*, and *sense of accomplishment*.

■ Transference.

Means-end chains associated with fishing led to the value *transference* 19 times (41.3%). Youth frequently reported transferring the consequences of participating in fishing to their life outside of NOLS. Participants explained that they continue to use the hard skills that they developed by continuing to fish. Four years after course completion, one participant commented “I enjoy fishing, and hunting, and being outdoors.” Another youth transferred the feelings of independence that he obtained when learning to fish, saying that “it’s important to be independent and be able to take care of yourself. Wherever you go, you are going to face challenges and you need to be prepared for them.”

■ Self-Respect/Esteem/Confidence.

Means-end chains associated with fishing led to the value *self-respect/esteem/confidence* ten times (89.8%). One participant explained that "I guess just like knowing...that I like had a role and was...proficient in fulfilling of what others expected of me..." Fishing and the opportunity to provide dinner for themselves and group members increased youth's self-esteem and gave them more confidence in their abilities.

■ Self-Fulfillment.

Means-end chains associated with fishing led to the value *self-fulfillment* seven times (15.2%). A number of youth that identified fishing as one of the most important aspects of their NOLS course specifically joined the course to fish. One male explained that fishing during the course was important to him because it "was kind of one of the main reasons I did the course, it was definitely one of the things that attracted me to it, that particular course of NOLS." Such youth were able to experience a sense of *self-fulfillment* when their desire to fish in Wyoming was met.

■ Sense of Accomplishment.

Means-end chains associated with fishing led to the value of *sense of accomplishment* seven times (15.2%). Several participants experienced a *sense of accomplishment* from the catch itself, especially when obtaining personal goals or "catching a lot of fish." Other youth mentioned the feeling of providing dinner for themselves and their group members. One female said "It was just me and this other girl kinda standing out in the middle of this lake...trying to catch a fish and she caught one and you know that was our dinner for the night. The guys cooked it... it felt good." Another male participant explained "There was one time when we ran out of food and uh I was the only one who was able to fly fish well and like I was able to catch fish and we were able to eat dinner and that was pretty cool."

■ Self-Awareness.

Means-end chains associated with fishing led to the value *self-awareness* seven times (15.2%). One male participant said "having that control over your food and your life was, was nice. It was nice to have that control, you know... Especially as a teenager, you know, especially because I guess when you're going through what everyone goes through as a teenager, uh, kind of, umm, it's really important, important to realize that you can control your own destiny, your own life, you own hands."

Discussion

These results demonstrate similar benefits of recreational fishing and participation in fishing education as prior research. Multiple studies have shown that youth continue to have an interest in fishing after completing an educational course (Flowers, 2010; Holland & Ditton, 1992; Koupal & Krasny, 2003; Palmberg & Kuru, 2000; Siemer & Knuth, 2001). This research demonstrates that fishing education provides youth with the ability and desire to continue fishing after course completion. Numerous researchers have reported that enjoyment of the experience impacts angler motivations, as well as satisfaction (Arlinghaus, 2006; Flowers, 2010; Holland & Ditton, 1992; Koupal & Krasny, 2003; Palmberg & Kuru, 2000; Siemer & Knuth, 2001). Similarly, the youth participants in this study frequently reported that they enjoyed their fishing experiences, mentioning that fishing was "a good time," "fun," "really nice," and "my favorite part." Fishing components of outdoor education programs provide youth with a similar

sense of independence and freedom that is associated with recreational fishing populations (Holland & Ditton, 1992).

Additionally, these results validate previous studies that found that despite programming objectives, participation in fishing education does not increase participants' sense of environmental stewardship or effect their behavior towards environmental concerns (Flowers, 2010; Koupal & Krasny, 2003; Siemer & Knuth, 2001). In this study, the attribute fishing did not lead to the consequence *environmental appreciation* or the *transference* of knowledge gained in order to protect the environment, which indicates that participation in fishing components of their NOLS course did not cause participants to have an increased sense of environmental stewardship.

This study meets research needs identified in prior studies. Siemer and Knuth (2001) cited the need to study specifically how program participation effects youth. By examining the ladders associated with the fishing attribute, this study investigated how participation in the fishing components of NOLS courses impacted youth outcomes. Numerous researchers called for longitudinal studies that measure the effects and impacts of course participation over time (Felder, 2001). This study presented data collected over five years, following participant outcomes from immediately after course completion to four years later, which demonstrates that participation in fishing education can have a meaningful and lasting impact on youth.

Managerial Implications

The results of this study provide some insight into the lessons and benefits that youth transfer from participation in fishing education into other areas of their lives, as well as the personal values that have an effect in youths' lives years after participation. Managers can use this information during program marketing and when attempting to obtain program funding. For programs that cite objectives aimed at improving youth lives, this research suggests that such objectives are valid as fishing education increases youth's self-respect/esteem/confidence, provides a sense of self-fulfillment and self-awareness, and offers transferable lessons and benefits. To facilitate the attainment of these values, program managers should strive to deliver opportunities that lead to these values by cultivating a sense of fun and excitement, teaching hard skills, and providing new experiences for youth anglers.

Research Implications

The sample population for data in this research was limited to youth who said that fishing was one of the three most important attributes of their NOLS course experience. Future research could conduct in-depth interviews with a larger population of youth to see if the fishing component affected all participants in a similar manner. A comparison between outcomes of participation in NOLS fishing courses versus NOLS general courses with fishing attributes may provide additional insight into youth outcomes. Researchers may also consider researching other outcomes of participation in other outdoor adventure education programs with fishing components. Females were limited in this sample population, future research should include a greater number of female youth and could examine differences in outcomes by gender.

Limitations

Limitations of this study include: sampling based on a convenience sample, a small sample population, and data being condensed when entered into LadderMap. Several participants were

unreachable four years after the initial data collection due to moving, conflicting schedules, or change of contact information. A final limitation of the study was the lack of consideration for other factors that could affect participant outcomes, such as program philosophy, weather factors, or course instructors. While program philosophy has an effect on participant outcomes, the study was not designed to measure this.

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An Exploratory Study of the Five Cs Model of Positive Youth Development Among Indiana 4-H Youth

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Abstract: The purpose of this study was to explore the levels of positive youth development (PYD) among Indiana 4-H club participants. Questionnaires were collected from a convenience sample of [State] youth (n = 453). Findings indicated that youth who participated in the 4-H program reported significantly higher total positive youth development than those who had never participated in 4-H. Youth who participated in the 4-H program also reported significantly higher scores on four of the Five Cs of PYD (Confidence, Connection, Character, and Caring). The findings of this study contribute to the Developmental Systems Theory by confirming the role that 4-H has in contributing to positive youth development. Recommendations are provided to guide future research related to the Five Cs aspect of positive youth development among 4-H youth.

Introduction

The positive youth development perspective is becoming the primary framework for researchers and practitioners in youth development (Bowers et al., 2010, King, et al., 2005). The PYD perspective posits that every adolescent has strengths, or at least the capacity to develop strengths, that will enable youth to grow positively (Lerner, 2006). This approach also maintains that youth are completely capable of learning and developing skills, exploring the world that surrounds them, and then making contributions to that world (Lewis, 2008). Damon (2004) asserts that "the positive youth development approach aims at understanding, educating and engaging children in productive activities rather than at correcting, curing or treating them for maladaptive tendencies or so-called disabilities" (p. 15). This type of development is most often seen in environments that enable youth to see the importance of their position and their

potential and “addresses the broader developmental needs of youth, in contrast to deficit-based models” (Rembert, 2009, as cited in Collins et al., 2008, p. 46). The features of PYD will emerge when the strengths of youth are aligned across adolescence with the resources available to them in their families, schools, and communities (Balsano, Phelps, Theokas, Lerner & Lerner, 2009).

The 4-H Youth Development Program is one of many examples of youth programming that has implemented the PYD approach (Lewis, 2008). The mission of the 4-H Youth Development Program is to empower young people to reach their full potential by allowing them to work, as well as learn, alongside and with the help of caring adults. The 4-H Youth Development program provides many critical elements required of a program to encourage PYD including caring adults, a safe environment and opportunities to master skills and content (National 4-H Impact Assessment Project, 2001). 4-H programming functions through many different venues with 4-H clubs being the largest and most popular way youth take advantage of the many educational opportunities and activities 4-H offers.

Research shows that 4-H Youth Development programs have beneficial effects on youth by positively affecting development and therefore positively affecting their adulthood (Boyd, Herring, & Briers, 1992). Though research continues to show that participating in constructive leisure activities, like 4-H, is a facilitating mechanism for positive development, more research is needed to strengthen this case (Morrissey & Werner-Wilson, 2005). The case is often made that the relationship 4-H has with a land-grant university provides unique opportunities for youth that few other programs offer, however, in the push for accountability, providing evidence of the effectiveness of youth development programs such as 4-H is essential (Boyd et al., 1992).

Purpose

The purpose of this study was to explore the levels of positive youth development among [State] 4-H participants.

Research Objectives

The research objectives of this study were to:

1. Describe the levels of positive youth development (PYD) as measured by the Five Cs between 4-H and non-4-H participants.
2. Describe differences in positive youth development (PYD) as measured by the Five Cs across 4-H participation, gender and grade.
3. Describe the relationships between positive youth development (PYD) as measured by the Five Cs and 4-H club and 4-H afterschool participation.

Theoretical Framework

Developmental Systems Theory (DST) is a contemporary human development theory and is particularly useful in studies of adolescent development (Kiely, 2010). The DST model (Figure 1) is composed of five primary components and include:

- 1) Ecological Risk/Protective factors,
- 2) Selection, Optimization, Compensation (SOC),

- 3) Positive Youth Development which is comprised of the Five Cs variables,
- 4) Contribution, and
- 5) Risk/Problem Behaviors. For the purpose of this study, we focused on the 5 C's component of the DST model which has received the most attention within the PYD literature (Bowers et al., 2010). This is due to the substantially larger base of empirical evidence for the Five Cs in comparison to other components, the validity of the constructs, and the importance of the Five Cs variables in predicting both long- and short-term outcomes as demonstrated through longitudinal research (Heck & Subramaniam, 2009).

Figure 1

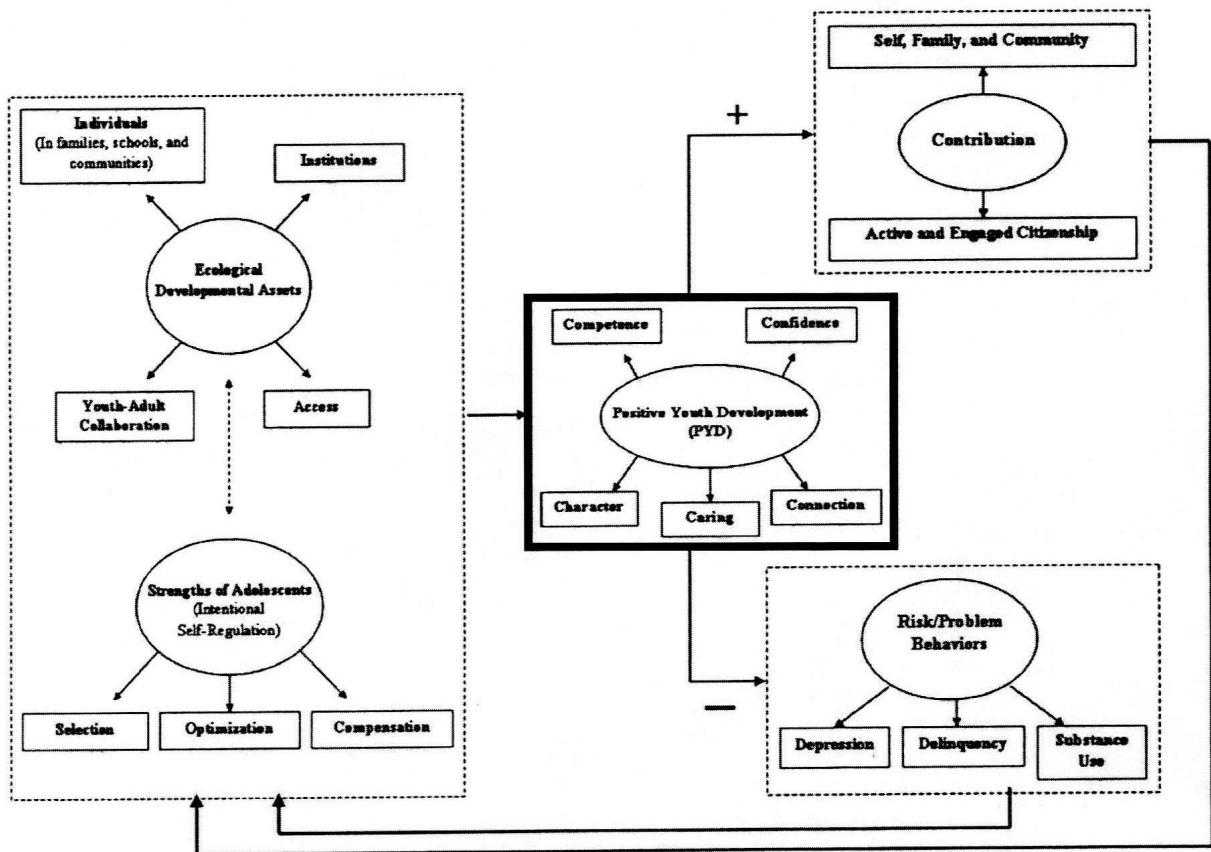


Figure 1. A Developmental Systems Theory-Based Framework of Thriving in Adolescence. Adapted from "Special issue introduction: The meaning and measurement of thriving: A view of the issues," by R.M. Lerner, A. von Eye, J.V. Lerner, S. Lewin-Bizan, and E.P. Bowers, 2010, *Journal of Youth and Adolescence*, 39, p. 712. Copyright 2010 by Springer Science+Business Media.

The 5 C's component introduces five key characteristics that are the building blocks of PYD. The Five Cs were developed based upon experience and reports of practitioners as well as a review of literature and include:

- 1) Competence,
- 2) Confidence,
- 3) Connection,
- 4) Character, and
- 5) Caring (Lerner, 2006; Bowers et al., 2010).

Competence is defined as having a positive outlook on one's own actions in specific areas including social, cognitive, academic, and vocational realms (Phelps et al., 2009). Confidence refers to a young person who exhibits a largely positive sense of self-worth and who also exhibits self-efficacy (Phelps et al., 2009). Connection is manifested through constructive and encouraging relationships with people and institutions such as school, family, and peers. Character refers to a respect for rules, and a sense of right and wrong (Bowers et al., 2010). According to Phelps et al. (2009), Caring is defined as the embodiment of sympathy and empathy for other people. Youth are best able to become sympathetic and empathetic by interacting with adults who display these traits when helping those in need around them (Jones, 2005). It has been reported that youth exemplifying lower levels of the Five Cs face greater risk of experiencing personal, social and risk/behavioral problems (Lerner et al., 2008). These risk behaviors include depression, delinquency, and substance abuse (Lerner et al., 2010).

Recently, a greater focus has turned to the use of the Five Cs with research related to 4-H and PYD (Arnold, Dolenc, & Rennekamp, 2009; Bossaer, 2009; Lerner & Lerner, 2009). The 4-H Study of PYD is the first longitudinal study of positive youth development with Lerner, et al. (2008) being the first to develop measurements for positive youth development using the Five Cs framework. Findings from Lerner et al.'s (2008) annual report of Wave 4 indicated that 4-H participants were on higher trajectories for PYD and Contribution as well as lower trajectories and risky behaviors. 4-H youth were also more likely to make contributions to their communities than their non-4-H peers. Lerner et al. (2010) longitudinally compared a sample of 215 ninth grade 4-H participants and 215 ninth grade non-4-H participants from the 4-H Study of PYD Annual Report for Waves 1-5. Between these two groups, 4-H participants showed consistently higher scores for PYD, Contribution and SOC, and received lower scores on risk behaviors. Also, 4-H youth scored 25% higher in Contribution when compared to youth who were involved in other out-of-school activities, such as sports, arts or school clubs, and 41% lower on the risk/problem behavior measure than non-4-H youth. 4-H'ers were also shown to achieve higher grades, being more engaged with school and more often saw themselves going to college (Lerner & Lerner, 2009). Finally, Bossaer (2009) compared 4-H participants with non 4-H participants according to their scores on Contribution. Bossaer found that active 4-H participants showed higher levels of community contribution than non-4-H participants. Not surprisingly, active 4-H participants reported significantly lower levels of risk behaviors than those youth who reported limited or no 4-H experience.

Methods

Participants

Two hundred fifty-five (56.9 %) participants were female and 193 (43.1%) were male. One hundred and sixty-one (36.3%) youth were in 9th grade, 129 (29.1%) were in 10th grade, 91 (20.5%) were in 11th grade and 63 (14.2%) were in 12th grade. Three hundred and ninety-three (89.1%) of the participants were Caucasian. Remaining questionnaires were completed by youth who were multiethnic (5.7%), Native American (2.5%), African American (1.4%), Hispanic (1.1%). Participants were asked to indicate their age as of January 1, 2010, with the average age of participants being 15.5 years ($SD= 1.21$). Two hundred and thirty-two (51.2%) participants were non-4-H participants and 221 (48.8%) were 4-H participants.

Measures

The questionnaire used for this study was the short-form version of the original measure of the Positive Youth Development Student Questionnaire (Lerner et al., 2005). The questionnaire was

designed to measure the Five Cs for use with youth who were over the age of 10. Also, although each of the Five Cs is comprised of subscales, for the purpose of this study, only the scores for each of the Cs and Total PYD were used in the analysis. Items in the short-form version of the Positive Youth Development Student Questionnaire were adapted from five measures (Lerner et al., 2005). This included the: 1) Search Institute Profiles of Student Life—Attitudes and Behaviors, 2) Self- Perception Profile for Children (SPPC), 3) Teen Assessment Project (TAP) Survey Question Bank, and composite of items from 4) The Eisenberg Sympathy Scale, and 5) The Empathic Concern Subscale of the Interpersonal Reactivity Index (IRI). The Five Cs of PYD were measured by well-validated scales that were intended to measure important elements that would define each of the Five Cs (Gestsdottir, Lewin-Bizan, von Eye, Lerner, & Lerner, 2009). Validity has been reported in numerous previously published articles (See Bowers, et al., 2010; Gestsdottir & Lerner, 2007; Jelcic, et al., 2007; Lerner, et al. 2005). Post-hoc reliabilities for each of the Five Cs and total PYD were: Competence (.63), Confidence (.79), Connection (.90), Character (.86), Caring (.82), and Total PYD (.73).

Individual Five C scale scores were calculated and then averaged to reach an overall PYD score. Character was computed by calculating the mean score for each subscale individually then computing the means of the subscales. Competence scores were computed by calculating means for each subscale then averaging those scores with the score indicated for grades. For Caring, Connection and Confidence scores were calculated by simply averaging the scores. Items were all answered on a Likert-type scale of 0-3. The individual Five C scale scores are interpreted on a 100 point scale and computed by multiplying each scale score by 33.33.

The questionnaire also contained items eliciting various demographic data. Specifically, participants were asked to indicate their gender, grade, age, county of residence, race/ethnicity, type of 4-H involvement, 4-H club participation frequency, and the extent of participation in other out-of-school activities. 4-H participation (i.e., 4-H and non 4-H) was determined using two criteria. First, youth were asked whether or not they attended a 4-H camp. Youth who answered 'Yes' were identified as 4-H participants while youth who answered 'No' were identified as non-4-H participants. Second, youth were also asked to indicate their 4-H club and 4-H afterschool program participation by stating their level of involvement across various time frames: 1) Never, 2) Once a month or less, 3) A couple times a month, 4) Once a week, 5) A few times a week, or 6) Every day. Youth who indicated a specific time frame were categorized as 4-H participants while youth who answered 'Never' were categorized as non-4-H participants.

Procedures

This study used a descriptive survey design. The sample was comprised of a convenience sample of 4-H and non-4-H youth ($n = 453$). The Purdue University's Institutional Review Board approved the study protocol and all participants provided informed consent prior to participation in the study. Data were collected using a modified version of Dillman, Smyth, & Christian's (2009) described implementation procedures. Specifically, we utilized 4-H Extension Educators from across Indiana as the primary contact to identify and invite youth to participate in our study rather than directly contacting the youth themselves. This procedure was employed because the researchers had greater access to 4-H Extension Educators and limited access to the youth participants' contact information (i.e., email and home mailing addresses). Also, using the 4-H Extension Educators proved to be the most practical way to reach youth because of the working relationships the Educators had with the schools in their counties. The steps that were used to contact the Educators and youth participants included: 1) Standard pre-notice letter to Educators, 2) Invitation letter including the URL link to the questionnaire to Educators and youth participants, 3) Thank you/reminder e-mail with the URL link to the questionnaire to

Educators and youth participants, and 4) Reminder letter with the URL link to the questionnaire to Educators and youth participants.

Initially, a pre-notice letter, published in Purdue University's county newsletter, informed all Extension Educators that an opportunity would be available to help gather data for a study that explored the levels of PYD of Indiana 4-H youth. Seven weeks later, Indiana's Assistant Director and Program Leader of 4-H Youth Development sent an e-mail again making Extension Educators across the state aware of the opportunity to participate in the study.

4-H Extension Educators from all 92 Indiana counties received a standard pre-notice letter from the researcher inviting them to consider participation in the study. The first official invitation letter was e-mailed to all Indiana 4-H Extension Educators, which also marked the first day of data collection. The e-mail was sent through an e-mail distribution list to Indiana Extension Educators who work in the 4-H Youth Development Program and contained detailed information on how the study would be conducted. This e-mail asked Educators to contact the researcher to indicate their interest in contacting youth who could participate in the study. Educators must have been willing to assist and follow the established protocol. Educators who responded indicating their participation were instructed to gather data by using one of the following options, or a combination of both:

- 1) Survey 9th through 12th grade students identified by a classroom teacher who had a prior collaborative programming relationship with the Extension Educator.
- 2) Survey 4-H members in grades 9 through 12 from the same county whose e-mail addresses the Educator had access to, or
- 3) The Educator could utilize both options above.

The URL link to the questionnaire included in the invitation letter for youth linked the participants directly to the questionnaire enabling youth to participate in the study from one of three locations: home, the Extension office, or a classroom. The data collection location was chosen by the Educator. In one instance, an Educator inquired whether or not distributing paper copies of the questionnaire in a classroom setting would be acceptable. This request was approved by the researcher and the researchers entered them into the database. The questionnaire included no identifiers. It was estimated that the questionnaire would take approximately 10 to 15 minutes to complete.

The first reminder e-mail was sent to Educators asking them to consider inviting the youth that they had access to participate in the study. According to Dillman, Smyth, & Christian (2009), surveys being sent through the mail should be followed by a reminder postcard seven days after the questionnaire. The researcher drafted letters that were sent to the youth, but the Educators were responsible for ensuring that the letters were delivered to the participants. An Educator asked if mailing paper copies of the invitation to youth would be acceptable since they had access to more home mailing addresses than e-mail addresses. This request was also approved by the researchers.

A final e-mail reminder was sent asking Educators to consider assisting in the data collection effort, but at this point Educators could only e-mail invitations requesting youth participation. The data collection process resulted in 705 4-H and non-4-H participants from 33 counties being collected. However, once the data were examined for unusable questionnaires the final sample resulted in 453 useable questionnaires from 31 counties. The reason for the deletion of 252

cases was because of participants not completing the questionnaire thus rendering the questionnaires unusable.

Data Analysis

Data were analyzed using descriptive statistics including means, standard deviations, frequencies and percentages. Independent samples t-tests were used to describe differences in positive youth development as measured by the Five Cs between 4-H and non-4-H participants. A one-way Analysis of Variance was used to describe mean differences among the Five Cs and Total PYD across grade levels. Pearson's correlation coefficients were used to describe the relationships between positive youth development as measured by the Five Cs and selected demographic characteristics. Regarding the correlational analyses, we made one modification which included exploring relationships between the types of 4-H involvement (i.e., 4-H club participation and 4-H afterschool participation). This was done for the purpose of determining whether or not type of involvement is related to the 5 C'. Effect sizes were calculated for relationships using Cohen's r^2 (1988) and relationship strength was described using Hopkin's (1997) conventions. Effect sizes for mean differences were calculated using Cohen's d (1988). Although it is not customary to use inferential statistics with a non-random sample, Uessler, Ricketts, Duncan and Peake (2006) stated that inferential statistics are useful with data from a convenience sample if the sample is "carefully conceptualized to represent a particular population" (p. 104). As a result, findings from this study will add to the knowledge base by supplying preliminary data for comparison purposes, and "for providing the basis for future research from samples that would allow generalizability to larger populations," (Roberts, Harlin, & Briers, 2007, p. 58).

Findings

Objective 1: Describe the Levels of Positive Youth Development (PYD) as Measured by the Five Cs Between 4-H and Non-4-H Participants

Levels of positive youth development for 4-H and non-4-H participants (See Table 1) were measured through the Five Cs by a 4-point Likert-type scale and are reported on a 100-point scale.

Mean scores for 4-H participants were Competence: 57.22, ($SD=11.14$), Confidence: 67.51 ($SD=16.37$), Connection: 70.11, ($SD=16.16$), Character: 73.4, ($SD=12.85$), Caring: 75.52, ($SD=11.19$), and Total PYD: 69.28, ($SD=10.17$).

Scores for non-4-H participants were as follows: Competence: 55.77, ($SD=12.17$), Confidence: 61.48, ($SD= 17$), Connection: 65.39, ($SD= 16.58$), Character: 68.31, ($SD=15.14$), Caring: 69.53, ($SD=19.15$), and Total PYD: 64.42, ($SD=10.73$).

Table 1

Means and Standard Deviations for Five C's Between 4-H and Non-4-H Participants

Five C's	4-H Participants		Non 4-H Participants	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Competence	57.22	11.14	55.77	12.17
Confidence	67.51	16.37	61.48	17.00
Connection	70.11	16.16	65.39	16.58
Character	73.4	12.85	68.31	15.14
Caring	75.53	11.19	69.53	19.15
Total PYD	69.28	10.17	64.45	10.73

Note. Competence, Confidence, Connection, Character, Caring and Total PYD maximum score=100.

Objective 2: Describe Differences in Positive Youth Development (PYD) as Measured by the Five Cs Across 4-H Participation, Gender and Grade

Independent samples t-tests were used to assess differences in group means among 4-H and non-4-H participants for each of the Five Cs and Total PYD. Results are reported in Table 2. Significant differences were identified between 4-H and non-4-H participants on Confidence, Connection, Character, Caring and Total PYD. Only the Competence scale failed to yield significant differences between 4-H and non-4-H participants. Effect sizes for the mean differences between 4-H and non-4-H participants among the Five Cs scores and total PYD were small according to Cohen's (1988) criteria.

Table 2

T-test Results for Five C's Between 4-H and Non-4-H Participants

C	4-H Participation	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>d</i>
Competence	4-H	188	57.21	11.14	-1.23	.12
	Non 4-H	203	55.77	12.17		
Confidence	4-H	193	67.51	16.37	-3.61**	.36
	Non 4-H	208	61.49	17.00		
Connection	4-H	216	70.11	16.17	-3.04**	.29
	Non 4-H	229	65.39	16.58		
Character	4-H	192	73.40	12.85	-3.61**	.36
	Non 4-H	205	68.32	15.14		
Caring	4-H	218	75.53	17.19	-3.49**	.33
	Non 4-H	230	69.52	19.15		
Total PYD	4-H	185	69.28	10.17	-4.51**	.46
	Non 4-H	198	64.45	10.73		

Note. Total number of responses are unequal due to non-response within various categories. Competence, Confidence, Connection, Character, Caring and Total PYD maximum score=100.

** $p < .05$

Significant differences were identified between males and females on levels of Connection, Character, Caring and Total PYD (Table 3). Only the Competence and Confidence scales did not yield significant differences between males and females. Effect sizes for the mean differences between males and females among Competence, Confidence and Connection were small, moderate for Total PYD, and strong for Character and Caring according to Cohen’s (1988) criteria.

Table 3

T-test Results for Five C’s Between Males and Females

C	4-H Participation	n	M	SD	t	d
Competence	Males	164	56.27	11.25	-.279	.03
	Females	227	56.61	12.03		
Confidence	Males	169	63.16	15.95	-1.23	.13
	Females	232	65.28	17.62		
Connection	Males	188	64.84	16.06	-3.04**	.29
	Females	253	69.62	16.61		
Character	Males	167	63.93	15.35	-8.46**	.91
	Females	230	75.74	11.10		
Caring	Males	189	63.62	18.90	-9.04**	.90
	Females	255	78.74	15.24		
Total PYD	Males	158	62.77	10.66	-6.46**	.67
	Females	225	69.60	9.86		

Note. Total number of responses are unequal due to non-response within various categories. Competence, Confidence, Connection, Character, Caring and Total PYD maximum score=100. **p < .01

A one way analysis of variance test (ANOVA) was conducted to determine whether means for the Five Cs and for Total PYD varied among the four grade levels. Results shown in Table 4 revealed that means varied at statistical significance across the various grade levels for two of the Five Cs, Confidence and Caring, as well as for Total PYD (Confidence: $F(3, 391) = 2.92, p < .05, \eta^2 = .022$; Caring, $F(3, 436) = 2.90, p < .05, \eta^2 = .02$; Total PYD, $F(3, 377) = 2.92, p < .05, \eta^2 = .023$).

Post-hoc comparisons using Bonferroni comparisons showed that the mean Confidence levels for 9th grade students ($M = 62.07$) was significantly lower than the mean for 12th grade students ($M = 70.15$). Relative to Caring, post-hoc comparisons showed that the mean levels for 9th grade students ($M = 69.22$) was significantly lower than the mean for 10th grade students ($M = 75.40$). Post-hoc testing failed to show any statistically significant differences for Total PYD by grade level, despite a significant F statistic. The significant difference in group means may have resulted from the larger number of responses in the overall dataset used to generate the F statistic. Smaller numbers of responses are used in Post-hoc testing.

Table 4

Analysis of Variance Results for the Five Cs and Total PYD

Variable	<i>M</i>	<i>SD</i>	<i>F</i>	<i>P</i>	<i>η</i>²
Competence			.022	.996	.00
Grade 9	56.59	11.86			
Grade 10	56.50	11.76			
Grade 11	56.26	11.25			
Grade 12	56.76	11.49			
Confidence			2.92	.034*	.02
Grade 9	62.07	17.68			
Grade 10	64.56	17.26			
Grade 11	64.27	16.46			
Grade 12	70.15	14.74			
Connection			2.24	.083	.02
Grade 9	64.93	17.70			
Grade 10	69.75	15.41			
Grade 11	68.16	17.48			
Grade 12	68.72	13.68			
Character			.658	.578	.01
Grade 9	69.57	14.48			
Grade 10	71.87	14.11			
Grade 11	70.32	14.41			
Grade 12	70.72	14.43			
Caring			2.9	.035*	.02
Grade 9	69.22	19.79			
Grade 10	75.40	18.00			
Grade 11	73.54	15.87			
Grade 12	72.81	17.58			
Total PYD			2.92	.034*	.02
Grade 9	64.65	11.43			
Grade 10	68.16	10.04			
Grade 11	67.08	10.81			
Grade 12	68.60	9.97			

Note. Competence, Confidence, Connection, Character, Caring and Total PYD maximum score=100.

**p* < .05

Objective 3: Describe the Relationships Between PYD as Measured by the Five Cs and 4-H Club and 4-H Afterschool Participation

Pearson’s correlations were used to describe the relationships between Total PYD, each of the Five Cs, 4-H Club participation and 4-H afterschool participation (Table 5). Hopkin’s (1997) and Cohen’s (1988) conventions were used to describe strength and effect sizes of the relationships. An effect size, or an r^2 , that is less than .08 is considered small, an r^2 falling between .09 and .24 is considered medium and any r^2 greater than .25 is considered large. All significant relationships ranged from low to high (.12-.74).

Table 5

Pearson’s Correlations Among the Five Cs, PYD, 4-H Club Participation and 4-H Afterschool Participation

Variable	1	2	3	4	5	6	7	8
1. Total Confidence	-----							
2. Total Competence	.44**	-----						
3. Total Connection	.48**	.23**	-----					
4. Total Character	.30**	.17**	.51**	-----				
5. Total Caring	.18**	.13**	.46**	.64**	-----			
6. Total PYD	.69**	.52**	.78**	.74**	.72**	-----		
7. 4-H Club Participation	.15**	.04	.12*	.14**	.15**	.19**	-----	
8. 4-H Afterschool Participation	.07	-.03	.05	.08	.06	.09	.64**	-----

Note. Total number of responses are unequal due to non-response within various categories.

* $p < .05$, ** $p < .01$

Conclusions

Youth who participated in the 4-H program reported higher levels of total positive youth development than those who had never participated in 4-H. These findings are important because the outcomes of positive youth development include lower participation in risky behaviors, greater community involvement, increased civic engagement, higher grades in school, and aspirations to pursue post-secondary education (Lerner & Lerner, 2009). However, although the findings of the study align with findings from Lerner et al. (2009) and Lerner et al. (2008) who also found that 4-H youth reported higher levels of positive youth development the “true value of 4-H programs comes not from short-term results or even the effects over a few years... but from the programs’ influence on lifelong pathways of development” (Lerner, Lerner & Phelps, 2009, p. 16).

Youth who participated in the 4-H program reported significantly higher scores on four of the Five Cs (Confidence, Connection, Character, and Caring). Among these Cs, 4-H participants averaged 2.3 to 7.5 points higher than non-4-H participants. This finding is unique because prior studies (see Lerner et al., 2009; Lerner, Lerner, & Phelps, 2008) have only discussed the concept of PYD as a function of the Five Cs. It should be noted that reporting findings related to the Five Cs individually is contrary to previous research using Developmental Systems Theory. For example, Lerner noted that each “C” is measured by its own individual scale. As such, PYD

is typically only reported as a collective construct of the Five Cs (J. Lerner, personal communication, February 13, 2011). However, in this study the researchers were primarily interested in exploring differences in levels of PYD between 4-H and non-4-H participants; as such differences in individual C scores were deemed important and were thus reported.

Although effect sizes between mean differences were small according to Cohen (1988), this may result from the population being very similar due to the convenience sampling methods used in the study. In this study, the researcher did not contact the participants, rather; the Educator was responsible for recruiting the participants. Small effect sizes could also be a result of the researcher's inability to assess the intensity (i.e., depth and breadth) of the participants' involvement in 4-H programming and other out-of-school programs. Both 4-H and non-4-H participants in this study reported involvement in other out-of-school activities such as Boy Scouts, the YWCA, and the Big Brothers Big Sisters program. Lerner (2005) and Busseri and Rose-Krasnor (2007) also found that youth are typically involved in more than one youth development program. Although Theokas et al., (2006) reported that participation in more than one out-of-school time program is common and beneficial for youth, they also note that this makes it increasingly difficult for researchers to pin-point which program had the greatest impact on the development of a young person.

Females also reported significantly higher levels of Connection, Character, Caring and Total PYD than males. These findings align with findings from previous research indicating that females achieved higher PYD than their male counterparts (Lerner, 2005b; Jelacic et al., 2007; Zimmerman, 2007). However, this study measured PYD overall rather than through specific domains such as math, sports, or language arts as was done in previous studies.

Finally, findings indicated that there were significant differences across grades in levels of Confidence, Caring and Total PYD. Confidence was significantly different between youth in 9th and 12th grades with 12th grade students reporting an average of 8.1 points higher. Caring was significantly different between youth in 9th and 10th grades with 10th grade students reporting an average of 6.2 points higher. Total PYD was significantly different; however, specific grade level differences were not detected. Despite the findings of increased PYD across grade levels, it is difficult to compare this study's findings to previous research because of conflicting results in addition to previous research being based on longitudinal data whereas this study utilized a cross-sectional design.

Findings from this study revealed significant relationships between 4-H club and 4-H afterschool participation and four of the Five Cs (Confidence, Character, Caring, and Connection) as well as between 4-H participation and total PYD. Lerner, Lerner, and Phelps (2008) reported that 4-H participation leads to higher levels of PYD and a stronger connection between 4-H participation and PYD scores. Findings from this study also support Lerner et al. (2010) who found that 4-H club and 4-H afterschool participation was consistently related to higher levels of PYD. Findings revealing significant relationships between levels of 4-H participation and four of the Five Cs seem reasonable considering that PYD is a function of the individual Five Cs (J. Lerner, personal communication, February 13, 2011).

Limitations

A number of limitations should be considered when interpreting the findings of this study. First the findings of this study are limited to the state of Indiana thus the findings cannot be generalized to other states. The data collection method of this study did not include a

randomized selection of the participants and is not generalizable beyond the participants studied. Also, the researchers cannot control for the effects of participants being involved in other youth programs which may have influenced their survey responses. Finally, self-report is a limitation in this study because the accuracy of this data is reliant upon the honesty and accuracy of the participants' opinions of themselves.

Implications for Practice

Findings from this study serve as information to help promote and accomplish the goals of the Indiana 4-H youth development program. In particular, based on the findings of this study it is reasonable to assume that 4-H Youth Development programs in Indiana make a difference in the lives of young people in terms of enhancing their positive youth development. However, it is also understood that the positive youth development reported by an individual cannot be attributed to 4-H alone nor to any single out-of-school activity (Theokas, Lerner, Phelps, and Lerner, 2006). Yet still, this study in concert with previous research indicates that youth who participate in 4-H youth development programming report higher levels of positive youth development. Thus, despite the fact that no causal inferences can be made based on the research design used in this study, there is reason to speculate that the Indiana 4-H program is providing opportunities for youth to become engaged in youth development activities and experiences which lead to positive youth outcomes.

Recommendations for Future Research

Youth can participate in 4-H programming a number of different ways including 4-H clubs, 4-H camps and 4-H afterschool activities. However, because involvement in 4-H usually occurs on average once or twice a month, asking youth if they were involved in 4-H a couple times per week or every day, as was done in this study, proved to be somewhat limiting. Also, 4-H experiences can vary greatly depending on a particular city or state. As such, future research should try to ascertain a more accurate measure of the duration (years involved in the 4-H program) and frequency (how often youth participate) of 4-H participation. Perhaps the most important approach to measuring the 4-H experience is through intensity (depth and breadth) which could be assessed by asking questions regarding meeting attendance and leadership, as well as involvement in other 4-H programs like Junior Leaders or Master Gardeners.

Clearly defining 4-H experiences would allow researchers to more precisely measure the effect 4-H participation has on young people. Because the data for this study was collected using a convenience sample; future studies would be strengthened by gathering data from a random sample thus enhancing external validity. The homogeneous sample of the study also limits generalizability to other racial and ethnic groups. Thus, future research would benefit from collecting data involving a more diverse sample among both 4-H and non-4-H participants. Finally, the short version of the PYD questionnaire used in this study did not include items measuring the Contribution or risk/problem behaviors that are recognized as key components of Developmental Systems Theory. To better contribute to theory, future research should include items that assess these two constructs which will then lend to findings and conclusions that can be better linked to DST.

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Measuring Life Skills: Standardizing the Assessment of Youth Development Indicators

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Measuring Life Skills: Standardizing the Assessment of Youth Development Indicators

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Abstract: While the development of life skills (e.g., communication, problem solving, etc.) is a commonly targeted youth program outcome, the lack of standardized conceptualizations and instrumentation make it difficult to compare impacts across programs and develop validated best practices. In order to promote a more unified approach to life skill development, literature reviews were conducted for 10 life skill domains to identify common definitions and, if available, appropriate outcome measures. Data were then collected from an ethnically diverse sample ($N = 758$) of elementary, middle, and high school aged youth for the 10 identified instruments. Analyses were conducted to ascertain the psychometric qualities of each measure, the interrelationships among measures, and the measures' relationships with gender, ethnicity, and school level. Results are discussed in terms of their relevance to life skill theory and measurement.

Introduction

Over the last 20 years the field of positive youth development (PYD) has experienced significant growth and increased researcher and practitioner attention. This movement resulted in part from a developmental systems theory perspective on the inherent plasticity of developmental trajectories and the ability to influence these trajectories, especially among youth, to a greater degree than previously supposed (Lerner, Almerigi, Theokas, & Lerner, 2005; Lerner, von Eye, Lerner, & Lewin-Bizan, 2009). This paradigm shift has expanded the focus of adolescent intervention efforts to address not only risk and protective factors but also facilitators of positive development (Damon, 2004). A broad range of youth programs have become the delivery vehicle for the provision of positive development facilitators.

A central issue facing positive youth development programs has been the identification, evaluation, and measurement of potentially effective program models. A seminal work in this area was completed in 2002 by the Social Development Research Group at the University of Washington and involved the review of more than 150 evaluations of PYD programs (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002). Deliverables from this effort included a clearer conceptualization of PYD in general and key program outcomes and elements. The authors also noted the need for a standardized tool kit of positive youth development outcome measures. Such a collection of standardized measures would enable increased comparability of outcomes across programs and improved identification of best practices.

Since Catalano et al.'s call, a variety of efforts have emerged to conceptualize and operationalize key facilitating factors of positive youth development. For example, the Search Institute (Benson, 2003) has promoted its list of 40 Developmental Assets and concept of thriving, America's Promise Alliance (2007) has issued its five promises, and the Five C's (Lerner et al., 2005; Roth & Brooks-Gunn, 2003) have also received attention. Amidst this work, measurement development efforts have produced specific PYD related measures (e.g., Oman et al., 2002; Oman, Vesely, Tolma, Aspy, & Marshall, 2010; Park & Peterson, 2006; Theokas et al., 2005). While each of these efforts have positively contributed to the creation of a richer body of standardized measures, there is still a need to provide practitioners with access to validated measures for other commonly targeted program outcomes.

For example, 4-H programming has a long standing focus on the development of life skills (Boleman, Cummings, & Briers, 2005; Boleman, Cummings, & Briers, 2004; Boyd, Herring, & Briers, 1992) but the lack of commonly identified, specific life skill domains and accompanying standardized measurement approaches hampers the ability to promote a unified life skill development strategy across all 4-H programs. Fortunately, the USDA has been funding recent efforts to promote the standardization of life skill programming and outcome measurement. As an initial step in this effort, an online survey of program directors of USDA Children, Youth, and Families At-Risk (CYFAR) funded programs across the country was conducted to identify the most salient life skill domains (Duerden & Witt, In Press). These individuals were given a list of 35 skills from the Targeting Life Skills Model (Hendricks, 1998) and asked to select areas most in need of measurement standardization. The 10 most commonly identified life skills were used to guide this study. For each of the 10 life skill areas a review of literature was conducted, available instruments assessed, and a target instrument was selected for further study. A subsequent field test was conducted utilizing the 10 selected instruments.

Life Skill Literature Review

Literature reviews were undertaken for the following life skill areas: communication, community volunteering, critical thinking, decision making, leadership, problem solving, responsible citizenship, self-esteem, self-responsibility, and teamwork. As noted, conceptualizations were selected or developed which were simple enough to afford practitioner accessibility but robust enough to provide a strong link to an associated measurement tool. A total of 170 references were reviewed across all life skill areas. The following sections provide an overview of each life skill.

Communication

The mechanics and components of human communication have been discussed and debated since the time of the ancient Greek philosophers (Bowman & Targowski, 1987) and multiple models and theories have been developed to describe the communications process. Although

differences exist across models, most contain the same core elements of speaker, message, and listener (Lysaught, 1984). The selected definition for communication was drawn from the work of Mincemoyer, Perkins, & Munyua (2001) who define communication as "the dynamic process by which people exchange thoughts, ideas, and messages. Listening is the act of interpreting sounds and/or visual stimuli and using those interpretations to give them meaning."

Community Volunteering

While adults are more likely to volunteer in order to make a contribution to their community, youth volunteer to gain skills, explore career fields, or to participate with friends who also volunteer (Shannon, 2008). Community volunteering allows youth to explore new roles and identities, foster a sense of empowerment and self-efficacy, and advance a personal set of morals (Youniss, Mclellan, Su, & Yates, 1999). It may also advance academic learning through improved skills in decision making, abstract thought, and reasoning (Conrad & Hedin, 1989). For this study community volunteering was defined as an attempt to meet a community need through uncompensated giving of time and or talents to others.

Critical Thinking

Critical thinking has long been identified as one of the key goals of education (Bloom, Englehart, Furst, & Hill, 1956). It is considered a key skill necessary for lifelong learning (Terenzini, Springer, Pascarella, & Nora, 1995) and navigating an increasingly complex world (Facione, 2006). In an effort to produce a more parsimonious measure of critical thinking geared towards adolescents, Perkins and Mincemoyer (2002) developed a unique conceptualization of critical thinking based upon their own review of literature. Their work resulted in a conceptualization of critical thinking as "thinking that evaluates reasons and brings thought and actions in line with evaluations" (Mincemoyer, et al., 2001).

Decision Making

Individuals utilize the skill of decision making daily. When a child picks out his or her outfit for school, this involves decision making. When a teenager is considering whether or not to do drugs, this involves decision making. When a high school graduate is debating what college to attend, that involves decision making. Some choices will not be tough to make while others require some serious thought by adolescents. The problem arises, however, because "adolescents are presumed to be more susceptible to peer influence, have a tendency to focus more on immediate rather than long-term consequences, and to be less risk averse" (Scott, Reppucci, & Woolard, 1995, p. 222). Effective decision making requires the "the ability to control one's thoughts and behaviors in situations in which there is a relatively strong motivational component (e.g., rewards and losses tied to one's performance)" (Carlson, Zayas, & Guthormsen, 2009, p. 1076). For the purpose of this project, decision making was conceptualized as the ability to define a problem, choose between alternatives, identify the risk and consequences for each alternative, selection of an alternative, and finally evaluating the situation (Mincemoyer & Perkins, 2003).

Leadership

A plethora of definitions exist for leadership. Stogdill and Melvin (1974) state that "there are almost as many different definitions of leadership as there are people who have tried to define it" (p. 7). Bennis and Nanus (2003) add to this by noting that "decades of academic analysis have given us more than 850 definitions of leadership" (p. 4). This diversity makes it difficult to identify a universal definition. For the purpose of this project, leadership was defined by the most common elements that recur throughout the literature. Accordingly, leadership was defined as the ability to interact with a group to exercise influence and achieve a common goal (Mills, 2009).

Problem Solving

Solving problems is the process of using reasoning and analysis to look beyond the surface of a problem to the underlying concepts that need to be part of the solution. Problem solving is a sub concept under the meta construct reasoning which can be defined as “the inferential steps that lead from a given state of affairs to a desired goal state” (Barbey & Barsalou, 2009, p. 35). For the purposes of this study, social problem solving was defined as “the self-directed cognitive behavioral process by which a person attempts to identify or discover effective or adaptive ways of coping with problematic situations encountered in everyday living” (D’Zurilla & Maydeu-Olivares, 1995, p. 410).

Responsible Citizenship

The majority of the literature addressing responsible citizenship states that a responsible citizen is civically engaged, whether by community volunteering, participation in advocacy groups or recycling. The term responsible citizenship and civic engagement are often used interchangeably, especially when referring to youth who may not yet be of age to vote or participate in political processes. Responsible citizenship is best defined by Bobek, Zaff, Li and Lerner’s (2009) multi-construct definition of civic engagement:

1. Sense of generalized reciprocity
2. Ability to be involved in civic society and democracy
3. Desire to make positive contributions to community
4. Participation in activities to better community (p. 616)

Self-Esteem

Self-esteem is generally thought as one’s own perception of worth. The term is often used synonymously with self-concept, self-image, and self-worth (Butler & Gasson, 2005). DeBord (2001) defined self-esteem as “the degree to which children feel accepted and valued by adults and peers who are important to them” (p. 1). Self-esteem is constructed when one compares oneself to other people such as family, friends, or characters seen through the media. An individual is consistently receiving confirmation from these sources to see if they have matched up to their own expectations. Therefore, based upon the reviewed literature, we defined self-esteem as the construct resulting from the degree of congruence between perceptions of their ideal and real selves, perceptions based upon comparisons with and feedback from others.

Self-Responsibility

The concept of adolescent self-responsibility has connections to a broad array of literature. Researchers have tied self-responsibility into discussions of altruism and personal norms (Schwartz & Howard, 1984), academic outcomes (Spencer, Dupree, & Swanson, 1996; Wang & Stiles, 1976), and values-based physical education interventions (Watson, Newton, & Kim, 2003) to mention just a few. One potential approach comes from a collaborative project between researchers at the University of Utah and the American Camp Association (2007a). In an effort to assess the impact of camp experiences on youth participants, this team created measures for seven constructs including responsibility (Ellis & Sibthorp, 2006). Ellis and Sibthorp defined responsibility as the “habit of owning and accepting consequences of personal actions” (p. 38). Two sub-domains were identified: ownership (i.e., taking ownership for one’s actions) and correction (i.e., willing to accept correction and consequences resulting from one’s actions). This definition appears most applicable for PYD contexts.

Teamwork

Definitions of teamwork converge on three key areas: actions, people, and tasks. For example, teamwork can be defined as “the set of interrelated behaviors and actions that occur among team members while performing on a task” (Salas, Burke, & Cannon-Bowers, 2000, p. 344). Similarly, “teamwork is a set of interrelated thoughts, actions, and feelings of each team member that are needed to function as a team and that combine to facilitate coordinated, adaptive performance and task objectives resulting in value-added outcomes” (Salas, Sims, & Burke, 2005, p. 562). There seems to be a general consensus among researchers who have studied teamwork that it is a multidimensional construct comprised of specific knowledge, skills, and attitudes (Lembke & Wilson, 1998). Therefore we defined teamwork as the knowledge, skills, attitudes, or behaviors that increase the likelihood that an individual can be an effective member of a team.

Methods

The study was designed to identify and test measurement tools related to 10 life skill constructs identified by youth program administrators as needing additional measurement development. Measures were selected that linked to the chosen conceptualizations and that were applicable for use in a variety of youth program settings. The research team also recognized that for the instruments to have broad applicability they needed to perform equally well across diverse populations.

Sample

Data were drawn from participants in a school district sponsored after school program in a large urban setting. The IRB at the researchers’ university and the participating school district approved the research project as part of a larger outcome study of the after-school program. All 4th grade and older youth who were signed up for the after school program were included in the study sample. Participation was voluntary and occurred during fall 2010. In total, 2089 surveys were distributed and 758 completed surveys were returned for a 37% response rate. The refusal rate for completing the survey is unknown, since some children were absent on the day the survey was administered, some children from the compiled list had dropped out of the program, and some children only attended on certain days of the week, which might not have included the survey administration day for a particular school. However, reports from the program site coordinators indicated that most children in attendance on the day the survey was administered completed the survey.

Out of the 758 collected surveys, 270 were missing some data. Chi-square and one-way ANOVA tests were conducted to test for differences between those with complete and missing data across all mean measure scores, grade level, gender and ethnicity. The only statistical difference between the complete and missing data subsamples occurred on the decision making scale ($F = 5.78, p = .02$), with the complete group having a higher mean score. Therefore, the decision was made to calculate mean scores for all cases with at least a 90% completion rate on each scale. The newly calculated means produced a final dataset with 608 complete cases.

Within this sample, 46.4% were Hispanic, 44.6% were African American, and 4.9% were White, and 3.1% were variously classified as other. Females comprised 54.4% of the sample and 38.2% of the sample were in elementary school (grades 4-6), 38.5% were in middle school (grades 7-8), and 23.4% were in high school (grades 9-12).

Instruments

Communication. The 23-item Communications Scale from the Youth Life Skills Evaluation (Barkman & Machtmes, 2002) was chosen for the study due to the acceptable survey length and adolescent focus of the items. The scale has been used extensively with 4-H youth populations and has produced an average reliability of .79 (Perkins & Mincemoyer, 2009).

Community volunteering. A primary goal of community volunteering is to create youth who are more considerate of other's needs (individual and community) and therefore more altruistic. The Self-Report Altruism Scale (Rushton, 1981) was selected for this study. The 20-item scale measures altruistic behavior with questions that ask how often various altruistic actions are performed. The survey asks the subject to respond to each question on a scale of never, once, more than once, often or very often. The measure has been widely used for adult subjects and has a reliability rating of .84 (Rushton, 1981). Some modifications were made to the original survey to make items applicable for children and adolescents. Some items were removed that deals with tasks many youth are too young to perform, for example driving a car. See Table 1 for a full overview of all item adaptations.

Table 1

Comparison of Original and Adapted Altruism Scale (Rushton, 1981)

Original Items	Adapted Items
I have helped push a stranger's car out of the snow.	---
I have given directions to a stranger.	I would give directions to someone I did not know.
I have made change for a stranger.	---
I have given money to a charity.	I would give money to a charity.
I have given money to a stranger who needed it (or asked me for it).	---
I have donated goods or clothes to a charity.	I would donate clothes or goods to a charity.
I have done volunteer work for a charity.	---
I have donated blood.	---
I have helped carry a stranger's belongings (books, parcels, etc.).	I would help carry belongings of someone I did not know.
I have delayed an elevator and held the door open for a stranger.	I would hold the door open for someone I did not know.
I have allowed someone to go ahead of me in a lineup (at Xerox machine, in the supermarket).	I would allow someone I did not know to go in front of me in line.
I have given a stranger a lift in my car.	---
I have pointed out a clerk's error (in a bank, at the supermarket) in undercharging me for an item.	I would point out a cashier's error in undercharging me for an item.
I have let a neighbor whom I didn't know too well borrow an item of some value to me (e.g., a dish, tools, etc.).	I would let a neighbor I did not know well borrow an item of value to me.
I have bought 'charity' Christmas cards deliberately because I knew it was a good cause.	---
I have helped a classmate who I did not know that well with a homework assignment when my knowledge was greater than his or hers.	I would help a classmate who I did not know well with a homework assignment when my knowledge was greater than his or hers.
I have before being asked, voluntarily looked after a neighbor's pets or children without being paid for it.	I would look after a neighbor's pet or children without being paid.
I have offered to help a handicapped or elderly stranger across a street.	I would offer to help a disabled or elderly person across the street.
I have offered my seat on a bus or train to a stranger who was standing.	I would offer my seat on a train or bus to someone who was standing.
I have helped an acquaintance to move households.	I would help someone in my neighborhood move houses.

Critical thinking. The 20-item Critical Thinking in Everyday Life Scale (CTEL; Perkins & Mincemoyer, 2002) was chosen for this study. The scale assesses the following critical thinking sub-skills: reasoning, enquiry, analysis/information processing, flexibility, and evaluation. Previous use of the scale has produced acceptable ($\alpha = .75$) reliability levels (Perkins & Mincemoyer, 2009).

Decision making. The Making Decisions in Everyday Life Scale (Mincemoyer & Perkins, 2003) was chosen as the most appropriate measurement tool for this project. The scale was designed specifically for adolescents and features 20 statements actions does during the decision making

process. Extensive use of the scale with 4-H populations has produced an average reliability level of .74 (Perkins & Mincemoyer, 2009).

Leadership. The six-item Leadership Efficacy Scale (Chi, Jastrzab, & Melchior, 2006) was selected for this study. It covers the elements of leadership without touching on the technical items such as the leadership styles. Previous applications of the scale have produced somewhat weak reliability statistics (Chi, et al., 2006). Reliability scores were lower for girls than for boys, .59 and .68, respectively. For African Americans the alpha reliability was only .49.

Problem solving. For this study the 24-item Solving Problems Survey (Barkman & Machtmes, 2002) was selected. Result of pilot testing with 4-H youth participants showed that the survey has good internal consistency; $\alpha = .86$ (Perkins & Mincemoyer, 2009).

Responsible citizenship. The 10-item Civic Responsibility Survey level 2 (Furco, Muller, & Ammon, 1998) was selected for the study. Previous use of the measure produced adequate levels of internal consistency ($\alpha = .84$).

Self-esteem. The 10-item Rosenberg Self-esteem Scale (Rosenberg, 1965) was selected for this study.

Self-Responsibility. The American Camp Association's six-item Self-Responsibility measure (2007a) was used in this study. As noted with their construct definition of self-responsibility (Ellis & Sibthorp, 2006), this measure of responsibility is both succinct and can be used to assess the development of self-responsibility within a variety of settings. These attributes coupled with strong psychometrics ($\alpha = .84$) makes this measure a strong selection for PYD project evaluative purposes.

Teamwork. The American Camp Association's eight-item Teamwork scale (2007a) was selected for use in this study. The scale has a 9th grade reading level and is intended for use with older campers (i.e., ages 10 and up). Previous application of the survey has produced excellent levels of internal consistency ($\alpha > .9$) and between item correlations were each above .5 (American Camping Association, 2007b).

Data Collection

The 10 life skill measures were divided into two different survey versions in order to reduce the overall number of items each respondent had to complete. Version A contained measures of communication, altruism, decision making, responsible citizenship, and teamwork. Version B contained measures of critical thinking, problem solving, leadership, self-responsibility, and self-esteem. All survey items are provided in Appendix A. Item wording remained in its original form for each instrument except for previously discussed modifications to the altruism measure (Rushton, 1981).

In cooperation with the after school program administrators, survey packets were sent to after-school programs at nine elementary schools, four middle schools, and eight high schools. Program staff at each location were provided with a protocol script which they were to read to the students before inviting them to complete the survey.

Analysis Strategy

All measures were scored using a five point Likert scale with either never to always or strong disagree to strongly agree response formats. Mean scores were calculated for all measures. Internal consistencies were computed for each measure. Pearson's correlations were conducted

to assess the relationship between the measures on survey A and B respectively. T-tests were conducted to look at gender and ethnicity differences across the measures and one-way ANOVA's were used to test for school level differences.

Results

Descriptive Statistics

Table 2 provides a complete overview of descriptive statistics for all measures and groups. Mean scores for all measures ranged from a low of 3.16 for altruism and a high of 3.89 for self-responsibility.

Table 2
Descriptive Statistics

		Comm.	Altruism	Decision Making	Resp. Citizen.	Team-work	Critical Thinking	Leadership	Problem Solving	Self-Est.	Self-Resp.
Total Sample	N	289	289	289	289	289	328	328	328	328	328
	Mean	3.32	3.20	3.41	3.59	3.70	3.46	3.70	3.36	3.48	3.90
	SD	.61	.82	.66	.81	.87	.59	.73	.61	.68	.77
Male	N	125	125	125	125	125	152	152	152	152	152
	Mean	3.30	3.18	3.37	3.55	3.69	3.39	3.62	3.31	3.44	3.83
	SD	.62	.79	.67	.77	.84	.56	.80	.58	.68	.83
Female	N	159	159	159	159	159	172	172	172	172	172
	Mean	3.33	3.21	3.44	3.61	3.71	3.50	3.76	3.39	3.51	3.96
	SD	.61	.85	.66	.84	.90	.58	.64	.60	.69	.71
Elementary	N	101	101	101	101	101	131	131	131	131	131
	Mean	3.28	3.29	3.47	3.87	3.90	3.59	3.82	3.53	3.33	4.09
	SD	.68	.87	.69	.77	.82	.59	.78	.64	.64	.75
Middle School	N	117	117	117	117	117	117	117	117	117	117
	Mean	3.23	3.04	3.33	3.39	3.53	3.30	3.60	3.17	3.62	3.73
	SD	.54	.74	.60	.83	.88	.59	.72	.57	.71	.79
High School	N	66	66	66	66	66	76	76	76	76	76
	Mean	3.54	3.34	3.45	3.49	3.71	3.42	3.63	3.32	3.50	3.84
	SD	.58	.84	.74	.72	.87	.45	.58	.41	.67	.68
African American	N	127	127	127	127	127	144	144	144	144	144
	Mean	3.38	3.29	3.49	3.64	3.78	3.40	3.66	3.31	3.50	3.79
	SD	.58	.84	.66	.85	.88	.60	.76	.62	.72	.82
Hispanic	N	130	130	130	130	130	152	152	152	152	152
	Mean	3.25	3.08	3.31	3.50	3.61	3.48	3.73	3.39	3.48	3.98
	SD	.62	.76	.65	.76	.83	.54	.67	.54	.65	.69
White	N	10	10	10	10	10	20	20	20	20	20
	Mean	3.21	3.41	3.56	3.80	3.94	3.33	3.45	3.28	3.38	3.97
	SD	.86	1.13	.80	.76	.97	.57	.72	.62	.54	.76

Psychometric Analyses

Internal consistency. Reliability analyses were run on each scale including corrected item-total correlations and Cronbach's alphas. Items number two and five on the communication scale, item two on the critical thinking scale, and item nine on the problem solving scale, all returned item-total correlations under .2 and were thus dropped from further analyses.

Table 3 lists the reliability for each scale. Reliabilities ranged from .71 to .94. All scales produced adequate levels of internal consistency when compared across gender, school level, and ethnicity. The only marked performance difference occurred with the self-esteem scale which produced Cronbach's alphas of .70 for elementary students and .83 for high school students.

Table 3
Cronbach's Alphas

Measure	# of Items	All	Male	Female	Elem. School	Middle School	High School	African American	Hispanic
Communication	21	0.86	0.87	0.85	0.87	0.82	0.88	0.82	0.88
Altruism	14	0.89	0.87	0.90	0.88	0.87	0.92	0.90	0.87
Decision Making	20	0.91	0.91	0.90	0.90	0.88	0.94	0.90	0.90
Resp. Citizenship	10	0.91	0.90	0.91	0.89	0.91	0.89	0.91	0.90
Teamwork	7	0.89	0.88	0.90	0.87	0.89	0.90	0.88	0.90
Critical Thinking	20	0.86	0.86	0.86	0.84	0.88	0.85	0.87	0.85
Leadership	6	0.78	0.82	0.71	0.76	0.80	0.74	0.78	0.76
Problem Solving	24	0.88	0.87	0.87	0.88	0.88	0.84	0.88	0.87
Self-Esteem	10	0.78	0.78	0.77	0.70	0.81	0.83	0.77	0.79
Self-Responsibility	6	0.86	0.86	0.85	0.85	0.85	0.87	0.85	0.86

Steps were also taken to compare the alphas from this study's data with previously reported alpha's (Table 4). For the most part, alpha's for the measures were similar across studies although there are some marked differences for the critical thinking, decision making, leadership and self-esteem scales. The critical thinking and decision making reliabilities were .11 and .12 respectively higher than reported levels from previous 4-H samples. The leadership alpha from the current study was .14 higher than results published by Chi et al. (2006) and self-esteem scores were .10 lower than reported levels from a sample of university students (Robins, Hendin, & Trzesniewski, 2001). Critical thinking and decision making differences in reliability may be due to the fact that the 4-H samples included third graders whereas this study's sample started with 4th graders. The self-esteem differences may be attributable to age as the previously reported sample consisted of university students. The reasons for the discrepancy in leadership scale alphas are not as apparent as the two samples appear fairly comparable.

Table 4

Comparison of Cronbach's Alphas with Previous Research

Measure	α's from Current Study	Past α's	Sample Description	Citation
Communication	0.86	0.79	Multiple waves of 4-H youth participants ages 8-18	(D. F. Perkins, personal communication, April 18, 2011)
Altruism	0.89	0.84	99 undergraduates (36 males and 63 females) at The University of Western Ontario	(Rushton, 1981)
Decision Making	0.91	.079	Multiple waves of 4-H youth participants ages 8-18	(D. F. Perkins, personal communication, April 18, 2011)
Responsible Citizenship	0.91	0.84	586 middle school students in California	(Furco, et al., 1998)
Teamwork	0.89	0.90	791 youth campers (ages 10-16) from 11 different ACA sponsored camps	(American Camping Association, 2007b)
Critical Thinking	0.86	0.75	Multiple waves of 4-H youth participants ages 8-18	(D. F. Perkins, personal communication, April 18, 2011)
Leadership	0.78	0.64	550 elementary and middle school students. 33.7% white, 22.4% multi-racial, 19.8% Latino, 8.3% African American. 57.5% Females	(Chi, et al., 2006)
Problem Solving	0.88	0.85	Multiple waves of 4-H youth participants ages 8-18	(D. F. Perkins, personal communication, April 18, 2011)
Self-Esteem	0.78	0.88-0.90	508 undergraduate students who attended the University of California at Berkeley. 42% Asian, 40% Caucasian, 11% Chicano/Latino, 6% African American, 1% Native American	(Robins, et al., 2001)
Self-Responsibility	0.86	0.84	791 youth campers (ages 10-16) from 11 different ACA sponsored camps	(American Camping Association, 2007b)

Concurrent validity. Table 5 contains a summary of the correlations between the measures contained on survey A and survey B. All correlations were significant ($p < .001$) and positive. The strongest correlations were between problem solving and critical thinking, and teamwork and responsible citizenship. Self-esteem had the weakest correlations with the other measures ranging from .10 with decision making to .32 with leadership.

Table 5
Measure Correlations

Measures (Survey A)	Communication	Altruism	Decision Making	Responsible Citizenship	Teamwork
Communication	1.00				
Altruism	.57	1.00			
Decision Making	.60	.55	1.00		
Responsible Citizenship	.45	.44	.56	1.00	
Teamwork	.47	.41	.57	.77	1.00
Measures (Survey B)	Critical Thinking	Leadership	Problem Solving	Self-Esteem	Self-Respon.
Critical Thinking	1.00				
Leadership	0.61	1.00			
Problem Solving	0.77	0.57	1.00		
Self-Esteem	0.25	0.32	0.10	1.00	
Self-Responsibility	0.54	0.64	0.54	0.31	1.00

Group differences. Results from *t* tests indicated the no significant gender differences (see Table 6). Due to small numbers in some of the ethnicity groups the analysis was delimited to African Americans and Hispanics. *T* test results revealed significant differences for altruism, decision making, leadership, and problem solving. African Americans scored higher on altruism and decision making and Hispanics reported higher self-responsibility scores (see Table 6).

Table 6
Gender and Ethnicity Differences

Scale	Gender			Ethnicity		
	<i>t</i>	<i>p</i>	Higher Mean	<i>t</i>	<i>p</i>	Higher Mean
Communication	.47	.63	---	-1.72	.09	---
Altruism	.25	.80	---	-2.04	.04	Hisp.
Decision Making	.80	.42	---	-2.19	.03	Hisp.
Responsible Citizenship	.65	.51	---	-1.42	.16	---
Teamwork	.12	.91	---	-1.63	.10	---
Critical Thinking	1.69	.09	---	1.18	.24	---
Leadership	1.73	.08	---	.79	.43	---
Problem Solving	1.19	.23	---	1.12	.27	---
Self-Esteem	.83	.41	---	-.30	.76	---
Self-Responsibility	1.50	.13	---	2.18	.03	Af. Am.

One-way ANOVA results with Bonferroni comparisons indicated a number of differences across school levels (Table 7).

Table 7
School Level Differences

Scale	<i>df</i>	<i>F</i>	<i>p</i>	Bonferroni Post-Hoc
Communication	2, 283	5.82	<.01	HS > MS & ES
Altruism	2, 283	3.78	.02	---
Decision Making	2, 283	1.44	.24	---
Responsible Citizenship	2, 283	10.57	<.01	ES > HS & MS
Teamwork	2, 283	5.06	.01	ES > MS
Critical Thinking	2, 323	8.40	<.01	ES > MS
Leadership	2, 323	3.39	.03	ES > MS
Problem Solving	2, 323	12.60	<.01	ES > HS & MS
Self-Esteem	2, 323	5.88	<.01	MS > ES
Self-Responsibility	2, 323	7.41	<.01	ES > MS

Discussion

This study highlights both the importance of life skills as a targeted outcome domain for many youth development programs and the breadth of approaches and conceptualizations that have been applied to life skill constructs. Findings suggest that although little agreement exists regarding which life skill domains are the most critical for youth programs, some consensus exists, at least among CYFAR Program Directors, regarding the most frequently targeted life skills.

The identification of 10 key life skill domains provided the research team with a roadmap for the other elements of the study. Attempts were made to select life skill definitions from the existing literature that were most aligned with PYD programs and the adolescent they served. Although the original plan included the possibility of construct new life skill measures where needed, it became apparent that ample measures existed and that the real issue was selecting and testing those that appeared most applicable to PYD programs. Hopefully the results from this study will help promote increased standardization of life skill conceptualization and measurement across youth development related fields and programs thereby addressing at least in part Catalano et al.'s (2002) call.

In terms of the testing and validation of the selected measures, it appears that each of the measures performed adequately with a diverse sample of youth when assessed by ethnicity, of gender, and school level. The findings represent an important contribution to the literature for many of the selected measures, especially those that had previously been employed with older (e.g., college students) or primarily homogenous (e.g., 4-H youth) samples (see Table 4).

Having respondents complete multiple life skill measures on the same survey also allowed the study to address the measures' convergent validity. The fact that all measures employed in this

study showed mild to strong positive correlations provides evidence of concurrent validity. The high degree of positive correlation between long and short forms of communication, critical thinking, decision making and problem solving supports the efficacy of both forms of these measures.

It was interesting to note that school level produced the most significant score differences across measures. There were no gender differences and only three measures with ethnicity differences. For most the part, elementary students scored higher than either middle school or high school respondents except for communication where high school students had higher scores and self-esteem where middle school students had higher scores.

Limitations and Future Research

Although this study contributes to the psychometric validation of the selected measures in terms of their reliability and concurrent validity, further work is needed to test their discriminant and predictive validity. This would require the employment of the measures in studies employing measures of theoretically opposed scales (e.g., deviant behavior) as well as experimental designs that included measures of constructs theoretically justified as being linked to and potentially influenced by selected life skills. A greater understanding of the validity of key life skills would greatly enhance the efficacy of these measures in both research and practice.

Implications for Practice

Although life skills receive frequent programmatic attention in the field of out-of-school time programming and other youth focused intervention contexts, the abstract nature of many life skills makes assessment difficult. Part of the issue arises due to the variety of definitions applied to life skills. For example, although leadership may be an intentionally targeted outcome of multiple programs, the way each organization defines leadership could be quite different. Lack of conceptual uniformity then fosters the development of multiple assessment tools to measure a single life skill. For example, as part of the review process for this study we assessed 15 different potential teamwork measures. The myriad of measurement options not only makes it difficult for practitioners to identify measures, it also renders it nearly impossible to make comparisons across programs and interventions that share common outcomes but use different measures to assess impact.

The findings from this study will hopefully create common ground for researchers and practitioners around standardized definitions and measurement tools for the 10 life skill domains discussed in this paper. Increased conceptualization and assessment uniformity will both help improve the breadth and applicability of impact evaluations as well as provide a means to more efficiently identify best practices. Imagine the insights that could be gained if programs targeting similar outcomes could all agree on a set of standard measures. Lack of measurement standardization is one of the weaknesses in evaluation of youth development programs but hopefully this study and similar efforts can help facilitate the development and adoption of standardized assessments for commonly targeted program indicators.

Conclusions

The sequence and breadth of this study make a strong contribution to the life skills literature. It also highlights the fact that the conceptualization and measurement of abstract life skill domains remains a field in need of further attention. While it is generally agreed that life skills

remain key targeted outcome domains for many youth development programs, the true power of life skills focused programs will not be obtained without standardization of definitions and measurement approaches. Hopefully this work can contribute to helping achieve this goal and promote further development of life skills research and practice.

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Got Dating: Outcomes of a Teen 4-H Relationship Retreat

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Got Dating: Outcomes of a Teen 4-H Relationship Retreat

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Abstract: To support youth in developing healthy relationships, state and county staff collaborated to offer a statewide overnight teen retreat to teach health relationship skills. Evaluation of 64 youth participants from rural and urban counties found significant increases in posttest knowledge of relationship skills for both male and female youth. Youth also reported that the content was very helpful and worth repeating. Program success may be attributed to addressing the interesting and needed subject of dating relationships as well as involvement of state ambassador and collegiate 4-H members as teachers. Implications and replication suggestions are outlined.

Program Purpose

One of the developmental tasks of adolescence is forming relationships with others (Adams & Williams, 2011). It is thus not surprising that Kaestle, Morisky and Wiley (2002) found over half of females and males reported having a recent dating relationship by age 15. Because relationship quality in youth is positively associated with couple-relationship quality in early adult relationships (Conger, Cui, Bryant, & Elder, 2000), having a positive and healthy example of relationships during adolescence may play a vital role in helping youth create and sustain healthy relationships. Surprisingly, according to the National Campaign to Prevent Teen and Unplanned Pregnancy and the Dibble Institute (2007), many teens (17%) don't know anyone who serves as an example of a healthy relationship in their lives. Creating, maintaining, and terminating relationships can be stressful across the lifespan. As a result, programs to help youth to navigate through this dynamic process may be of great benefit (Adams & Williams, 2011).

The mission of 4-H is to help youth to reach their full potential and make a positive difference in the world (National 4-H Council, n.d.). Developing relationship and social skills is an important aspect of youth development and 4-H events can be valuable resources to help youth obtain these skills (Boyd, Herring, & Briers, 1992; Scales, Benson, Leffert, & Blyth, 2000). To address

this youth development need, state and county staff collaborated to offer an overnight teen retreat to teach healthy relationship skills which included workshop sessions, interactive activities, peer teaching and leadership opportunities from state ambassadors and collegiate 4-H, and coaching support from extension faculty and staff (Brower, MacArthur, Albrecht, Bunnell & Lyons, 2011). An IRB-approved evaluation was provided to all participants at the conclusion of the retreat to measure the outcomes of the event.

Program Objectives

The program had the following main objectives:

- To address a developmental need for teens
- To make the retreat available to interested teens
- To teach research-based relationship skills and knowledge to participants
- To provide hands-on learning activities to practice skills and increase learning retention
- To evaluate the education program by measuring the change in relationship skills and knowledge of participants

Retreat Organization

The *Got Dating?* Retreat was based on the research-based national curriculum *How to Avoid Falling for a Jerk (or Jerk-ette)* by Dr. John Van Epp (Van Epp, 2007, 2010; Van Epp, Futris, Van Epp & Campbell, 2008). Successful implementation of this curriculum in several counties led to statewide interest in the curriculum. The retreat included peer-taught workshops on topics such as steps to building healthy relationships and communication skills, and supplemental activities such as dating scenario role plays and speed dating to encourage “learning by doing” (Diem, n.d). In addition, youth interacted through activities such as snowshoeing, cross country skiing, and a dance. More detailed elements of the retreat organization and implementation suggestions can be found in an article by Brower et al. (2011).

The retreat was held Friday evening through Saturday afternoon at a facility located in the central part of the state and was open to all youth at least 15 years old. Marketing efforts included flyers, e-mail, state and county newsletters and Web sites, and word of mouth efforts through county extension offices, teen council meetings, and 4-H events.

Many factors contributed to the success of this program. Some of these include:

Youth and Adult Partnerships

Youth and adult partnerships are often keys to success when planning events for teenagers. These partnerships in 4-H programming can help develop strengths in youth partners (see Epstein, 2004; Higginbotham, MacArthur, & Dart, 2010) and keep the focus of the program relevant to youth perspectives rather than adult perspectives. The combination of adult experience and expertise in subject matter combined with the creative and energetic perspective of youth can create a synergistic atmosphere for planning and implementing events. This event was planned collaboratively with county and state faculty, 4-H state ambassadors, and collegiate 4-H members. This partnership promoted youth buy-in and encouraged creativity in the planning process.

Shared Workload

A shared workload was created by dividing and assigning tasks among state 4-H youth ambassadors and collegiate 4-H, with staff and faculty members serving in supportive roles. As a result, the program was planned and implemented smoothly with organizers able to maintain their other work responsibilities.

Peer-To-Peer Teaching and Role Modeling

Peer teaching allowed state ambassador and collegiate 4-H members to learn teaching methods and leadership skills. In addition, participants were very engaged in the learning process when taught by peers.

Coaching Support

Coaching by extension faculty was vital to the state ambassadors and collegiate 4-H members to be successful in their teaching. Coaches provided teaching outlines and activity ideas and then acted as an audience for teaching practice and feedback before the retreat.

Research-Based Curriculum

Utilizing research-based curriculum ensured that concepts being discussed were appropriate and effective in helping youth develop the desired knowledge and skills. As mentioned previously, the curriculum utilized for this event, *How to Avoid Falling for a Jerk* by Dr. John Van Epp, is research-based and has been recognized nationally as an avenue to help youth and adults learn how to create and sustain healthy relationships. (Van Epp, et al., 2008). The focus of the curriculum concentrates on how to recognize warning signs of unhealthy partners, steps to building healthy and safe relationships, and the importance of being a healthy individual and good friend in order to attract others who are similar.

Social Interaction

Every successful teen program needs social interaction to provide informal opportunities to apply the skills learned throughout the retreat. Opportunities for social interaction were initiated throughout the program with activities such as icebreaker games, speed dating, small group discussion, a dance, and cross country skiing.

Reduced Cost

Cost for statewide retreats can often be prohibitive for participants. Efforts to keep registration costs low resulted in reaching the retreat capacity.

Replication

The success of this model has resulted in planning additional retreats using this format.

Method

Participants completed an IRB approved evaluation at the end of the retreat containing questions about relationship skills and program satisfaction. Because most of the participants were under 18, parents signed a consent form during the retreat registration allowing youth to complete the evaluation.

Participants

Participants consisted of a total of 86 youth, with a total of 50 females (58%) and 36 males (42%). The youth came from several urban and rural counties across the state (55% of the state's counties were represented; i.e., 16 of 29). Of these youth, 64 (74%) filled out surveys.

This sample was identified as 71% female, 29% male; and the mean age was 16.6 ($SD = 1.24$). Almost all were Caucasian (97%); two of the 64 youth identified as Asian/Pacific Islander. Approximately two-thirds of the youth indicated they had never before had relationship education.

Measures

Using a posttest-then-retrospective-pretest evaluation pen and paper tool (Marshall, Higginbotham, Harris, & Lee, 2007), participants rated their knowledge of relationship skills on their knowledge 'BEFORE and AFTER the program' (ranging from 1 = poor to 4 = excellent). Categories included knowledge of how to 'listen effectively to someone,' 'settle disagreements well,' 'solve problems,' 'deepen a loving relationship,' 'have a strong friendship,' and 'awareness of the importance of spending time together.' The six items were reliable ($\alpha = .80$ and $.86$ for males, $.76$ and $.75$ for females, pre- and posttest), suggesting they measure different dimensions of a single construct: relationship knowledge. Because the items measure a single construct, they were combined rather than being analyzed separately. A repeated measures ANOVA was used to test both for differences in pre- and post-test scores, and to test for potential effects of gender.

Results

Outcomes

The results, reported in Table 1, show significant increases in posttest knowledge of relationship skills for both male and female youth. Means for males were 2.68 (pre) versus 3.53 (post); means for females were 2.90 (pre) versus 3.59 (post). The data thus suggest that participation in the program resulted in an increase in aspects of relationship knowledge that the research literature underscores as important to healthy relationships. Outcomes measured on a scale of 1-4, with 4 being 'excellent,' showed the average rate of gain in relationship knowledge was $.85$ for males, and $.69$ for females, reported retrospectively (i.e., posttest-then-retrospective-pretest). These results are statistically significant and indicate gains in participants; knowledge of listening effectively, handling disagreements, solving problems, relationship depth and friendship, and the importance of spending time with a significant other. These findings applied regardless of gender, showing no significant differences when comparing the gains made by males with those made by females ($F(1, 62) = 1.71, p = .21$).

Table 1

Change in Relationship Skills Knowledge Before and After the Retreat

Group	Pre-Test Mean	Post-Test Mean	<i>t</i>	<i>df</i>
Males	2.68 ($SD=.55$)	3.53 ($SD=.57$)	-7.53***	16
Females	2.90 ($SD=.49$)	3.59 ($SD=.34$)	-10.42***	46
$F(1, 62) = 142.28***$				

Note. $N=64$. *** $p < .001$

Youth Perceptions

To evaluate the perceived value of the program, participants rated their experience with the program with five questions (1 = strongly disagree; 5 = strongly agree), using survey items including 'Helped me strengthen my relationship,' 'I'd take this class in the future,' 'Presenter was knowledgeable,' 'Presenter was caring,' 'I'll recommend this experience.' These questions

reliably measured program value ($\alpha = .87$ for males and $.90$ for females) and were thus combined. Both males and females rated the program highly, with means of 4.37 ($SD = .63$) for males, and 4.47 ($SD = .50$) for females. There were no significant gender difference ($F(1,63) = .02, p = .89$). On average, the data show that the youth found the content very helpful and worth repeating and that the presenters were knowledgeable and caring.

In addition to quantitative data, youth were also asked the open ended question, "What are the most important things that you learned?" Responses included comments such as "good listening skills," how to "understand" and "relate" better with the opposite sex, how to better communicate and read "body language," and "how to make and keep good relationships and how to be smart when dating."

Funding Considerations

One goal of the retreat was to keep the cost reasonable to encourage attendance. This was accomplished in three ways. The first strategy was to handle registration ourselves rather than University services that charge an added fee. Second, extension faculty and staff covered their registration through county funds. Lastly, some counties were able to provide partial scholarships (with previously collected county funds or grant money) for a few participants. The cost of the conference (\$50 per participant) included the facility cost, workshop materials, and a beanie memorabilia cap. The majority of this cost (\$42 per person) covered the facility, including one night in a mountain lodge, three meals, and the snowshoeing/cross-country skiing activity. An additional \$600 in grant money was used to provide scholarships to cover the registration for the collegiate 4-H members and state 4-H ambassadors for their planning and teaching efforts.

Discussion

The purpose of this article was to direct attention to the gap in teen relationship education programming and to highlight the unique role extension has in being able to help fill this gap. An additional purpose was to outline results from the program evaluation and any implications stemming from these results.

The positive results were consistent across gender; that is, the retreat resulted in significant increases in knowledge for both males and females. A descriptive finding of interest was that this retreat was the first relationship education for almost two thirds of the participants. Together, these results imply a need for relationship education for teens. For extension personnel, this implication can highlight the need for relationship education in future teen programming. An implication for parents may be to take note of this need and enroll their teens in programs which teach practical relationship knowledge and skills.

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Jump-Starting Youth Community Leadership: An Evaluation of a Leadership Development Program for Lesbian, Gay, Bisexual, Transgender & Ally Youth

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Jump-Starting Youth Community Leadership: An Evaluation of a Leadership Development Program for Lesbian, Gay, Bisexual, Transgender & Ally Youth

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Abstract: The GLSEN Jump-Start National Student Leadership Team, a leadership development program for lesbian, gay, bisexual, transgender (LGBT), and ally youth designed to promote direct action community organizing and community engagement. This article examines the benefits of the program for youth's socio-political development. Data came from a multi-year evaluation that examined changes over time (baseline, immediately post-program, and one-year follow-up) in community engagement between a program group ($n = 103$) and a comparison group of youth ($n = 47$). Results indicate that the program may support LGBT and ally youth's socio-political development and have positive implications for their development as community leaders, but these benefits may not be sustained after program completion. Implications for further research and program development for LGBT youth are explored.

Introduction

Much of the existing research about lesbian, gay, bisexual, and transgender (LGBT) youth populations focuses on their status as at-risk for negative outcomes. For example, research has shown that LGBT youth often experience hostile school communities where they are marginalized, bullied, harassed, and excluded and face discriminatory policies and practices (Kosciw, Greytak, Diaz & Bartkiewicz, 2010; Sausa, 2005). Further, research has shown that such hostile experiences may place LGBT youth at heightened risk for negative outcomes, such as anxiety and depression (Almeida, Johnson, Corliss, Molnar & Azrael, 2009; Birkett, Espelage & Koenig, 2009; Bontempo & D'Augelli, 2002; Goodenow, Szalacha & Westheimer, 2006; Safren & Heimberg, 1999).

Although it is a reality that many LGBT youth have difficult experiences in their schools and communities, a number of these youth are also thriving and are actively engaged in their schools and communities. However, less is known about LGBT youth in the context of healthy youth development, including positive peer relations and school and community participation. Relatively little research has examined leadership development, civic engagement, and participation in youth development programs among LGBT youth populations.

Youth development programs that encourage critical thinking about one's individual and group position in the society, analysis of power and privilege, and engagement in collective organizing can support youth's socio-political development (Ginwright & James, 2002), a process through which "a person's knowledge, analytical skills, emotional faculties, and capacity for action in political and social systems" grow (Watts, Williams & Jagers, 2003, p. 185). One aspect of socio-political development is socio-political control—a sense of agency and self-efficacy regarding making social and political change. Research has shown that for youth who are members of marginalized communities, promoting their sense of socio-political control may help ameliorate negative outcomes associated with experiences of bias, prejudice, and discrimination (Peterson, Lowe, Hughey, Reid, Zimmerman & Speer, 2006; Zimmerman & Zahniser, 1991). Programs that focus on youth's socio-political development may promote greater community engagement and healthier socio-emotional development. Indeed, research on LGBT and ally youth activism through Gay-Straight Alliances (student-led, school extracurricular clubs that often work to challenge biased and discriminatory behaviors and policies) has shown that club engagement may help youth to become more empowered and civically engaged (Russell, 2002).

Even though youth in marginalized communities may especially benefit from opportunities that promote leadership and socio-political development, they may often lack access to such opportunities (Watts & Flanagan, 2007). LGBT youth, in particular, may face barriers to leadership and engagement within their schools and broader communities. Russell (2002) asserts that institutionalized homophobia and heterosexism create barriers to pathways to citizenship development and civic engagement for LGBT youth. Youth who do not identify as LGBT but have LGBT friends or who are involved with efforts to combat anti-LGBT bias and harassment in their communities (often referred to as "allies") may also face hostility and be stigmatized (Sweat, 2004) because of their support of LGBT people and activism. This may potentially obstruct their access to opportunities for development and civic engagement as well.

In order to provide LGBT students with leadership opportunities and to support their socio-political development, GLSEN (the Gay, Lesbian, and Straight Education Network) developed the Jump-Start National Student Leadership Team, a program designed to provide LGBT and ally youth with training and leadership opportunities in organizing for safer schools. In this article, we present findings from a multi-year evaluation of the program. We first discuss program theory and implementation and follow with an examination of the impact of the program on youth's leadership development and engagement with their communities through organizing and activism.

GLSEN's Jump-Start National Student Leadership Team

Program Purpose, Goals, and Theory

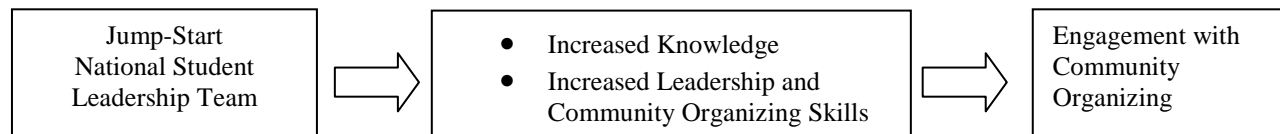
Founded in 1990, GLSEN is a national non-profit focused on addressing anti-LGBT bias and other issues of sexual orientation and gender identity/expression in K-12 education in the United States. In order to support youth leadership and community organizing to make school

communities safe and welcoming for all students, in 2002 GLSEN began the Jump-Start National Student Leadership Team (hereinafter, Jump-Start Team). The program is open to both LGBT youth and ally youth.

As originally conceived, the Jump-Start Team was a 12-month program, running from July to June. The program's primary purpose was to support LGBT and ally youth's leadership and socio-political development, including building collective organizing skills and encouraging critical examination of how anti-LGBT and other bias may affect members of school communities. Additionally, the program was intended to increase their direct action organizing to improve school climates.

GLSEN's program and evaluation team developed a model for the underlying program theory. As shown in Figure 1, Jump-Start participation would directly increase youth's knowledge about the prevalence and impact of bias and harassment on school communities, grow their leadership and community organizing skills, and increase their frequency of engaging in community organizing and activism, thereby promoting youth's socio-political development.

Figure 1
Program Theory



Program Implementation

The Jump-Start Team was for secondary school youth who were at least 13 years of age and expressed a desire to work on addressing anti-LGBT bias and harassment in their schools. Youth learned about the program through GLSEN's network and via youth advocacy organizations. Each program year 50 to 70 students were selected for the team. In selecting team members, program staff strived to create a team that was diverse regarding racial, ethnic, and gender identity, sexual orientation, and geographic location. Given that travel was involved, youth obtained parental permission to participate. GLSEN covered all expenses, such as travel costs.

Team members attended three multiple-day group gatherings throughout the program year, one at the beginning of the program, one 6 months into the program, and one 9 months into the program. At these gatherings, team members participated in trainings designed to provide them with information, resources, and skills to help them be effective community organizers. Trainings focused on topics such as understanding inequality and interconnected forms of oppression, navigating school systems, responding to critics, organizing and facilitating workshops, and planning actions and campaigns. As part of these trainings, team members practiced utilizing the information, resources, and skills. Program participants were actively involved in organizing to address these issues in their communities, focusing on the following areas:

- 1) supporting Gay-Straight Alliances,
- 2) organizing local activities to commemorate national advocacy events (e.g., the National Day of Silence),
- 3) organizing campaigns directed at changing discriminatory or exclusionary school policies, and

- 4) training school staff on school climate issues related to sexual orientation and gender identity/expression.

Throughout the year team members received on-going support from GLSEN staff through semi-monthly group and individual telephone calls. Additionally, team members could communicate via email and telephone with staff and other team members at anytime throughout the program. Team members contributed 10 to 15 hours of service per month focused on leading collective efforts in their local communities. Program staff supported members in developing goals and activities, but youth ultimately decided how they would engage in organizing in their communities. At the end of the program, youth created a portfolio highlighting their accomplishments and skills. The core components of the program have remained the same throughout its history. However, since 2009, the Jump-Start Team is implemented at the local level by GLSEN affiliates— program staff from the national office work with local GLSEN leaders to conduct trainings and provide support to youth.

Method

In this evaluation we sought to answer the following questions:

1. What leadership and organizing skills did Jump-Start members learn through program participation?
2. Does Jump-Start participation affect youth's engagement with community organizing and activism?

Study Design

The evaluation design was quasi-experimental, utilizing pre- and post-surveys to examine changes over time between a Jump-Start program group and a comparison group of youth. To obtain comparison group participants, GLSEN distributed electronic announcements about the study through its networks and via listservs and websites of youth advocacy organizations. In addition, youth who applied to but were not selected for the Jump-Start Team were invited to participate in the comparison group. Youth in the comparison group were all middle and high school students, at least 13 years of age who were involved in organizing for safer schools in their communities. All study participants were required to obtain parental consent prior to taking part in the study and study participation was voluntary for both groups.

Data for this evaluation were collected through questionnaires administered to program and comparison groups from three time points: prior to the start of the program (baseline or Time 1), immediately at the end of the program year (Time 2), and one year after the end of the program (Time 3). In each questionnaire, we examined skills that youth had learned through the Jump-Start Team and frequencies of participation in a variety of community organizing activities. To assess what leadership and organizing skills youth learned, we utilized responses to an open-ended item at Time 2 asking respondents to describe the types of skills they had learned as part of the team.

To examine possible effects of program participation on community engagement, we tested significant differences over time in the program and comparison groups' frequency of involvement in organizing in their communities. Engagement in community organizing/activism was assessed with a 16-item, modified version of the *Index of Civic and Political Engagement* (Andolina, Keeter, Zukin & Jenkins, 2003) that asked respondents how often in the past 12

months they had participated in activities such as working collaboratively to address community problems or contacting a public official to share an opinion.

Sample

The sample for this evaluation consisted of 103 Jump-Start members who participated in the program during the 2004-05 and 2005-06 school years and 47 youth in the comparison group. (Ten team members did not complete the program and were excluded from the analysis, along with two individuals who were originally part of the comparison group but then became part of the Jump-Start team the following year while the evaluation was still underway). The Jump-Start group and comparison group were relatively similar in terms of their individual characteristics (see Table 1). About a fifth in each group identified as heterosexual and a majority identified as lesbian, gay or bisexual, female, and White. The two groups differed somewhat with regard to gender with Jump-Start participants being more likely to identify as male (45.6% vs. 27.7%; $\chi^2=6.88$, $df = 3$, $p<.10$, Cramer's $V = .21$). There were fewer White youth in the Jump-Start group, although the differences between individual racial/ethnic categories were not statistically significant ($\chi^2 = 8.23$, $df = 5$, $p>.10$, Cramer's $V = .23$). The groups were not statistically different regarding sexual orientation; a majority of both groups were lesbian, gay, or bisexual ($\chi^2 = .04$, $df = 2$, $p>.10$, Cramer's $V = .02$). The average age at baseline for both groups was approximately 16 years.

Table 1
Individual Characteristics as a Percentage of the Sample (N=150)

Characteristic	Jump-Start Group (<i>n</i> = 103)	Comparison Group (<i>n</i> = 47)
Sexual Orientation		
Lesbian, Gay, or Bisexual	68.9	70.2
Heterosexual	19.4	19.1
Other orientation (e.g., queer)	11.7	10.6
Gender		
Female	51.5	61.7
Male	45.6	27.7
Transgender	1.9	6.4
Other gender (e.g., androgynous)	1.0	4.3
Race/Ethnicity		
White	61.2	78.7
Black or African American	3.9	-
Hispanic or Latino/a, any race	24.3	8.5
Asian or Pacific Islander	2.9	4.3
American Indian or Alaska Native	1.0	-
Multiracial	6.8	8.5

Results

Self-Reported Skills Obtained Through Jump-Start Team Participation

In response to an open-ended survey question at the end of the program year, Jump-Start Team members reported gaining a wide range of skills and knowledge through their participation in the program ($n = 59$; see Table 2). The skills that were most commonly mentioned by youth were those related to:

- 1) planning and delivering workshops and other events,
- 2) working with other people and group leadership,
- 3) communication skills, including interpersonal communication and public speaking, and
- 4) information and resources for organizing for safer schools.

Table 2

Self-Report of Skills Obtained Through Jump-Start Team Participation ($n=59$)

Skill	%	n
Workshop/event planning and delivery	62.7	37
Working collaboratively and team leadership	49.2	29
Communication skills	39.0	23
Information and resources	28.8	17
Personal growth	27.1	16
Networking, outreach, and coalitions	18.6	11
Community organizing skills, non-specific	16.9	10
General organizational skills (e.g., time management)	16.9	10
Supporting Gay-Straight Alliances	11.9	7
Logistics of campaign and action planning	8.5	5
Other (e.g., fundraising, lobbying)	22.0	13

In addition to specific skills, team members also mentioned areas of personal growth that they attributed to their participation in the program, such as greater self-efficacy with regard to making a positive impact in their communities. (Note about language: In discussing youth's responses regarding skills, we use third-person pronouns [they, their] rather than first-person pronouns [he/his, she/her]. Not all of the youth in the sample use male or female pronouns and for the sake of consistency we choose to use third-person pronouns.)

Event planning and delivery. Almost two-thirds (62.7%) of respondents mentioned skills related to planning and delivering various types of events, such as facilitating a workshop or organizing a "summit" or gathering of other student leaders in their community. For example, one student described learning "how to plan and host a youth summit (logistics, agenda, presenters, etc.)." Another student said that they had learned "how to facilitate a workshop in

a semi-professional setting” as well as how to successfully plan school- and community-wide events.

Working collaboratively and team leadership. Almost half (49.2%) described skills such as learning to work more effectively in partnerships, to build coalitions and network with other community members, and successfully lead a group of people toward a common goal. For example, one student said: “I’ve learned how to better negotiate and work with the adult members of my community. Also, I learned a lot about delegating tasks and responsibilities to other members of my group when we have a big event that we are planning.” Another student said that they had “learned about teamwork and delegating and why [it is] so important.” Several students mentioned learning how to work with large groups of people toward a common goal.

Communication skills. At the end of the program year, 39.0% described learning a variety of communication skills. Several respondents spoke specifically about developing more effective interpersonal communication skills as a result of their involvement with the Jump-Start Team. For example, one student said: “I have learned to be a much more effective communicator and to use that in my organizing when things get rough between members of a given organizing group.” Another student commented that they had learned “[talk] with people who are from different backgrounds (including age, sex, gender, class, ethnicity).”

One student reported that their experiences as a Jump-Start Team member positively affected their public speaking skills:

I have learned so much throughout this past year. I cannot even explain the difference this team has made on me. Between using the workshops and resources I learned from GLSEN at my school and other schools I have become more confident in public speaking and more confident in talking about LGBT issues.

Several students commented on learning strategies for communicating with the media, such as how to handle interviews. For example, one student said: “I gained knowledgeable skills in dealing with the media in a courteous manner, sending press releases that guarantee media coverage, and how to deal with impromptu interviews.”

Information and Resources. About a quarter (28.8%) of respondents mentioned learning specific information or resources that they believed had contributed to their growth as community organizers. For example, respondents described learning about diverse communities, the experiences of transgender students, and students’ legal rights. In addition, respondents commented about useful GLSEN resources they received while on the team (e.g., GLSEN *Jump-Start Guides*).

One student said that all of the resources they had received strengthened the various skills they acquired while on the team and were useful in a variety of community organizing activities: “I used them to run my summit...and some skills for the national workshop I did for my conference with the church.” Furthermore, two respondents specifically mentioned learning strategic approaches to organizing. One student commented that they had “learn[ed] how to use certain tactics to put pressure on decision-makers in order to achieve [their] goal,” and another person discussed learning how to navigate school administration, specifically knowing “the order of people to talk to in order to get something changed at [their] school.”

Personal Growth. More than a quarter (27.1%) of respondents described how the Jump-Start Team was a personal growth experience for them. These respondents tended to describe areas of personal growth, such as becoming more “open-minded” and increased self-confidence and self-efficacy in effecting community change, that were presumably related to other skills gained while on the team. For example, a student said that their involvement with the Jump-Start Team had taught them “how to be strong and believe in myself. Find something that I am very passionate about. Find a place that I finally felt I belonged.” Two students described how the team contributed to growth in their self-efficacy in affecting community change. One said that they had “learned how to stand up and speak out against injustice... learned that youth really can make a difference,” and a second student shared the following:

When I first came to the Jump-Start team, I was an awkward teenager who knew nothing about LGBT issues. Having been oppressed for years, I knew that I wanted to make a difference, and when I joined the JSLT, I learned all the skills to do anything and everything about LGBT issues.

In addition to the above, Jump-Start Team members mentioned a variety of other types of skills that they had acquired while in the program. These ranged from general organizational skills, such as better time management, to skills specific to community organizing, such as building coalitions and the logistics of planning an action campaign (see Table 2). It is somewhat surprising that relatively few youth specifically mentioned learning skills related to supporting Gay-Straight Alliances (GSAs), given that doing so was supposed to be a key program activity. It is possible that respondents who did not specifically mention GSAs also utilized their skills and knowledge to support student clubs in their communities. But, we cannot know from this data to what extent this may be true.

Effect of Jump-Start Team Participation on Community Engagement

In addition to growing youth’s skills, based on the program theory we expected program participation to increase youth’s community engagement. We examined whether there were significant differences over time in the program and comparison groups’ frequency of involvement with various indicators of community organizing and civic engagement. We expected that there would be an increase over time among Jump-Start Team members, but not among youth in the comparison group. To test this hypothesis, a mixed between-within subject repeated measures analysis of variance test was conducted and the interaction effect for Group x Time examined, controlling for gender and race/ethnicity because of the differences between the two groups. Cases were deleted list-wise, thus, only respondents with data at all three time-points were included in the analyses.

We found that participation in the Jump-Start Team was related to a significant increase in community engagement. Among program participants, frequency of involvement with community organizing activities increased from Time 1 (pre-program) to Time 2 (immediately at the end of the program year; see Table 3). In contrast, engagement in community organizing did not significantly change over time for the comparison group. However, although there were changes in Jump-Start Team participants’ from pre- to immediately post-program, this change was not maintained one year after the program: at Time 3, Jump-Start Team participants’ community organizing activity decreased to Time 1 levels ($n = 79$, Wilks’ Lambda = .90, $F(2, 69) = 3.96$, $p < .05$, partial eta squared = .10; see also Table 3). These results suggest that the program itself provided youth with opportunities and incentive for community engagement, opportunities and incentive which youth in the comparison group may not have had and which team members may no longer have had after they graduated from the program.

Table 3

Changes Over Time in Community Organizing Activities:
Jump-Start Team Participants vs. Comparison Group N=79

Jump-Start Team Participants N=52			Comparison Group N=27		
Mean (Standard Error)			Mean (Standard Error)		
Time 1	Time 2	Time 3	Time 1	Time 2	Time 3 Conclusion
Pre-Program	End-of-Program	One Year Post	Pre-Program	End-of-Program	One Year Post
2.32 (.05) ²	2.50 (.05) ^{1,3}	2.34 (.05) ²	2.21 (.07)	2.20 (.07)	2.24 (.07)
<i>Note.</i> Statistically significant differences between time points are indicated by superscript numbers – e.g., superscript “2” for the program group’s Time 1 score indicates that it is statistically different from the Time 2 score.					

Conclusion and Implications

There are several limitations to this study that warrant mention. First, findings from this evaluation cannot be generalized to all development programs for LGBT and ally youth. Second, given the sample size, we were not able to examine potential group differences among team members. Jump-Start Team members were quite diverse in terms of their school environments, sexual orientation, and racial/ethnic identity, but in this study we were not able to examine how community context and various aspects of youth’s identity may have impacted their experiences while on the team or their community engagement (e.g., the experiences of ally youth vs. those who were LGBT-identified). The sample size also limited our ability to examine both youth who did not complete the program and attrition from the study. Third, we had only self-reports of youth’s community engagement and independent reports about team members’ organizing efforts (e.g., the perspectives of program staff) may have added to our understanding of how the program impacts LGBT and ally youth’s community engagement. Finally, we do not know the extent to which youth—both those in Jump-Start and those in the comparison group—may have been involved with other youth development programs or activities.

Findings from this evaluation of GLSEN’s Jump-Start National Student Leadership program are promising and demonstrate that many participants gained skills and knowledge that they believed helped them to become strong community leaders. Most of the skills described by participants map back to the trainings they received during the program, such as organizing and facilitating meetings and working collaboratively with other community members, and may prove useful to youth in their continued community organizing work as well as in other facets of their lives. Experiences while on the team also contributed to personal growth for some youth in areas such as self-confidence and self-efficacy. Results also suggest that this program increases LGBT and ally youth’s community engagement, and thus, supports their socio-political development. In that the increase in community organizing activity during the program was not

sustained a year later suggests that it may be the program itself that provided youth with opportunities for community engagement, opportunities that they may not have had after program completion and that comparison group youth did not have. Given that team members were expected to engage in 10 to 15 hours per month in organizing in their local communities, it could also be that youth had more incentive to engage in such activities during the program, compared to after the program and compared to youth in the comparison group. Additionally, a year after the program, many former team members were out of high school and in college and/or employed—these life changes may have changed the nature of their community engagement. Nevertheless, participating in GLSEN’s Jump-Start program may help to support LGBT and ally youth’s socio-political development and may have positive implications for their development as community leaders. As we continue to examine data from the evaluation, it will be important to explore how changes in community engagement while in the program relate to positive outcomes in participants’ socio-emotional well-being over-time.

Programs that support youth leadership and community engagement, such as Jump-Start, may be important for the healthy development of LGBT and ally youth. By supporting their socio-political development, such programs may, in turn, promote greater well-being and mitigate the harmful effects of too often negative experiences. For some LGBT youth, it may also provide an opportunity where they can be open about their sexual orientation and/or gender identity while being engaged in their communities as leaders. Youth service providers, including those providing youth development programs, should consider the ways in which supporting LGBT and ally youth’s socio-political development may ultimately contribute to their socio-emotional well-being. With regard to LGBT youth specifically, youth development program providers need to 1) be cognizant of the presence of LGBT participants (who may or may not be open about their sexual orientation or gender identity) in their programs, and 2) consider the differential effects of program participation, which may not be benefitting all youth in similar ways. Failing to do so may further marginalize some youth, including LGBT and ally youth.

We have just begun to understand LGBT youth’s experiences in youth development programs more broadly. More research is needed that examines LGBT youth’s socio-political and leadership development, including potential benefits for health and well-being, as well as more evaluations of the potential impact of participation in various types of youth development programs.

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Reducing Bullying Through Leadership Skills Development

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Reducing Bullying Through Leadership Skills Development

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Abstract: The heart wrenching and disturbing statistics regarding bullying in the schools is a reason for concern. Looking at a popular definition of bullying: aggressive intentional behavior involving an imbalance of power or strength (Stop Bullying.gov), one can see a lack of caring and compassion for others. The 4-H Study of Positive Youth Development (Lerner, et al., 2008) indicates the 4-H Youth Development Program is successfully guiding youth onto the best trajectory for positive youth development. As a result of the Lerner PYD study, one rural school in Oregon invited an Extension 4-H Educator to teach leadership skills to children in grades 4-8. The goal of the training was to increase caring and compassion through interactive, teambuilding activities thereby reducing bullying. Evaluation results indicated a significant impact by the program on youth defining their ability to positively work with others.

Introduction

Bullying in the schools is a significant problem for youth. The statistics are disturbing and heart wrenching. The National Youth Safety Center (NSSC) called bullying the most enduring and underrated problem in American Schools (Beale, 2001). The 2009 National Youth Risk Behavior Survey completed by the U.S. Department of Health and Human Service found 1 in 5 teens had been bullied at school in the last year. Research indicates students who are chronically bullied are more likely to report physical and mental health problems, are at risk for behavioral and academic problems, and are more likely to contemplate suicide (Espelage & Swearer, 2003; Rigby, 2001).

Among the most important changes in the field over the past 25 years are shifts in emphasis toward prevention as well as remediation of problem behaviors (Horner, et al., 2004). Lerner's study of positive youth development (2008) acknowledges the accomplishments of the 4-H Youth Development Program in its ability to help youth obtain the best development trajectory for becoming compassionate adults. The Positive Youth Development approach builds upon

what have become known as the Five Cs: Competence, Confidence, Connection, Character and Caring. Positive youth development programming strives to incorporate opportunities for youth to further develop these qualities. Studies on the topic of leadership education reflect an increase in learning how to care about others. A multi-site study in Oregon (Arnold, 2003) shows an increase in the mean scores of youth measures following educational retreats that focused on leadership development. Another study states: "The personal characteristic of kindness and helpfulness was desired most by both lower and higher socioeconomic status groups" (Apps, 1968). Leadership education sessions, with character-building education, may contribute to a decrease in bullying behavior.

Program Purpose

Studies indicate the importance of providing students with the tools to reduce bullying behaviors by blending positive support with explicit instruction (Ross, Horner, & Stiller, 2008). Increased bullying behavior in schools has many state legislators considering laws that will directly influence the development of school-based violence prevention policies and require these policies to be inclusive of bullying behavior. (Limber & Small, 2003).

Researchers agree that school-wide primary prevention programs are the best defense against school bullying (Elinoff, Chafouleas, & Sassu, 2004). According to Meyer and Nastasi (1999) primary prevention strategies are those that are given to an entire population and are designed to prevent a problem from occurring before signs appear. Primary prevention of bullying in schools needs to involve all students, not just those actively affected by bullying behavior.

Program Design

Based on concerns as addressed in the prior section, a School Leadership Training was designed as a Bully Prevention Program conducted at a small rural school in Oregon. Bullying behavior in the school resulted in School Administrators partnering with the local Extension 4-H Youth Educators to provide the prevention program for youth in grades 4-8. The program included a series of ten leadership education sessions, each 55 minute in length, and presented to individual classrooms of 4th-8th grade students. All students in these grades received the training.

The lessons and interactive activities used in the trainings were chosen to focus on understanding and appreciation of others and working together as a team. The program consisted of sessions each day for one week followed by once a month class sessions.

Daily Themes Included:

- Embrace Our Uniqueness
- Teamwork and Cooperation
- Respect
- Trust
- Emotional Safety

Group activities, de-inhibitors, role play and individual/group reflection time were included within each 55 minute session. Refer to the Appendix for a class lesson sample.

Evaluation

The program evaluation consisted of a pre-post, post survey containing fourteen questions designed to measure the student's attitude change toward their classmates. Twenty three 6th graders, twenty-four 5th graders and thirteen 7th grade students responded to the evaluation. Of the 60 participants 35 were male and 25 were female. The evaluation tool was given to the students on the last day of the training series. T-test comparisons of the scores were statistically significant to .01 on all questions.

Table 1

Pre-post Post Surveys: Ranking in score improvement on topics taught during Leadership Skills training

	N	Pre-Test	Post-Test^a	Improvement in Scores	
Topics Used to Evaluate Leadership Trainings	Matched Pairs	Mean Scores	Mean Scores	Difference between pre and post	Ranking
I can work on a project with anyone in my class.	54	3.28	4.30	1.02	1
I understand how my words can affect others.	56	3.75	4.70	.95	2
I care about how my decisions affect other people.	55	3.84	4.67	.83	3
I listen to opinions of my classmates.	57	3.75	4.53	.78	4
I understand how my attitude can affect my life.	57	4.14	4.88	.74	5
I consider myself a leader.	55	3.89	4.60	.71	6
I appreciate each of my classmates (even if I don't consider them a friend).	57	3.74	4.44	.70	7
It is easy for me to consider the feeling of others.	56	3.80	4.46	.66	8
Other people's feelings matter to me.	57	3.98	4.60	.62	9
I am open to suggestions from any of my classmates.	57	3.86	4.46	.60	10
I understand the value of teamwork.	56	4.28	4.84	.56	11
I can be counted on to help if someone needs me.	56	4.16	4.70	.54	12
I try to do the right thing, even when I know that no one will know if I do or not.	58	4.19	4.66	.47	13
It is important that others can count on me.	54	4.15	4.59	.44	14
Rating code: 5 = strongly agree; 1 = strongly disagree					
^a Differences between pre-test and post-test scores is statistically significant at p<.001.					

The results of the survey indicate students developed an overall awareness of how their words and actions affect others and indicate a move toward being more accepting, appreciative and caring of all classmates. The move toward caring about others and how their words and actions affect their peers theoretically should reduce intentional, aggressive, bullying behavior.

Follow up informal questioning between the educator and this school's teachers and administrators point toward a decrease in the more minor aggressive behavior displayed between students. The student's instructors noticed a marked decrease in the "picking on each

other” that was frequent behavior between students. They have contributed this change to the leadership trainings. The school administrators also indicated they have noticed a drop in intentional aggressive behavior between students.

Implications

The positive impact the 4-H School Leadership Training has had on the participating students is encouraging; however more can and should be done to reduce bullying behavior in schools. The educator has been invited back for a third year of leadership training. This time, the training will be offered to students in grades 2 and 3 as well. Discussions with the teachers have shown a need to start the focus on appreciation of other earlier in a student’s life.

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Engaging Youth in Evaluation: Using Clickers for Data Collection

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Engaging Youth in Evaluation: Using Clickers for Data Collection

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Abstract: Now, more than ever, evaluation is an essential component for all programs. Although the need for outcome data is clear, collecting data from youth populations is often difficult, particularly among youth who are vulnerable and/or disenfranchised. While the use of paper-and-pencil (PAP) surveys is a commonly used method of data collection, different technological methods, such as online surveys, text messaging, and personal digital assistants (PDA's), are increasingly employed in data collection efforts. This article explores the use of audience response systems ("clickers") as an innovative data collection method that is especially suited for use with youth. In this paper we examine qualitative findings from key informant interviews regarding data collected from youth participants on a youth program quality measure using clicker technology. Findings from the study indicate that the use of clickers may increase youth engagement in and improve the efficiency of the data collection process.

Introduction

Now, more than ever evaluation is an essential component of all programs. Programs can no longer simply assert that young people benefit from participation in their programs without also providing evidence supporting this claim. Funders, policy makers, and others are requiring evidence that clearly demonstrates outcomes, impact, and accountability of programs. Although the need for outcome data is clear, collecting data from youth populations is often difficult particularly among youth who are vulnerable and/or disenfranchised. Moreover, many of these youth may lack the reading and comprehension skills necessary to complete surveys.

Previously these issues have been addressed by changes in methodology, such as having a survey read aloud or conducting individual interviews or focus groups. Recent advances in

technology now offer alternatives to traditional data collection processes with youth. While the use of paper-and-pencil (PAP) surveys is a commonly used method of data collection, different technological methods, such as online surveys, text messaging, and personal digital assistants (PDA's), are increasingly employed in data collection efforts (e.g. Abo-Zena, et al., 2009). The intersection of technology and data collection approaches brings benefits such as the automation of data entry and analysis, tracking youth participation, and a greater engagement in the data collection process (Caldwell, 2007). Another benefit of using clickers for data collection is that youth in low-income and rural settings with traditionally limited access to technology are provided opportunities to utilize innovative technology that can prepare them for higher education settings. These advancements underscore the fact that PAP survey methods may be cumbersome and time consuming compared to technological approaches developed and utilized by evaluators and researchers.

Audience Response Systems (Clickers) in Data Collection

Audience response systems, more commonly known as "clickers," offer an innovative approach to data collection. Clickers are frequently used in classrooms to "address two of the oldest and most fundamental challenges in teaching: how to engage students and how to determine if they are learning what you are teaching" (Duncan, 2006, p. 1). This dilemma plagues researchers and evaluators in much the same manner: How can we engage young people in the data collection process and how do we know if they are truly involved in the process? The answers to these questions can be addressed by utilizing audience response system technology.

An audience response system typically consists of three parts:

- (1) a receiver, which is connected to the researcher/evaluator's computer,
- (2) hand-held clickers, and
- (3) clicker-specific analysis software that is downloaded on the researcher/evaluator's computer.

Clickers can be randomly assigned to participants and their digital responses can be confidentially or anonymously submitted. Participant data is identifiable via the clicker serial number (or pre-determined participant list using unique identifiers) as data is instantly sent to and recorded in a dataset. The automated, electronic collection of data is a benefit to researchers and evaluators as it eliminates the timely and sometimes costly process of manually entering data as well as avoids the possibility of data entry errors common to PAP survey methods.

To administer a survey using clicker technology, survey questions are pre-loaded into the clicker-specific software and projected one at a time onto a screen. The survey administrator can read each question and the possible response options aloud, advancing to the next question at their discretion. Youth are able to select their answer and enter it into the clicker by pressing the appropriate response button. Youth also maintain the liberty to skip a question if they choose not to answer it. Moreover, some clicker software is equipped with features such as a timer that allows youth to know how much time remains to submit their answer and a response counter that permits the survey administrator to track the participation rate for each question (e.g., track how many responses submitted). Using clicker technology, youth can have survey items read aloud, can ask for clarification if needed, and can more quickly complete a survey, thereby reducing respondent burden, test fatigue, and boredom.

AZ-SEARCH Program Quality Pilot Study

Researchers with the Arizona Supporting Evaluation and Research Capacity Hub (AZ-SEARCH) project at the University of Arizona conducted a youth program quality pilot study designed, in part, to develop a new measure of youth program quality based on the Eccles and Gootman model of quality youth programming (Eccles & Gootman, 2002). The purpose of the pilot study was to:

- (1) test the validity of the youth program quality measure and
- (2) utilize clickers as an innovative data collection method with youth.

In the development of this new measure, pilot data from 143 youth (age range = 9-19 years; $M = 13.38$, $SD = 2.45$) were collected from rural and urban youth participating in 4-H programs in four southwestern counties. Instead of using a traditional PAP survey method for the pilot study, clicker technology was utilized by training 4-H county agents, the survey administrators, in the data collection procedure. In addition to collecting the survey pilot data, qualitative data was also collected from the 4-H agents via key informant interviews. Below we describe the feedback provided by 4-H agents regarding their experience using the clicker technology for data collection with youth.

Overall, the 4-H agents reported that youth were able to use the clickers with minimal or no instructions and the vast majority appeared comfortable using the technology. One agent noted that all but three or four youth (from a group of 30) demonstrated a high level of comfort using the clickers initially, and for the very few that did not, individual instruction enabled them to "get up to speed" with the rest of the youth. Agents also felt that youth were generally excited to use the clickers, noting that youth thought the clickers were "pretty cool" and using the clickers was "fun." One agent remarked, "I can't picture a single young person that wasn't intrigued by getting the clicker and the anticipation of what they would get to answer."

In addition, agents reported that youth appeared more engaged in the data collection process as a result of the clickers, compared to their previous experiences with PAP surveys. One agent reported that two youth explicitly stated that they would not have participated in the study had it not been for the use of clickers. Agents noted that youth engaged in more discussion than with a traditional PAP survey method and expressed curiosity about the data collection, asking questions such as "What are you using this for?"

Agents reported that the use of clickers also enabled youth to complete the survey more quickly and efficiently. On average, the 45-item survey took approximately 30 minutes to administer. Agents also indicated that the process may have garnered better and more complete data than a traditional PAP survey method. Agents noted that it "takes less effort to complete clicker surveys," and that "maybe the novelty of the clickers enables a greater response rate." In addition, agents noted that using clickers engaged youth and held their attention for longer periods of time than might be expected when using a PAP method. Said one agent, "I know that I had their attention for a good 45 minutes and that is hard to come by with teenagers." Agents also expressed that reading each question and response options aloud to all youth at once enabled youth to complete the survey together at a similar pace, thus reducing the amount of time youth might take to complete a self-administered PAP survey on their own.

Agents indicated that it was especially important to expose youth in low-income and rural communities to clicker technology due to their limited access to technology. As one agent

commented, "some communities are very remote with no internet [and using] clickers might be the first step toward using something high-tech." In addition to increasing youth engagement in and the efficiency of the data collection process, using clickers may also provide important exposure to technology with specific youth populations.

One of the challenges with using clickers for data collection may be a loss of interest or enthusiasm by youth between pre- and post-survey administration or during the administration of a lengthy survey. Upon first introduction to the use of clickers, youth appeared more interested and more curious about how the technology registered their responses. Said one agent, "By [post-survey] they were more goofy, less serious, and reported false data intentionally. They were more honest with their first round of data collection." Similarly, another agent noted that "throughout the length of the survey they lost their enthusiasm [and] some became somewhat disengaged."

Summary

Overall, agents expressed support and enthusiasm for the use of clickers in evaluation efforts involving youth. Agents indicated the technology was appropriate for all ages of youth sampled in the study (e.g. 9-19 years). Although there may be some challenges associated with using clickers (e.g., loss of interest from pre- to post-survey, providing unreliable data), these are challenges that are also associated with traditional PAP survey methods. In sum, clicker technology may be a viable alternative to traditional data collection methods. The use of clickers in data collection efforts with youth may increase youth engagement in and improve the efficiency of the data collection process. For youth in low-income and rural communities, using clickers for data collection may also provide important exposure to technology. Evaluators and researchers can benefit by keeping updated with new technologies, especially when working with the current generation of technologically-savvy youth.

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