

Amplifiers of developmental and negative experiences in organized activities: Dosage, motivation, lead roles, and adult-youth ratios[☆]

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Abstract

This study evaluated four sets of factors hypothesized to amplify adolescents' developmental and negative experience in organized youth activities. A representative sample of 1,822 eleventh grade students from 19 high schools completed the computer-administered Youth Experience Survey. Findings indicated that amount of time, motivation, holding a lead role, and the ratio of adults-to-youth were independently related to students' reports of developmental experience in an organized activity. These variables accounted for substantially more variance (23%) in reported developmental experiences than type of activity (3%); and they had only modest relationships with youths' negative experiences (2% of total variance). The findings suggest that developmental benefits of programs might be higher if youth were motivated by enjoyment and had lead roles more often. Further, they raise an important policy issue regarding how to make best use of staff to maximize developmental benefits.

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1. Introduction

Increasing evidence suggests that young people's participation in organized activities, including sports, arts, and other types of youth programs, is associated with positive outcomes, such as college achievement (Marsh, 1992), interpersonal competence (Mahoney, Cairns, & Farmer, 2003), reduced risky behaviors (Eccles & Barber, 1999), and adult civic engagement (Frisco, Muller, & Dodson, 2004). Most of these positive outcomes are believed to be attributable, not just to attendance, but to youth's engagement in the developmental experiences that these activities afford (NRC, 2002; Weis, Little, & Bouffard, 2005). Organized activities are theorized to provide unique opportunities for youth to take on real-world challenges and responsibilities, work toward goals, collaborate with peers, and interact with community members, among other growth-promoting experiences (Eccles, 2005; Heath, 1999; Larson et al., 2004; Youniss, McLellan, & Yates, 1997). The likelihood of participants having these developmental experiences, however, is apt to vary across youth and programs. It is important to understand what factors are related with their increased likelihood.

This research assesses four sets of factors hypothesized to be associated with youth obtaining greater benefits from organized activities: dosage, motivation, lead roles, and adult-youth ratios. Although this study does not test causality, we

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label these factors “amplifying variables”, because at a conceptual level they are theorized to increase or “amplify” youth’s engagement with the developmental opportunities provided by the program. This study evaluates whether these hypothesized amplifiers are associated with youth reporting more frequent developmental experiences. We also ask whether these variables are related to a greater or lesser frequency of negative experiences. Data for this report come from a large representative sample of 11th grade high-school students. Computer assisted procedures were used to obtain information across the full range of extra-curricular and community-based activities in which these youth participated.

1.1. Factors hypothesized to amplify developmental and negative experiences in organized activities

The rationale for considering four sets of possible amplifiers of experiences – time of involvement, type and degree of motivation, leadership roles, and number of youth/ratio of youth to adult – is derived from developmental theory, research in other settings, and preliminary findings on organized activities.

1.1.1. Dosage

Developmental scholars have long assumed that the amount of time youth spend in an activity context influences the degree to which they gain the developmental benefits (or harms) associated with it (Larson & Verma, 1999). Despite predictions that time or “dosage” influences what participants learn in a program (Simpkins, Little, & Weiss, 2004; *The Forum for Youth Investment*, 2004), time has rarely been included in research except as a control variable. One exception was a longitudinal study by Marsh and Klietman (2002), which evaluated the effect of individuals’ total time spent in school-based activities on 21 outcome variables (e.g., general self-esteem, educational aspirations). Total time across all activities was significantly related to positive changes on 16 of the outcomes, even after controlling for prior scores on these variables. Their findings suggest that higher dosage is associated with greater developmental outcomes, but the study did not separate out time spent in specific activities or consider youths’ actual experiences in these activities. As a fundamental step, it is important to understand how dosage differs between sports, arts, and other types of activities. More substantively, it is important to evaluate how dosage relates to developmental and negative experiences and if this association is consistent across different types of programs.

1.1.2. Type and degree of motivation

Youth’s motivations for participating in a program can also be expected to be associated with developmental and negative experiences, because motivations influence the degree of psychological engagement. Adolescents join and are motivated in organized activities in a variety of ways. Many teens report participating in programs in order to spend time with friends or make new friends (Borden, Perkins, Villarruel, & Stone, 2005; Fredricks, Alfred-Liro, Hruda, Eccles, Patrick, & Ryan, 2002; Patrick, Ryan, Alfred-Liro, Fredricks, Hruda, & Eccles, 1999). Although it is possible that collaboration with friends in program activities might increase developmental experiences, it is also possible that affiliation with friends competes with engagement in these activities and thus limits these experiences (Larson, *in press*). Many teens report participating in organized programs because they find the activities to be enjoyable. It is theorized that this intrinsic motivation leads to higher engagement in the developmental experiences of the programs (Brustad, Babkes, & Smith, 2001; Csikszentmihalyi, Rathunde, & Whalen, 1993; Larson & Kleiber, 1993).

High-school-aged students also report participating in organized activities as a means to help reach future goals, such as admission to college or a career (Lauver & Little, 2005). For example, it has been reported that youth join career and technical student organizations as a means to gain relevant knowledge, skills, and social connections (Brown, 2002). If youth are merely using the activity as a means to an end, it could be possible that they would be less psychologically engaged in developmental experiences. In an interview study, however, Patrick and associates (1999) found that youth motivated by career aspirations “exhibited a passion in their activity that was not evident in other program participants” (p. 88), which suggests a high level of engagement. For all these types of motivations, it is important to assess their frequency across categories of organized activities and evaluate their relationships to youth’s reports of developmental and negative experiences.

1.1.3. Lead role

Holding a lead role within an activity is another factor that has been hypothesized to increase the developmental experiences afforded by the program (Eccles & Templeton, 2002; Roth, Brooks-Gunn, Murray, & Foster, 1998). Early studies on sports found that athletes in starter roles reported different experiences and greater developmental benefits

than other participants (Schendel, 1968; Snyder, 1975). These studies suggest that holding a leadership or other prominent role in an activity can lead to greater developmental experience. It is important, however, to ask whether this is true across different types of organized activities, among which the nature of these roles differ. It is also possible that holding a lead role may be related to more frequent negative experiences. Youth in lead roles that are subject to public scrutiny (e.g., instrument soloist) have been found to experience greater stress (Simon & Martens, 1979). Given the range of activities in which youth are involved, it is important to ask how the frequency of lead roles differs across these types and then how they are related to developmental and negative experiences.

1.1.4. Numbers of youth and adults

Finally, the number of youth in an organized activity and the ratio of adults to youth might be related to developmental experiences and negative experiences (Hart, Atkins, & Ford, 1998). Educational research finds that smaller class size and a higher teacher-to-pupil ratio are related to students' learning (Miller-Whitehead, 2003), and the same relationships have been theorized for youth programs (Mahoney, Larson, Eccles, & Lord, 2005). In classroom studies, a higher teacher-pupil ratio is found to provide more supervision and permit teachers to devote greater individual attention to students (Miller-Whitehead, 2003). Adults in programs play roles similar to those of teachers in mentoring youth, as well as in structuring and facilitating ongoing program activities (Hirsch, 2005; Rhodes, 2004; Walker, Marczak, Blyth, & Bordon, 2005). Thus one might expect that a smaller group size and higher adult-to-youth ratio would be associated with higher rates of developmental experiences. Consistent with this prediction, in an evaluation of the New York City Beacons youth programs, Warren, Feist, and Nevarez (2002) found that smaller group size and higher staff-to-youth ratios were associated with youth experiencing more support from adults and youth having more opportunities to run activities. Further, smaller group size was associated with lower rates of conflict and bullying between youth. Systematic evaluation of these hypothesized relationships is needed across categories of youth programs for both developmental and negative experiences.

1.2. The current research study

In order to evaluate the association of these hypothesized amplifying factors and developmental and negative experiences, a representative sample of youth were surveyed about their experiences across different types of organized activities. The study employed the Youth Experiences Survey (YES), which was designed to inventory students' developmental and negative experiences that the youth development literature attributes to organized activities (Hansen & Larson, 2005; Hansen, Larson, & Dworkin, 2003). Use of self-report provided an important "reconnaissance step" for assessing experiences across a broad population (Larson, Hansen, & Moneta, 2006). Adolescents, particularly older adolescents, are often active and conscious agents of their own development, especially in organized programs (Larson, 2000; Lerner, & Busch-Rossnagel, 1981). Hence, it is argued that students' self-reports can be useful indicators of their developmental and negative experiences. Indeed, adolescents' ratings of their developmental experiences in organized activities on the YES were found to be correlated with ratings of these youth's experiences by adult program leaders (Hansen & Larson, 2005).

The aim of this study was to inventory developmental and negative experiences across the full range of extra-curricular activities and community-based youth programs in which youth are involved. To achieve this, the YES survey was administered by a computer system with procedures that selected two activities for each youth to report on from the activities he or she currently participated in. For the sample as a whole, these procedures provided systematic representation—within the constraints of youth's current activity participation—across six basic categories of organized activities: sports, arts, academic clubs and organizations, community-oriented activities, service activities, and faith-based programs. A prior article more fully described the six categories of activities and how youths' rates for different domains of developmental and negative experiences varied between the six types of activities (Larson et al., 2006). Overall, the activities differed in the types of experiences youth had (e.g., in experiences pertinent to identity work, acquiring teamwork and social skills, experiences of stress). The findings also showed differences between activity types in overall frequency of developmental experiences: Faith-based youth groups, for example, were associated with the highest rates for most domains of developmental experiences, while school-based academic clubs were associated with lowest rates.

The purpose of the present research was to evaluate how the four sets of hypothesized amplifiers correlate with developmental and negative experiences, controlling for differences in experiences between activity types. The first objective of the analysis was descriptive: to evaluate how the proposed amplifiers differed across the six types of

activities and how each related to the others. That is, do academic clubs, arts, and faith-based youth groups, for example, differ in youth's dosage, motivations, likelihood of being in lead roles, and adult-to-youth ratios?

The second and principal objective of the analysis was to evaluate the relationship of the hypothesized amplifiers to adolescents' rates of developmental and negative experiences. To test these relationships, analyses were conducted in which the differences in experiences associated with the type of activity were controlled so that the independent influences of each of the amplifiers could be evaluated. Interactions between the amplifiers and activity type were also evaluated. As a check for the robustness of the principal findings, relationships were evaluated with a subsample of youth who provided reports on two organized activities. This allowed the use of within-person analyses, a procedure that provides a check against the possibility that findings were attributable to individuals' response tendencies.

2. Method

2.1. Sample

The sample consisted of 1,822 eleventh grade students (54% female) from 19 high schools in Illinois. Schools were selected for the study to approximate the economic strata, geographic regions, and ethnicities of eleventh grade students in Illinois and the United States (U.S Census Bureau, 2000). Ten schools were located in districts below the state's median household income in 2000 and the remaining schools were in districts above the median income. Thirty-three percent of the sample lived in an urban area, 36% in a suburb, 13% in a small city, and 18% in a rural area. The ethnicity of this sample was 64% European American, 14% African American, 10% Hispanic, 6% Asian, 1% Pacific Islander and Native American, and 5% reported multiple ethnicities.

Across all schools, students were selected to represent a cross-section of the school's eleventh grade population. In most schools the survey was conducted in physical education or health classes, which are required of all students in the state. In those schools with fewer than 150 eleventh graders, all were surveyed. In larger schools, the school administration selected a subset that consisted of 50% of the eleventh graders that represented the diversity of the student population by participant sex, ethnicity, and college vs. non-college track.

2.2. Procedures

The survey was administered in classes using a mobile computer laboratory with battery-operated laptops connected to a server. Two weeks prior to the scheduled date of the survey, informational letters were given to all youth and letters were sent to parents explaining the study and giving them the opportunity to decline their child's participation. On the day of the survey, preliminary oral instructions were provided. Next, students were asked to read the consent form that appeared on the laptop screen in front of them. They indicated their consent decision by selecting a 'yes' or 'no' option. Those who selected the 'yes' option were shown the first screen of the survey; those who selected the 'no' option ($n=28$) were shown a final screen that thanked them for their time. Of the students present in the classes on the day of administration, 98.8% completed the survey.

The survey began by asking students to complete an inventory of all the organized activities in which they currently participated. The computer screen presented lists of organized activities grouped in six categories, and students were asked to check all that applied. The six categories were based on prior work (e.g., Eccles & Barber, 1999; Elder & Conger, 2000) and included: sports, performance and fine arts, academic clubs and leadership, community-oriented organizations such as scouts and career and technical organizations (e.g., FFA, Junior Achievement, etc.), service, and faith-based youth groups. If a specific activity was not listed in a category, the student could type in the name of the activity.¹ Students were also asked to indicate their participation in three comparison activities, that is, hanging out with friends, working a job, and class.

The server next selected two activities from each student's available activities to complete the YES. In order to facilitate the comparisons that were the focus of previous work in this area (Larson et al., 2006), the goal of the selection algorithm was to equalize the sampling of all possible combinations of two activities from the six categories of organized activities and the three comparison activities (for details of the procedure see Larson et al., 2006). The

¹ The specific activities reported in each category of organized activity and the frequencies for each are reported in Larson et al., 2006.

algorithm kept ongoing counts of each two-activity combination in a tabulation matrix, and it was programmed to select the combination for each student that was currently least represented in the data matrix for the student's sex at the school. As a result of these procedures, 800 students completed the survey for two categories of organized activities (e.g., a sport and an arts program), 1022 students completed it for one organized activity and one comparison activity (e.g., sports and a job), and 455 students completed it for two comparison activities (e.g., job and class). The sample of 1822 students used here includes all students (from the full sample of 2,280 students) who provided YES data on at least one organized activity.

We selected one organized activity from each student for the primary analyses in this study. For students who had reported on two organized activities, we chose the first activity on which she or he reported (the order of the two activities had been randomly assigned by the server). This decision to focus on one organized activity per person was made in order to maximize the number of students in the analyses and the representativeness of the sample. Supplementary replication analyses were carried out using data from the subsample of 800 youth who reported on two organized activities (as described below).

2.3. Measures

2.3.1. Hypothesized amplifiers of developmental and negative experiences

2.3.1.1. Dosage. Two items assessed how much time youth spent in their organized activities. Students indicated how many hours per week they participated in the organized activity on an 11-point scale from "0" to "10 or more". This item was recoded into four categories in order to approximate a normal distribution: 1 = 1 or less, 2 = 2–4, 3 = 5–9, and 4 = 10 or more. Frequency of participation was assessed on a 4-point scale from 1 = "less than once a month" to 4 = "more than once a week".

2.3.1.2. Motivations. Students' motivations in each activity were assessed with three 2-item scales: enjoyment, future goals, and peer affiliation. For each item in a scale, students' responded to the lead-in question, "Why have you participated in this activity within the last three months?" The Enjoyment scale included, "To have fun" and "For enjoyment", $\alpha = .79$. The Future goals scale included, "To help on my college application" and "To help me towards a job or career", $\alpha = .75$. The Peer affiliation scale included, "I had friends who were participating" and "My friends wanted me to participate", $\alpha = .78$. Students' indicated agreement with each item based on a 3-point gradient: 1 = Not a reason, 2 = A minor reason, and 3 = A major reason. Mean scores were computed for each scale. Higher mean scores represent stronger motivation.

2.3.1.3. Lead role. Holding a lead role in an organized activity was assessed by one item: "What leadership role or other special role have you had in your organized activity?" Response categories were: director, officer, first chair, leader, editor, captain, section leader, starter, other, and "I have not had a leadership role". When a student indicated "other" they could type in the title of the role. For this analysis, responses to this item were coded into a dichotomous lead role variable indicating whether they did or did not have a lead role.

2.3.1.4. Number of adults and youth. Separate items assessed the number of youth and the number of adults in the activity. Number of youth was obtained from the item: "How many youth participate with you in this activity?" Response choices were: 0–10, 11–20, 21–40, 41–60, and over 60. Students were also asked to indicate on a continuous scale "How many adult leaders are in your activity?" The reported number of adults was then divided by the variable for number of youth to compute the Ratio of adults-to-youth. A higher score indicates a comparatively higher proportion of adults per student.

2.3.2. The Youth Experience Survey (YES), Version 2.0

The YES 2.0 inventories both the developmental and negative experiences that respondents have had in an activity. Students in the study rated whether they had personally experienced each of 66 experiences in their organized activity during their "current or recent involvement." Ratings were made on a 4-point gradient from "Not at all" to "Yes, definitely". Hansen and Larson (2005) provide information on the development of the YES, evidence for the validity of the scales, and further scale and item information.

2.3.2.1. Developmental experiences. The scale of Developmental experiences includes 47 items and provides an overall rate of positive experiences in an activity ($\alpha = .97$). Items in this scale deal with six domains of development

that have been identified in the research literature. Six of the items ask about students' identity work experiences, such as "This activity got me thinking about who I am". Twelve items deal with experiences related to initiative ("I set goals for myself in this activity"). Four items ask about emotional regulation ("Learned that my emotions affect how I perform"). Ten items ask about students' experiences of teamwork and social skills ("Learned that working together requires some compromise"). Eight items ask about positive relationships ("Got to know someone from a different ethnic group"). Seven items focused on adult networks and social capital experiences ("Got to know people in the community").

2.3.2.2. Negative experiences. The scale of Negative experiences includes 19 items ($\alpha = .95$). These items ask about negative experiences in five domains discussed in the literature. The domain of stress includes three items, such as "Demands were so great that I didn't get homework done". Four items ask about experiences of inappropriate adult behavior ("Adult leaders in this activity are controlling and manipulative"). Four items ask about negative influences ("Felt pressured by peers to do something I did not want to do"). Social exclusion includes three items ("I felt left out"). Three items asked about experiences related to negative group dynamics ("I got stuck doing more than my fair share").

3. Results

3.1. Data analytic plan

3.1.1. Descriptive statistics

Descriptive analyses first evaluated whether the hypothesized amplifying variables differed across the six categories of organized activities. MANOVA and ANOVA procedures were used to investigate differences in dosage, motivation, and number of adults and youth across activity types. Next, Bonferroni follow-up tests were conducted to identify which activity types significantly differed from the others. A chi-square test was used to evaluate if there were significant differences for the dichotomous variable lead role across the six activity types. To perform follow-up contrast tests for lead role, the Bonferroni's contrasts were computed using the same procedures employed with the other amplifying variables.

Intercorrelations among the different hypothesized amplifiers were evaluated, controlling for differences between activity types. These correlational analyses were computed with five dummy variables to partial out the six activities. Given the large sample size, we employed an alpha level of $p < .01$ for all significance tests.

3.1.2. The relationship of the hypothesized amplifying variables to developmental and negative experiences

Linear regression procedures were used to evaluate the relationship of the hypothesized amplifying variables to youth's reported rates of experiences on the YES developmental and negative experiences scales. Separate analyses were conducted using the scales of developmental and negative experiences as the dependent variable. In preliminary analyses we evaluated a set of variables that might possibly confound relationships (e.g., participant sex and ethnicity; school SES level and urban, suburban, small city, rural location) but found that these variables did not impact the findings; therefore these variables were not included in the analyses reported here.

Variables were added to the regression models for developmental and negative experiences in two steps. In Step 1 (the Base Model) five dummy variables representing the six types of organized activities were added in order to compute the variance in experiences due to activity types. Because the mean YES scores for community-oriented activities were closest to the overall means for all activities, it was chosen as the reference category (Larson et al., 2006). In Step 2, each of the four amplifying variables was entered in a separate model (Models A-D), along with the five activity type dummy variables, in order to compute the variance in experiences accounted for by the proposed amplifiers. In Step 2, a Final Model was also computed, in which all of the amplifiers were entered simultaneously. The F statistic and the change in R^2 associated with each step were used to assess the statistical significance of the added variables. The standardized regression coefficients for the independent variables were used to evaluate their separate contributions. In separate analyses, a third model was evaluated that included interaction terms.

A final set of analyses were conducted using the subsample of 800 students who reported on their experiences in two organized activities. The goal was to retest the results of the regression analyses using the data on both organized activities from each student in order to control for individual differences in response patterns. Hierarchical Linear Modeling procedures (HLM) were used with the levels of activity, person, and school modeled. The procedures for these

analyses followed the same steps described above for the regressions. With individual differences modeled, these analyses provided a within-person test of the predicted relationships, albeit with a smaller sample that was more self-selected (because it was limited to youth involved in two or more organized activities). The primary concern was whether the results of these analyses would replicate those obtained with the regressions.

3.2. Data analyses

3.2.1. Descriptive analyses

First differences in the four hypothesized amplifiers (the independent variables) between types of organized activities were investigated. Each of the hypothesized amplifiers significantly differed between activities (Table 1).

Table 1
Descriptive statistics for hypothesized amplifying variables by activity type ($N = 1822$)

	Scale	ANOVA F	η^2	Sports	Performance and fine art	Academic clubs and organizations	Community-oriented	Service	Faith-based	Bonferroni contrast
				$n = 541$	$n = 368$	$n = 279$	$n = 185$	$n = 244$	$n = 205$	
Dosage										
Hours per week, M (SD)	1-4	32.4**	.08	1.99 (1.09)	1.74 (1.05)	1.07 (1.06)	1.46 (1.06)	1.39 (1.04)	1.54 (1.09)	SP>AR, AC, CM, SV, FB AR>AC, SV CM, FB>AC
1 or less				12.5%	14.2	37.7	20.3	21.8	18.8	
2-4				22.4	28.8	33.3	36.8	37.0	36.1	
5-9				18.8	25.7	13.8	19.8	21.4	17.3	
10 or more				46.3	31.3	15.2	23.1	19.8	27.7	
Frequency of participation, M (SD)	1-4	41.0**	.10	3.23 (1.01)	3.35 (0.96)	2.38 (1.00)	2.55 (0.98)	2.65 (1.12)	2.93 (0.86)	SP, AR> AC, CM, SV, FB> AC, CM
Less than once a month				11.9%	9.1	25.5	18.3	22.6	9.2	
Less than once a week				12.8	9.9	28.3	29.0	20.9	14.4	
Once a week				15.3	18.1	29.1	32.0	26.0	50.8	
More than once a week				60.0	62.9	17.0	20.7	30.6	25.6	
Motivations										
Enjoyment, M (SD)	1-3	38.5**	.10	2.71 (0.53)	2.66 (0.51)	2.39 (0.65)	2.40 (0.60)	2.14 (0.69)	2.45 (0.62)	SP, AR> AC, CM, SV, FB CM, AC, FB,> SV
Future goals, M (SD)	1-3	29.2**	.07	1.63 (0.68)	1.83 (0.72)	2.02 (0.70)	2.01 (0.77)	2.09 (0.69)	1.50 (0.59)	AR, CM> SP, FB AC, SV> SP, AR, FB
Peer affiliation, M (SD)	1-3	6.1**	.02	1.83 (0.69)	1.78 (0.67)	1.84 (0.68)	1.84 (0.65)	1.58 (0.64)	1.89 (0.66)	SP, AR, AC, CM, FB> SV
Lead role	% yes	53.6 ^a	.03	56.5%	38.3%	38.0%	45.4%	35.1%	39.0%	SP> AR, AC, SV, FB
Number of youth and adults										
Number of Youth, M (SD)	1-5	7.5**	.02	2.32 (1.09)	2.73 (1.29)	2.71 (1.26)	2.75 (1.35)	2.47 (1.37)	2.61 (1.27)	AR, CM> SP
0-10				23.1%	17.7	15.1	21.2	32.9	20.1	
11-20				41.8	32.0	37.5	26.3	23.3	34.7	
21-40				21.8	24.6	22.4	25.1	21.3	22.1	
41-60				7.4	11.0	10.7	11.2	9.6	10.6	
60 or more				5.9	14.6	14.3	16.2	12.9	12.6	
Ratio adult-to-youth, M (SD)	n of Adult/ n of Youth	23.9**	.06	1.21 (1.18)	.76 (1.02)	.86 (0.84)	1.37 (1.34)	1.56 (1.89)	1.72 (1.42)	SV, FB> SP, AR, AC SP, CM> AR, AC

* $p < .01$. ** $p < .001$.

^a $\chi^2, p < .01$.

3.2.1.1. Dosage. The MANOVA of time spent in each of the six activities indicated that dosage differed by activity type, $F(5, 1816)=26.4$, $p<.001$. Follow-up ANOVAs showed differences in both the number of hours per week and the frequency of participation between activity types (Table 1). Follow-up contrasts (shown in the rightmost column of Table 1), indicated that youth in sports reported spending more hours per week than youth in each of the other types of activities. Youth involved in arts also reported more hours of involvement per week than youth in each of the other activities, except sports. Hours per week were lowest for youth in academic clubs and organizations. Similarly the frequency of participation was highest in sport and lowest in academic clubs.

3.2.1.2. Motivations. Students' self-reported motivations for participating also differed by activity type, $F(5, 1816)=24.7$, $p<.001$, with significant differences for all three types of motivations. Bonferroni follow-up contrasts showed that youth in sports and arts activities were significantly more motivated by enjoyment compared to youth in academic clubs, community-oriented, service, and faith-based activities. Motivation by future goals was higher for youth in academic, community-oriented, and service activities than for youth in faith-based youth groups and sports. Being motivated by peer affiliation was significantly lower for youth in service activities compared to youth in each of the other types of activities. Overall, students participating in sports and arts reported being most motivated by enjoyment, and students in academic, community-oriented, and service activities were most motivated by future goals.

3.2.1.3. Lead role. Youths' reports of holding a lead role also differed by type of activity, $\chi^2(5, N=1822)=53.6$, $p<.01$, (see Table 1). Bonferroni tests showed that youth in sports had higher rates of being in a lead role than youth in the other categories of activities.

3.2.1.4. Number of youth and adults. The MANOVA indicated that number of youth in the program and in adult-to-youth ratios differed by type of activities, $F(5, 1816)=15.3$, $p<.001$. Bonferroni follow-up tests indicated arts and community-oriented activities had significantly higher numbers of youth in those activities as compared to sports. Arts and academic activities had lower adult-to-youth ratios than each of the other types of activities. Service and faith-based youth groups had higher ratios compared to sports.

3.2.1.5. Correlations among amplifiers. Partial correlations between the amplifying variables showed only modest associations (see Table 2). Although correlations within categories of amplifiers (e.g., between frequency and hours, between N of youth and adult-youth ratio) were significant, other correlations were below .20. Frequency of participation was correlated with enjoyment and hours per week were correlated both with enjoyment and being motivated by future goals. Both of these dosage and motivation variables were also associated with having a lead role. The correlations of the dosage and motivation variables with the two variables for number of youth and adults were small. Overall, these analyses suggest the amplifying variables were relatively independent of one another.

3.2.2. Relationship of hypothesized amplifiers to developmental experiences

Table 3 presents a summary of results of stepwise regressions predicting the overall rates of developmental experiences: the activity contrasts were first entered in the Base Model as control variables, the different sets of

Table 2
Partial correlations among independent and dependent variables, with type of activity controlled ($N=1822$)

Variables	1	2	3	4	5	6	7	8	9	10
Frequency	–	.37**	.12**	.10*	-.08*	.17**	.13**	-.03	.23**	.00
Hours		–	.13**	.13	-.02	.18**	.07	.04	.25**	.02
Enjoyment			–	.16**	.16**	.12**	.03	.04	.27**	-.10*
Future goals				–	-.01	.10*	.12**	.01	.28**	.06
Peer Affiliation					–	-.06	.07	-.08*	-.01	.02
Lead Role						–	.01	.06	.28**	.09*
Number of Youth							–	-.30**	.05	.04
Adult-Youth Ratio								–	.10*	-.03
Developmental Experiences									–	.05
Negative Experiences										–

* $p<.01$. ** $p<.001$.

Table 3

Summary of regression analyses predicting developmental experiences from the hypothesized amplifying variables ($N=1822$)

Variables Entered	Base Model	Model A	Model B	Model C	Model D	Final Model
	β	β	β	β	β	β
Activity Contrast						
Sport	.05	-.06	.05	.02	.08	-.01
Performance & Fine Art	-.00	-.08	-.02	.01	.02	-.04
Academic Clubs & Organizations	-.12**	-.09	-.12**	-.10*	-.10*	-.06
Service	.01	.01	.03	.03	.02	.05
Faith-based Youth Groups	.10*	.07	.14**	.11**	.09*	.12**
Dosage (A)						
Frequency		.21**				.14**
Hours		.17**				.11**
Reasons (B)						
Enjoyment			.24**			.20**
Future Goals			.25**			.21**
Peer Affiliation			-.04			-.02
Lead Role (C)						
				.28**		.19**
Number of Youth & Adults (D)						
Number of Youth					.09**	.05
Adult-youth ratio					.12**	.09**
Variance Explained						
Step 1 (Base) R^2	.03**	.03**	.03**	.03**	.03**	.03**
Step 2 (Model) R^2 Change		.09**	.13**	.08**	.02**	.23**
Total Adjusted R^2		.12**	.15**	.11**	.05**	.25**

* $p < .01$. ** $p < .001$.

amplifiers were entered separately in Models A-D, and all variables were entered simultaneously in the Final Model. The results from step two of the models represent the association between the amplifiers and developmental experiences when controlling for differences in experiences attributable to activity types. These regression analyses generally confirmed predictions that these amplifying variables were associated with the youth's reports of developmental experiences.

3.2.2.1. Dosage. The findings for Model A indicated that the amount of time youth spent in an activity was associated with self-reported developmental experiences. The addition of frequency of participation and number of hours per week to the Base Model accounted for 9% of the variance in developmental experiences (see Table 3). Youth who reported more frequent participation and spending more hours per week also reported significantly higher rates of developmental experiences. These effects remained significant in the Final Model, in which the other amplifier variables were also included in the equation. Given Marsh and Klietman's (2002) finding of a curvilinear relationship between time and outcome variables, we tested whether adding quadratic terms for the two dosage variables to Model A accounted for a significant change in R^2 , which they did not. It should be noted, however, that the highest point on the scale of hours per week was "10 or more hours". Therefore the findings do not address whether the relationship is linear above this dosage.

3.2.2.2. Motivations. Findings for Model B showed that students' motivations accounted for a substantial amount of the variance in developmental experiences, 13%. Being motivated both by enjoyment and by future goals was associated with developmental experiences, but being motivated by peer affiliation was not (see Table 3). The magnitude of the associations for enjoyment and future goals were comparatively high, $\beta = .24$ and $\beta = .25$, respectively, and remained significant and substantial in the Final Model. It is notable that peer affiliation did not have a significant zero-order correlation with developmental experiences (See Table 2); hence it was not related with developmental experiences with or without controls for other variables.

3.2.2.3. Lead role. Results for Model C indicated that having a lead role in an activity accounted for a significant portion of the variance in the rates of developmental experiences, 8% (Table 3). The magnitude of the lead role

coefficient was substantial, $\beta = .28$. Thus, students who reported holding a lead role in their activity had substantially higher rates of developmental experiences compared to those who did not hold a lead role, even after controlling for differences between activities in the number of lead roles. Lead role remained strong and significant in the Final Model, although the strength of the beta coefficient fell somewhat, to $\beta = .19$.

3.2.2.4. Number of youth and adults. In Model D, the two variables for the number of youth and adults accounted for a significant but small amount of the variance, 2%. The beta coefficients for number of youth and the ratio of adults-to-youth indicated positive associations with developmental experiences, although the magnitude of each coefficient was small, $\beta = .09$ and $\beta = .12$, respectively. In the Final Model, only the ratio of adults-to-youth remained significant.

3.2.2.5. Tests for interaction effects. The analyses thus far indicated that the hypothesized amplifying variables and activity type had independent associations with developmental experiences, but they have not addressed the possibility of interactions between these two categories of variables. For example, might having a lead role have a stronger relationship to developmental experience in one activity than another?

To test this, we computed terms for the interaction of each hypothesized amplifying variable with the five dichotomous variables for activity type. The five interaction terms for each amplifier were then added to the regression analysis that included the respective set of amplifying variables (Models A-D in Table 3). None of the 40 interaction terms were found to add significantly to the prediction of developmental experiences, $ps > .01$. These results indicate that the effects for the amplifying variables did not vary substantially across sports, arts, etc.

3.2.2.6. Conclusions about developmental experiences. The findings show that the hypothesized amplifiers were positively associated with developmental experiences, and that these associations were independent of effects for the type of organized activity. The test for interactions also suggested that the strength of these relationships did not vary greatly among types of activities. The Final Model in Table 3 provides a useful summary of the findings, showing that all of the predicted amplifiers, except peer motivation and number of youth had significant independent relationships with reported developmental experiences. The combined contribution of these variables accounted for 23% of the variance.

3.2.3. Relationship of hypothesized amplifiers with negative experiences

The same set of analyses was repeated with youth's reports of negative experiences as the dependent variable. Table 4 presents the Base Model, Models A-D, and the Final Model for the prediction of negative experiences.

3.2.3.1. Dosage. The findings for Model A indicated that amount of time youth spent in an activity was not associated with overall rates of negative experiences (Table 4).

3.2.3.2. Motivations. Students' motivations accounted for 2% of the variance in negative experiences, which was significant at $p < .01$ (Model B, Table 4). Higher enjoyment was significantly associated with lower rates of negative experiences, $\beta = -.14$, while higher future goals was associated with higher rates of these experiences, $\beta = .08$. Being motivated by peer affiliation did not account for a significant portion of the variance in negative experiences.

3.2.3.3. Lead role. Having a lead role in an activity was significantly associated with negative experiences, however the effect size was small (1% of variance) (Table 4, Model C). Students who reported holding a lead role in their activity reported slightly higher rates of negative experiences compared to those not in a lead role.

3.2.3.4. Number of youth and adults. Overall rates of negative experiences were not significantly related to number of youth and the ratio of adults-to-youth (Model D, Table 4).

3.2.3.5. Test for interaction effects. As with developmental experiences, we tested whether the interactions between the hypothesized amplifying variables and activity type added significantly to the prediction of negative experience. Only one of the 40 interaction terms was significant at $p < .01$. These results indicated that the effects for the amplifying variables were not discernibly different between activity types.

Table 4

Summary of regression analyses predicting negative experiences from the hypothesized amplifying variables ($N=1822$)

Variables Entered	Base Model	Model A	Model B	Model C	Model D	Final Model
	β	β	β	β	β	β
Activity Contrast						
Sport	.09	.09	.13*	.08	.09	.12*
Performance & Fine Art	-.03	-.02	.00	-.02	-.03	.01
Academic Clubs & Organizations	-.06	-.07	-.06	-.06	-.07	-.06
Service	-.10*	-.10*	-.12**	-.09*	-.09*	-.11*
Faith-based Youth Groups	-.06	-.05	-.03	-.05	-.05	-.02
Dosage (A)						
Frequency		.04				.03
Hours		-.02				-.03
Reasons (B)						
Enjoyment			-.13**			-.12**
Future Goals			.08*			.05
Peer Affiliation			.04			.04
Lead Role (C)						
Number of Youth & Adults (D)				.09**		.09**
Number of Youth					.03	.04
Adult-youth ratio					-.02	-.01
Variance Explained						
Step 1 (Base) R^2	.03**	.03**	.03**	.03**	.03**	.03**
Step 2 (Model) R^2 Change		.00	.02**	.01**	.00	.02**
Total Adjusted R^2		.03	.05**	.04**	.03	.05**

* $p < .01$. ** $p < .001$.

3.2.3.6. *Conclusion about negative experiences.* In contrast to findings for developmental experiences, the hypothesized amplifiers had comparatively little association to youth's negative experiences in programs. The total amount of variance explained by the amplifying variables in the Final Model was only 2%.

3.3. Replication of analyses controlling for individual differences

A final set of analyses was conducted to address the possibility that the associations between the hypothesized amplifiers and rates of developmental and negative experiences might be affected by individual differences in response tendencies among youth. These analyses used HLM to replicate the regressions predicting the rates of developmental and negative experiences using data from the sub-sample of 800 students who provided reports on two organized activities. The results from these analyses were compared to the results from the regressions summarized in Tables 3 and 4. Since HLM procedures do not yield a standardized coefficient, unstandardized coefficients from the two sets of analyses were used for these comparisons.

The HLM analyses predicting developmental experiences yielded results that were nearly identical to those obtained from the regressions. The unstandardized coefficients were found to have identical levels of significance and were closely similar in size to those in the original regressions for hours, frequency, enjoyment, lead role, and adult-youth ratio for Models A-D and the Final Model. The unstandardized coefficients for peer motivation were also closely similar to those in the regressions, however they were significant in the HLM but not quite significant in the regressions ($\beta = -.07$, $p < .01$ versus $\beta = -.04$, $p < .05$, respectively, in Model A). Together these findings suggest that being motivated by peer affiliation is associated with slightly lower rates of developmental experiences. The other difference was for number of youth. The significance and the unstandardized coefficients (to two decimal points) for number of youth were identical between the regression and HLM solutions for Model C. But in the Final Model this effect remained significant in the HLM but not in the regression. Overall, the absence of any substantial differences provided strong confirmation of the original pattern of results for developmental experiences (as shown in Table 3).

The HLM analyses predicting negative experiences also yielded similar results to those in the regressions (Table 4), with several exceptions. The unstandardized coefficients were closely similar and the level of significance identical for future goals, peer affiliation, lead role, number of youth, and adult-youth ratio. For the two dosage variables, the HLM

yielded a positive coefficient in Model D that was significant at the .01 level (however it did not remain significant in the Final Model for frequency). This suggests that, with individual differences controlled, dosage may have a modest independent association with negative experiences. The other, more striking difference was that the substantial inverse relationship between being motivated by enjoyment and negative experiences was not present in the HLM ($\beta < .001$ for the regressions). One explanation for this finding might be that youth's reports of enjoyment and negative experiences were both influenced by a positive response bias, which created an artifactual correlation that was removed in the HLM. On the whole, however, the results indicated the strong robustness of the regression findings in the HLM analyses.

4. Discussion

This research evaluated a set of factors hypothesized to be related to youth having more frequent developmental experiences in organized youth activities. Employing data from a large, representative sample of 11th graders, the study confirmed that greater program dosage, stronger enjoyment and future goal motivations, students having a lead role, and a higher adult-to-youth ratio were each independently associated with youth reporting a higher frequency of developmental experiences. The findings indicated that these “amplifying factors” accounted for substantially more variance in rates of the developmental experiences assessed by the YES than did the type of activity (23% vs. 3%, respectively). The hypothesized factors, however, had much less relationship (2% of total variance) to youths' negative experiences in the activities. These basic findings were replicated using HLM to control between-person variance for a subset of the sample that provided reports on two organized activities. We theorize that these amplifying factors influence the quantity of youth's behavioral and psychological engagement in the opportunities that organized programs provide.

4.1. Dosage

Time spent in an activity, or dosage, is often conceptualized as a proxy for the quantity of youth's exposure to and engagement in what an organized activity has to offer. As expected then, youth who spent more hours per week in an organized activity and participated more frequently reported higher rates of developmental experience. Our data suggest that the relationship between dosage and developmental experiences was linear, with more time related to more experiences. However, further research is warranted to evaluate whether high dosages of participation (above 10 hours per week) might be related to diminishing returns (Mahoney, Harris, & Eccles, 2006).

Logically one might expect that spending more time in an activity would also increase youth's likelihood of negative experiences. The results, however, indicated the dosage variables were not significantly related to negative experiences in the regression analyses and were not significant in the final model of the HLM analyses. Possibly negative behavior emerges in a given group regardless of how much time is spent, or perhaps spending more time in a program allows for conflict resolution processes that counterbalance a dosage effect. It is also possible that youth lower or raise their level of involvement in inverse proportion to the degree of negative experiences they encounter.

4.2. Motivations

Youths' motivations can also be seen as relating to their psychological engagement in an organized activity and thus to whether they gain the developmental opportunities it affords. Consistent with this, we found that youth who reported being motivated by enjoyment and future goals, but not peer affiliation, reported higher rates of developmental experiences. Enjoyment is viewed in the motivational literature as a cardinal indicator of intrinsic motivation and deeper psychological engagement in an activity (Csikszentmihalyi, 1990; Ryan & Deci, 2000). Thus, the finding that enjoyment was associated with all domains of developmental experience is consistent with motivational theory. The regression findings also suggested that being motivated by enjoyment was inversely related to negative experiences; however, this result was not replicated in the HLM analyses, suggesting that this relationship might be an artifact of individual response tendencies.

Being motivated by future goals was found to be an equally strong predictor of developmental experiences. This suggests that youth who participate in activities to increase their access to college or careers also become quite engaged in the activities' developmental opportunities. It must be cautioned, however, that while we have conceptualized

enjoyment and future goal motivation as “amplifiers,” it is possible that these relationships are driven by reverse or bi-directional causal processes. Experiences and motivations may influence each other.

The findings further suggested that being motivated by peer affiliation may be as much of an obstacle as it is an aid to developmental engagement. Although peers were reported to be a frequent motivation for youth’s participation, which is consistent with past research (Borden et al., 2005; Fredricks et al., 2002), the present findings suggest that this motivation was not associated with developmental experiences; indeed such motivation might have a slight negative relationship to developmental experiences. Peer motivation, however, may be important to getting youth in the door. In an in-depth study of a civic activism program, Pearce and Larson (2006) found that peer affiliation was an important factor in youth’s initial attendance at meetings, and that collaborating with peers who were engaged in program activities served as a catalyst for youth’s development of intrinsic motivation in program activities.

4.3. *Lead role*

Researchers have hypothesized that having a lead role heightens the developmental benefits that youth experience in a program, and our findings were consistent with this prediction. Although being in a lead role such as starter, first chair, or officer is correlated with spending more time in an activity and higher intrinsic motivation, it had a substantial independent relationship with the frequency of developmental experiences. Scholars have theorized that lead roles increase developmental experiences because youth in these roles carry greater responsibility (Eccles & Templeton, 2002; Hanks & Eckland, 1978). Youth in these roles are likely to have greater immersion and investment in the implementation of program activities, and thus be more likely to learn from them. But we also found that holding a lead role was associated with more frequent negative experiences. This suggests that the same immersion and investment also carries with it a greater potential for negative experiences. Of course, negative experiences do not inevitably lead to long term negative outcomes. Facing real-world obstacles and challenges of organized activities may be part of the developmental process (Larson, Hansen, & Walker, 2005); indeed some youth report that their negative experience in youth programs are a stimulus for growth (Dworkin & Larson, 2004). It is important for future research to evaluate how youth can gain the developmental benefits of lead roles while levels of negative experiences are kept within the manageable range and appropriate supports are provided to prevent sustained negative impacts.

4.4. *Ratio of adults-to-youth*

Research in school settings finds that a higher teacher-pupil ratio permits teachers to provide more supervision and devote greater individual attention to students, which enhances students’ learning (Miller-Whitehead, 2003). Our findings suggest that a similar amplifying process may apply for developmental experiences in organized activities. Results showed that the ratio of adults-to-youth in a program was modestly related to youth reporting higher rates of developmental experiences. Curiously, the adult-youth ratio had no association with the number of negative experiences that youth reported in the program. On the whole, then, the adult-youth ratio did not stand out as a strong predictor of youth’s experiences. One explanation for these modest findings may lie in the theory that youth programs are contexts in which youth are often agents of their own development (Larson, 2000). If youth are driving their developmental experiences, it could explain why factors like youths’ motivation and lead roles were more salient than the ratio of adults.

4.5. *Future directions*

This study provides preliminary evidence suggesting that dosage, motivation, having a lead role, and adult-youth ratio are associated with greater developmental experiences in youth programs. Future research is needed, however, to more fully test these relationships. Although we have argued that the use of self report in this study is a valuable reconnaissance step, further research is needed that tests the role of these hypothesized amplifiers in longitudinal research employing multiple data sources. Likewise, we believe that our focus on proximal developmental experiences is valuable for providing a “lay of the land” across diverse youth and types of programs, but subsequent research is needed that tests the sequence of relationships between program participation, proximal experiences, and long term outcomes.

It should further be recognized that the hypothesized amplifiers examined here represent only a small subset of the many individual and program-level factors that are likely to affect youth’s developmental experiences. Other important factors to consider are the quality and training of staff (Roth & Brooks-Gunn, 2003; Walker et al., 2005), the quality of

relationships between youth and adults (Rhodes, 2004), the degree of youth-environment fit (Eccles, 2005), as well as many other factors (see NRC, 2002). In order to understand the role of these factors, researchers will also need to evaluate a more diverse set of outcome measures that reflect the diverse array of developmental experiences (e.g., learning emotional skills and teamwork) that youth in this study reported in organized programs.

Specific implications of these findings for policy and practice also need to be tested. These findings suggest dosage is important, but are there optimal dosages for different types of programs? And does the time spent in each program make an independent developmental contribution? The findings here suggest that the developmental benefits of programs would be higher if youth were motivated by enjoyment and had lead roles more often. It would be valuable to test whether increasing these two factors, for example in service activities where they are typically low, could increase developmental experiences. The important policy question regarding adult-to-youth ratios is how to make best use of staff to maximize developmental benefits. Of course answers to this question and the others may differ by the age of youth and staff training, as well as numerous other factors.

References

- Borden, L., Perkins, D., Villarruel, F., & Stone, M. (2005, Spring). To participate or not to participate: That is the question. *New Directions for Youth Development, 105*, 33–49.
- Brown, L. (2002). *CTE student organizations (Report No. EDO-CE-02-235)*. Center on Education and Training for Employment Columbus, OH: ERIC Clearinghouse on adult, career, and vocational education (ERIC Document Reproduction Service No. ED99CO0013).
- Brustad, R. J., Babkes, M. L., & Smith, A. L. (2001). Youth in sport: Psychological considerations. In R. N. Singer, H. A. Hausenblas & C. M. Janelle (Eds.), *Handbook of sports psychology* (pp. 604–635), 2nd ed. NY: John Wiley.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience* NY: Harper & Row.
- Csikszentmihalyi, M., Rathunde, K., & Whalen, S. (1993). *Talented teenagers: The roots of success and failure* Cambridge, England: University Press.
- Dworkin, J. & Larson, R. (2004). Adolescents' negative experiences in organized youth activities. Unpublished paper. [<http://web.aces.uiuc.edu/youthdev/>]
- Eccles, J. (2005). The present and future of research on activity settings. In J. Mahoney, R. Larson & J. Eccles (Eds.), *Organized activities as contexts of development: Extracurricular activities, after-school and community programs* (pp. 353–374). Mahwah, NJ: Lawrence Erlbaum Associates.
- Eccles, J., & Barber, B. (1999). Student council, volunteering, basketball, or marching-band: What kind of extracurricular involvement matters? *Journal of Adolescent Research, 14*, 10–43.
- Eccles, J. S., & Templeton, J. (2002). Extracurricular and other after-school activities for youth. In W. S. Secada (Ed.), *Review of educational research, vol. 26* (pp. 113–180). Washington DC: American Educational Research Association Press.
- Elder, G., & Conger, R. (2000). *Children of the land: Diversity and success in rural America* Chicago: University of Chicago Press.
- Fredricks, J., Alfred-Liro, C., Hruda, L., Eccles, J., Patrick, H., & Ryan, A. (2002). A qualitative exploration of adolescents' commitment to athletics and the arts. *Journal of Adolescent Research, 17*, 68–97.
- Frisco, M. L., Muller, C., & Dodson, K. (2004). Participation in voluntary youth-serving associations and early adult voting behavior. *Social Science Quarterly, 85*, 660–676.
- Hanks, M., & Eklund, B. (1978). Adult voluntary associations and adolescent socialization. *Sociological Quarterly, 19*, 481–490.
- Hansen, D.M., & Larson, R. (2005). The Youth Experience Survey. Unpublished manuscript, University of Illinois at Urbana-Champaign. [<http://web.aces.uiuc.edu/youthdev/>]
- Hansen, D., Larson, R., & Dworkin, J. (2003). What adolescents learn in organized youth activities: A survey of self-reported developmental experiences. *Journal of Research on Adolescence, 13*, 25–56.
- Hart, D., Atkins, R., & Ford, D. (1998). Urban America as a context for the development of moral identity in adolescence. *Journal of Social Issues, 54*(3), 513–530.
- Heath, S. (1999). Dimensions of language development: Lessons from older children. In A. S. Masten (Ed.), *Cultural processes in child development: The Minnesota symposium on child psychology, vol. 29* (pp. 59–75). Mahwah, NY: Lawrence Erlbaum.
- Hirsch, B. (2005). *A place to call home: After-school programs for urban youth* Washington, DC: American Psychological Association.
- Larson, R. (2000). Toward a psychology of positive youth development. *American Psychologist, 55*, 170–183.
- Larson, R. (in press). Learning collaboration: Teamwork as a dimension of positive development. In R. Lerner & R. Silberstein (Eds.). *Approaches to positive youth development*. Thousand Oaks, CA: Sage.
- Larson, R., Hansen, D., & Moneta, G. (2006). Profiles of developmental experiences in organized youth activities. *Developmental Psychology, 42*, 849–863.
- Larson, R., Hansen, D., & Walker, K. (2005). Everybody's gotta give: Development of initiative and teamwork within a youth program. In J. Mahoney, R. Larson & J. Eccles (Eds.), *Organized activities as contexts of development: Extracurricular activities, after-school and community programs* (pp. 159–184). Mahwah, NJ: Lawrence Erlbaum.
- Larson, R., Jarrett, R., Hansen, D., Pearce, N., Sullivan, P., Walker, K., et al. (2004). Youth programs as contexts of positive development. In A. Linley & S. Joseph (Eds.), *International handbook of positive psychology in practice: From research to application* (pp. 540–560). New York: Wiley.
- Larson, R., & Klieber, D. A. (1993). Daily experience of adolescents. In P. Tolan & B. Cohler (Eds.), *Handbook of clinical research and practice with adolescents* (pp. 125–145). New York: Wiley.

- Larson, R., & Verma, S. (1999). How children and adolescents spend time across cultural settings of the world: Work, play and developmental opportunities. *Psychological Bulletin*, *125*, 701–736.
- Lauver, S., & Little, P. (2005). Recruitment and retention strategies for out-of-school-time programs. *New Directions for Youth Development*, *105*, 71–89.
- Lerner, R., & Busch-Rossnagel, N. (1981). *Individuals as producers of their development*. New York: Academic.
- Mahoney, J., Cairns, B., & Famer, T. (2003). Promoting interpersonal competence and educational success through extracurricular activity participation. *Journal of Educational Psychology*, *5*, 409–418.
- Mahoney, J., Harris, A., & Eccles, J. (2006). Organized activity participation, positive youth development, and the over-scheduling hypothesis. *Society for Research in Child Development Social Policy Report*, vol. XX, Num. IV.
- Mahoney, J., Larson, R., Eccles, J., & Lord, H. (2005). Organized activities as development contexts for children and adolescents. In J. Mahoney R. Larson & J. Eccles (Eds.), *Organized activities as contexts of development: Extracurricular activities, after-school and community programs* (pp. 3–22). Mahwah, NJ: Lawrence Erlbaum.
- Marsh, H. (1992). Extracurricular activities: Beneficial extension of the traditional curriculum or subversion of academic goals? *Journal of Educational Psychology*, *84*(4), 553–562.
- Marsh, H. W., & Kliettman, S. (2002). Extracurricular school activities: The good, the bad, and the nonlinear. *Harvard Educational Review*, *72*(4), 464–511.
- Miller-Whitehead, M. (2003, November). *Compilation of class size findings: Grade level, school, and district*. Paper presented at the annual meeting of the Mi-South Educational Research Association, Biloxi, MS.
- National Research Council and Institute of Medicine (2002). *Community programs to promote youth development*. Washington, DC: National Academy Press.
- Patrick, H., Ryan, A., Alfred-Liro, C., Fredricks, J., Hruda, L., & Eccles, J. (1999). Adolescents' commitment to developing talent: The role of peers in continuing motivation for sports and the arts. *Journal of Youth and Adolescence*, *29*, 741–763.
- Pearce, N., & Larson, R. (2006). The process of motivational change in a civic activism organization. *Applied Developmental Science*, *10*, 121–131.
- Rhodes, J. E. (2004, Spring). The critical ingredient: Caring youth-staff relationships in after-school settings. *New Directions in Youth Development: After-school worlds* (pp. 145–161).
- Roth, J., & Brooks-Gunn, J. (2003). Youth development programs: Risk, prevention, and policy. *Journal of Adolescent Health*, *32*, 170–182.
- Roth, J., Brooks-Gunn, J., Murray, L., & Foster, W. (1998). Promoting healthy adolescents: Synthesis of youth development program evaluations. *Journal of Research on Adolescence*, *8*, 423–459.
- Ryan, R. M., & Deci, E. L. (2000). Self-Determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*, 68–78.
- Schudel, J. S. (1968). The psychological characteristics of high school athletes and non-participants in athletics: A three year longitudinal study. In G. S. Kenyon (Ed.), *Contemporary psychology of sport* (pp. 79–96). Chicago: Athletic Institute.
- Simon, J., & Martens, R. (1979). Children's anxiety in sport and nonsport evaluative activities. *Journal of Sport Psychology*, *1*, 160–169.
- Simpkins, S., Little, P., & Weiss, H. (2004). *Understanding and measuring attendance in out-of school time programs*. Cambridge, MA: Harvard Family Research Project.
- Snyder, E. E. (1975). Athletic team involvement, educational plans, and the coach-player relationship. *Adolescence*, *10*, 191–200.
- The Forum for Youth Investmen (2004, March). *Participation during out of school time: Taking a closer look* (Out-of-school Time Policy Commentary No. 6) Washington, DC: Author.
- US Census Bureau, (2000). Retrieved February 18, 2005 from US Census Bureau Online via GPO Access: <http://censtats.census.gov/data/IL/04017.pdf>
- Walker, J., Marczak, M., Blyth, D., & Bordon, L. (2005). Designing youth development programs: Toward a theory of developmental internationality. In J. Mahoney R. Larson & J. Eccles (Eds.), *Organized activities as contexts of development: Extracurricular activities, after-school and community programs* (pp. 399–418). Mahwah, NJ: Lawrence Erlbaum.
- Warren, C., Feist, M., & Nevarez, N. (2002). *A place to grow: Evaluation of the New York City Beacons*. New York: Academy for Educational Development.
- Weis, B. Little, P. & Bouffard, S. (Eds.). (2005). *Participation in youth programs: Enrollment, attendance, and engagement*. *New Directions for Youth Development*, vol. 105. [Special issue].
- Youniss, J., McLellan, J. A., & Yates, M. (1997). What we know about engendering civic identity. *American Behavioral Scientist*, *40*, 620–631.