Running head: AFTER-SCHOOL ACTIVITIES

Youth Development in After-School Leisure Activities

Denise M. Wilson, M.A., Denise C. Gottfredson, Ph.D,

Amanda B. Cross, M.A., and Melissa Rorie

University of Maryland College Park

Nadine Connell, Ph.D

Rowan University

In press, *Journal of Early Adolescence*

Abstract

Leisure activities that occur outside of the school hours may facilitate positive youth development. The experiences of youth in three categories of activities (basketball and football, other sports, and non-sports) are examined in this study. Based on prior research, it is hypothesized that students participating in basketball and football will experience more negative outcomes (i.e., problem behaviors, fewer positive peer influences, and lower academic achievement). Furthermore, specific experiences in these leisure activities are explored as potential mediators of the effects of participation. Results indicate that basketball and football participation is related to more negative experiences and outcomes, but these differences reflect selection of more at-risk youths into these activities. Implications of the findings are discussed.

Youth Development in After-School Leisure Activities

Professionals in the fields of youth development and delinquency prevention have been interested in the potential positive effects of activity participation. However, this research is challenged by two primary issues. First, youth self-select into specific leisure activities, making it difficult to separate the effects of selection from the effects of participation. Second, the specific mechanisms related to *how* participation in leisure activities might influence outcomes are unclear. This study extends previous research by examining effects of selection into leisure activity participation on outcomes including problem behaviors, peer influence, and academic achievement. Specific experiences during leisure activity participation are also examined as the potential causal processes relating activity participation to the outcomes.

Leisure Activities and Selection

Leisure activities have recently received considerable attention because of the potential to manipulate the availability of these activities for youth. In this paper, leisure activities are defined as any extracurricular activities occurring outside of the school hours that require some effort, including sports, academic clubs, and performance and fine-arts clubs. Experiences during leisure activities have been compared to school time, time spent with peers, and employment (Hansen, Larson, & Dworkin, 2003; Kahne et al., 2000; Larson, Hansen, & Moneta, 2006). These studies suggested that leisure activities sometimes were associated with more positive experiences (e.g., identity development, supports for youth development) than the comparisons.

In addition to comparisons of leisure activities to other contexts, compared to non-participation, leisure activity participation has been associated with increased educational aspirations and attainment, positive psychological outcomes, and reduced problem behaviors

(Barber, Eccles, & Stone, 2001; Fredricks & Eccles, 2006; Holland & Andre, 1987; Mahoney, Larson, Eccles, & Lord, 2005). On the other hand, some leisure activities (e.g., sports) have been positively related to delinquency, substance use, and school drop out when compared to non-participation (Agnew & Petersen, 1989; Eccles & Barber, 1999; Eccles, Barber, Stone & Hunt, 2003; Fredricks & Eccles, 2006; Mahoney, Stattin & Magnusson, 2001). Many of these studies failed to account for the voluntary nature of these activities meaning that individual characteristics influence choice of participation and outcomes. Thus, the correlation of activity participation and outcomes may be spurious. Although research has begun to control for individual characteristics (Eccles et al., 2003; Fredricks & Eccles, 2006), more of these studies are needed to determine whether the previously reported associations replicate.

Potential Benefits and Causal Processes

Mahoney et al. (2005) suggest that positive youth development includes positive functioning in the present, the reduced risk for the development of problem behaviors, and an increased likelihood for healthy adjustment in the future. This holistic view links the importance of prevention *and* promotion, both of which are necessary components for youth to become functioning and contributing adults to society. Thus the potential benefits of leisure activities are clear (e.g., intellectual development, prevention of problem behaviors such as substance use, psychological adjustment).

The causal process that may link leisure activities to changes in outcomes is less clear. There is evidence that the situational context of the activity is important; organized, structured, and supervised leisure activities lead to more positive outcomes (Agnew & Petersen, 1989; Gottfredson, Gerstenblith, Soulé, Womer, & Lu, 2004; Gottfredson, Gottfredson, & Weisman, 2001; Larson et al., 2006; Mahoney et al., 2005). Others suggest that psychological factors and

interpersonal skills such as developmental experiences, competencies learned, and supports for healthy development also are important (Hansen & Larson, 2005; Kahne et al., 2001; Larson, Wilson, Brown, Furstenburg, & Verma, 2002; Roth & Brooks-Gunn, 2003). Compared to the situational context, these intervening mechanisms have been subject to less empirical testing.

Dworkin, Larson, and Hansen (2003) developed The Youth Experiences Survey (YES) to study the psychological factors and interpersonal skills developed during leisure activities. Given that negative experiences are likely, they were also included. In the first empirical test of the YES 1.0, Hansen et al. (2003) analyzed experiences in the following five categories of activities (defined based on prior categorizations in the literature): faith-based and service, academic and leadership, performance and fine arts, community and vocational, and sports. They concluded, first, that faith-based and service activities were consistently associated with more positive experiences and less associated with negative experiences. Second, while sports were more strongly associated with gaining self-knowledge and developing emotional and physical skills, they were also associated with more negative peer interactions than the other activities. It is unclear whether the activities themselves led to these experiences or whether students with certain characteristics selected into specific activities because controls were not included.

Using a revised version of the original survey (YES 2.0), similar differences between activities were found (Larson et al., 2006). The most positive experiences were reported by students participating in faith-based activities. Students participating in academic activities reported the lowest ratings of positive experiences. Participating in sports was positively associated with initiative, emotional regulation, and teamwork and social skills, but was also the only activity which was positively related to all four negative experiences (only stress and social

exclusion were significant). Despite the suggestion that differences exist in youth experiences during participation in the different activity categories, the study does not separate potential effects of participation from possible effects of selection (i.e., controls were not included).

Confluence of Selection, Activity Participation and Youth Development

Another group of researchers have suggested that individual characteristics, activity participation, peer groups, and identity are intimately linked, and that the coalescence of these factors influences youth development (Barber et al., 2001; Barber, Stone, Hunt, & Eccles, 2005; Eccles & Barber, 1999; Eccles et al., 2003). Examining activity participation (prosocial, sports, performing arts, school involvement, and academic clubs) measured during 10th grade, they found evidence for the influence of these activities on 12th grade outcomes after controlling for selection. The strongest findings were for the effect of prosocial activities (e.g., church, community service) on decreasing risky behaviors (substance use and skipping school) and the effect of sports on increasing risky behaviors. Additional analyses suggested that activity participation was related to similar more long-term outcomes at an eight year follow-up (Barber et al., 2001; Barber et al., 2005; Eccles & Barber, 1999; Eccles et al., 2003). These results confirm the potential benefits and risks of leisure activity participation on adolescent development, even after accounting for selection.

Specific mediating effects of identity building and peer influence were not examined, however, they did find relationships among individual characteristics, activity choice, identity, peer groups, and outcomes. For instance, individuals who played sports, identified themselves as "jocks," and had friends who engaged in risky behaviors also reported higher levels of drinking. Their analyses underscore the need to unravel the complex relationships among individual characteristics, risk and protective factors, and outcomes.

Objectives and Hypotheses

Building on these studies which were conducted approximately 25 years ago with an older, predominately white, middle-SES sample, this study examines the relationship among individual characteristics, activity participation, developmental experiences, and outcomes. First, the reliability of the YES instrument used in key research summarized earlier to measure developmental experiences during activity participation, is examined for younger, mostly minority, low-SES youths. The YES was developed from focus groups and the initial tests (Hansen et al., 2003; Larson et al., 2006) were all conducted with predominately white, middle-SES, high school samples. Second, pre-existing characteristics of youth engaging in three categories of activities (basketball and football, other sports, and non-sports) are compared. Controlling for individual characteristics, the relationship between activity participation and similar outcomes (peer influence, GPA, problem classroom behaviors, delinquency) discussed in the literature is then explored. Finally, any relationship not accounted for by selection (i.e., individual level controls) is examined further to test the extent to which developmental experiences measured by the YES mediate the effects of activity participation on outcomes. Building from the negative findings for sports in prior research cited above, the competitive nature, and the possibility of low structure in basketball and football, it is hypothesized that students choosing to participate in basketball and football will experience more negative experiences and outcomes than students in the other two groups.

Methods

Sample

During the 2006-2007 school year, 447 middle school aged youth from five schools in a Mid-Atlantic county participated in an experimental evaluation of an enhanced after-school

program (ASP) (*Authors names and reference omitted for peer review*, 2008). Youth voluntarily signed up and were randomized into treatment and control groups; the treatment group received the ASP three days per week for three hours a day and the control group received treatment as usual. Study youths completed pre- and post-test surveys (measuring outcomes such as delinquency, attitudes about drugs, and peer influence) as well as the YES 2.0. The sample for this study included both treatment and control youth[1].

The YES survey provided youth with an activity survey developed by the researchers. This survey asked about activity participation Monday – Friday between the hours of 3:00 and 6:00 p.m. Youths marked which of the 47 listed activities they participated in during a typical week during the school year, and circled the activity in which they spent the most time. The circled activity became the "reference activity" and youths were asked to refer to this activity when answering 66 questions about their experiences. Of the total sample, 133 either did not complete a YES survey (N = 58, 13.0%) or did not circle a reference activity (N = 75, 16.8%). Their data were not analyzed because this research is primarily concerned with experiences in specific activities. Comparisons between the included (N = 314) and excluded cases (N = 133) showed no significant differences on gender, race, family income, and percent receiving subsidized meals. Those excluded from the study were more likely to be older (12.42 vs. 12.14 years old) and a greater percentage of students were in 7th and 8th grades (66.9% vs. 55.5%) than included cases. Included cases were also more likely to report living with both parents (40.8%) compared to those excluded from the study (27.8%).

[1] In the larger study, youth were randomly assigned to receive a specific set of ASP program services or "treatment as usual". Both the treatment and control conditions involved participation in leisure activities, the independent variable in the current study. In fact, 96% of youth (treatment and control) indicated that they participated in leisure activities during the after school hours. Therefore, the random assignment variable does not capture the behavior of interest in this study. Also, it is not likely that participation in the experimental ASP confounded the results of the current study because the ASP had no effect on any of the outcome variables included in the analysis (*Authors names and reference omitted for peer review*, 2008).

The 314 youth who completed the YES were included in all subsequent analyses. The sample is roughly half male (52%) and predominantly black (68%). Youth were on average 12.14 years old and almost half (45.5%) were in 6th grade. Students had a median family income of $33,272, 59% received a free or reduced lunch at school, and 40.8% lived with two parents.

Measures

Demographics. Demographic information on age, race, gender, parent income, family structure, and subsidized meals was collected through parent reports and youth self-reports. Parent reports were used as the primary source of information. Missing parent report data was supplemented with youth self-reports when available.

YES 2.0. Midway through the school year youth completed the YES 2.0 about experiences during leisure activities. Administration occurred during one class period and youth were given a $5 gift card as an incentive. A description of the activity survey that preceded the YES survey was included in the sample section. The YES 2.0 (Hansen & Larson, 2005) measured six dimensions of positive development (identity, initiative, basic competencies, teamwork and social skills, positive relationships, and adult networks and social capital) and four dimensions of negative development (stress, negative influences, social exclusion, and negative group dynamics)[2]. The 66 questions asked youth to indicate the extent to which they experienced a variety of situations in the referenced activity (e.g., "I had the opportunity to be in charge of a group," "I practiced self-discipline," "I did something that was morally wrong"), with a four-item response set. Scales were computed by averaging the distinct items within each scale. Reliabilities and descriptives for the scales based on this sample can be found in Table 1.

Youth surveys. Two youth surveys containing 167 questions, a pre-test upon registration and a post-test near the end of the school year, were administered to all registered students.

[2] One additional dimension of negative development (inappropriate adult behavior) was not included in this study.

Survey administration occurred during the school day and students were given a $5 gift card as an incentive for attendance at each survey.

The current research examined three outcomes measured by the youth survey: positive peer influence, problem classroom behaviors, and delinquency. Scores from the post-test were the dependent variables while pre-test measures were used as controls. In all cases, higher scores indicated a higher level of the outcome.

Positive peer influence was included because of the importance of peers during this stage of development and the exploration of peer influence in previous studies cited above. It is a 12-item scale composed of items from the *What About You* survey (Gottfredson & Gottfredson, 1992) and the *Best Friend Influence Questionnaire* (Poulin, 2003). Youth were asked four types of questions: (a) five questions referring to either friends or best friends' behaviors with a mostly true/mostly false response set, (b) three questions about how many of their friends used substances in the past three months with a three-item response set ranging from none to most, (c) one true/false question about being at a party with alcohol, and (d) three questions asking how often they talked with their friends about substance use and problem behaviors with a five-item response set ranging from never to very often. Each non-dichotomy item was transformed and the mean of the items was computed. The mean of the items was non-normally distributed with clustering on the right end of the distribution; it was squared after adding a value of one to increase normality. Two measures of problem behaviors were also included. The problem classroom behaviors scale included a subset of items from a *Problem Behaviors* scale (e.g., how often have you been suspended from school) developed by Hansen (Tanglewood Research, 2008). The mean of the three yes/no items served as an estimate of each youth's level of problem classroom behaviors. Delinquency is a seven-item count variable that measured the

number of different delinquent acts in which youth have engaged in the past year (from stealing things worth less than $5 to carrying a weapon to school). These items were also derived from the *What About You* survey. Table 1 shows the alpha reliability, mean, standard deviation, and range for each of the scales at pre- and post-test. Each of the scales was found to be reliable with alphas ranging from .63 - .80 (Table 1).

Grade point average (GPA). School records of student GPA for the 2005-2006 and 2006-2007 school years were collected for each student. The mean, standard deviation, and range for GPA can be found in Table 1.

INSERT TABLE 1

Procedures

The YES scales' alpha reliabilities, ranges, means, and standard deviations for the sample were computed and compared to the data reported by Hansen and Larson (2005) to evaluate the reliability of the YES for measuring developmental experiences in a younger, low-SES, predominantly African American sample. Correlations among the scales were also compared to those reported by the developers. Finally, we replicated the confirmatory factor analysis (CFA) conducted by Hanson and Larson (2005) to validate the factor structure of the positive and negative scales. First several indices of fit, the ratio of the χ^2/df, the nonnormed (NNFI) and comparative fit indices (CFI), and the root-mean-square error of approximation (RMSE), from a model including six positive latent scales that allowed the covariances among the scales to vary freely were compared to a single factor model in which all six positive scales loaded on one factor. These models were also compared for the negative scales using the four negative latent scales. Provided the multi-factor scales fit the data better, we examined the statistical independence (i.e., are the distinct scales related) of the positive and negative scales by

comparing the chi-square of the model that allowed the covariances to be estimated freely to one that restricted the covariances to zero.

To determine activity groupings based on the reference activity, an exploratory factor analysis was conducted including a dummy variable for each of the 47 activities (1 = participation; 0 = no participation). This analysis supported treating "non-sports" activities, "basketball and football," and all "other sports" as three distinct categories. Table 2 shows a complete list of each of the activities included in these groups. Non-sports activities seem to necessitate a higher degree of adult supervision and organization, while basketball and football may involve less organization and structure and be more competitive than non-sports and other sports.

INSERT TABLE 2

Next, analysis of variance (ANOVA) tests were computed for individual characteristics and youth outcomes measured at post-test to compare youth in the three activity categories. Each of the dependent variables, including both YES scales and outcomes, was then regressed on two dummy variables (1 = reference activity choice; 0 = not reference activity choice) for activity participation in other sports and non-sports. The basketball and football category was used as the omitted category. Ordinary least squares regressions were modeled for all dependent variables with the exception of delinquency, a count variable, which was modeled with negative binomial regression. When YES experiences or outcomes varied significantly with activity participation, to determine whether these relationships were explained by pre-existing differences in the characteristics of youth who selected into those activities, age, gender, race,

and relevant pre-test control variables[3] were included. If a significant difference across activity categories remained for an outcome after adding these controls, the YES scales were added to determine whether these experiences mediated the relationship.

Results

First, it was important to determine the generalizability of the YES to a different sample. The alpha reliabilities for the individual YES scales ranged from .76 - .89 suggesting that the YES scales were reliable in the current sample (see Table 1). The descriptives of the scales (Tables 1) were also similar to those reported by Hansen and Larson (2005) who used a sample of predominately white, 11th graders from Illinois. In addition, the correlations among the YES scales (Table 3) closely matched the correlations reported by Hansen and Larson. The difference in correlations ranged from -.25 - .14 with an average difference of -.06[4].

INSERT TABLE 3

We replicated the CFA conducted by Hanson and Larson (2005) and confirmed their findings that the six positive and four negative scales are better conceptualized as distinct scales but that these scales are statistically interrelated. First, the indices of fit for the six factor model (χ^2/df = 1.54, NNFI = .86, CFI = .86, RMS = .05) were better than the one factor positive model (χ^2/df = 1.96, NNFI = .74, CFI = .75, RMS = .07). This was also true for the four factor negative model (χ^2/df = 2.02, NNFI = .96, CFI = .97, RMS = .06) compared to the one factor negative model (χ^2/df = 2.40, NNFI = .92, CFI = .93, RMS = .08). Second, we compared the chi-square from a model that allowed the covariances between the six positive or four negative factors to be

[3] The pre-test variable is included to control for all characteristics, behaviors, attitudes, and experiences related to the outcome variable, measured at time 1. By including this control variable, we essentially examine the change in each outcome variable from pre- to post-test for those who did and did not participate in each leisure activity.

[4] Some of the correlations between positive and negative scales are positive. A reviewer questioned this finding. Although these relationships may not be intuitive, there is no reason why an activity producing a positive experience might not also produce a negative experience. For example, an experience that results in identity formation may also produce stress (r = .14). As mentioned, Hansen and Larson (2005) report similar findings.

freely estimated to a model that restricted the covariances between the factors to zero. The difference in chi square for both the positive and negative models was significant at $p < .001$, with $\chi^2 = 789.47$, df = 15 and $\chi^2 = 568.10$, df = 6 respectively.

Activity Participation and Selected Reference Group

Youths in the sample were highly involved in a variety of after-school activities. They reported participating in an average of 4.57 different activities (range = 1-22). The maximum number of activities involved in may appear high, however, factoring in the availability of activities at different times over the course of the year accounts for this finding. Activities cited most frequently were after-school program at school (N=218; 69.6%), basketball (N=137; 43.6%), football (N=115; 36.6%), and bike riding (N=63; 20.1%).

Roughly half of the youth chose an activity in the non-sports category (N=150; 47.8%) as their reference activity followed by basketball and football (N=112; 35.7%). The smallest group chose activities in the other sports (N=52; 16.6%) category. It is possible that grouping diverse activities into these categories masks important differences among them. Recall, however, that the factor analysis described in the methods section supported grouping all non-sports activities into one category and all other sports into a different category. Moreover, almost half (N=70; 46.7%) of the youths who selected non-sports as their reference category answered the questions in reference to an after-school program at school. Another third (N=49; 32.7%) answered the questions in reference to a performance and fine-arts activity. This suggests that although a wide variety of activities was included in the non-sports category, most youths in the category were referencing ASPs or fine-arts activities. Participation in other sports was more variable but also the smallest category of the three.

Activity Group Comparisons

Prior to computing the regression of the outcomes on the activity categories, correlations between the YES variables and the outcomes were computed to determine whether developmental experiences were related to the outcomes. Correlations were in the expected direction, however, positive experiences were mostly unrelated to the outcomes (Table 4). Negative experiences, on the other hand, were significantly associated with all outcome variables. The correlation table suggests that if relationships among activity participation and the outcomes are not completely attenuated by individual characteristics, negative experiences will be more likely to mediate the relationship than positive experiences.

INSERT TABLE 4

Descriptive comparisons of activity groups suggest that the groups differ on demographics and control variables (Table 5). Youth who chose basketball and football were more likely to be male compared to the other two categories and more likely to be older than non-sports participants. They were also more likely to report more delinquency, less positive peers, and had significantly lower GPAs than those participating in non-sports. At pre-test, basketball and football participants appeared to be more at risk for negative outcomes when compared to non-sports participants. These differences support the need to control for individual differences when examining the influence of activity participation on the outcomes.

INSERT TABLE 5

Regressions were conducted to relate YES experiences, positive peer influence, GPA, and problem behaviors to activity participation. There were no significant differences across activities in any of the positive YES experiences (Table 6). However, basketball and football participants reported significantly more negative experiences on all four scales than non-sports participants (Table 7). Demographics were included to examine whether this relationship was

explained by the pre-existing characteristics of the youth involved. Consistent with the research by Eccles and colleagues on peer influence (Barber et al., 2001; Barber et al., 2005; Eccles & Barber, 1999; Eccles et al., 2003), positive peer influence at pre-test was also added to the model. The controls accounted for the differences in negative influence and negative group dynamics, but not the stress or social exclusion scales. These findings suggest that there may be something about participating in basketball and football that create stress and social exclusion as compared to non-sports activities.

INSERT TABLES 6 & 7

All regressions of the outcomes on the activity categories showed similar results. The initial results including only the activity dummies showed that youth who chose basketball and football had lower GPAs, reported more delinquency, and more problem classroom behaviors than the other two categories (Table 8). Youth in basketball and football also reported less positive peers than those in the non-sports category. When controls for demographics and for the time 1 measure of each dependent variable were added, the relationship between activities and each of the outcomes was no longer significant[5]. Thus, mediation models were not run because variation in the dependent variable had been explained. Even though the demographic variables were significant in some instances, the majority of the relationship between activity choice and the outcome was accounted for by the level of the variable at pre-test. The more negative experiences of youth in basketball and football are therefore unlikely to have a causal influence

[5] GPA from 2005-2006 had extensive missing data (50.6%) because academic records were not collected electronically for students who were in elementary school the year prior to the program. The ice command in STATA (version 9.0) was used to impute this variable with eight iterations. Variables that were highly correlated (.7 or above) with pre-test GPA were included in the imputation and are as follows: gender, pre-test measures of number of suspensions, MSA math scores, MSA reading scores, problem classroom behaviors, commitment to education, and post-test measures of number of suspensions, MSA math scores, MSA reading scores, problem classroom behaviors, GPA. The results did not differ from the analyses reported using listwise deletion when a regression was run on the imputed dataset with the STATA command mim.

because these youth already had more negative peer influences, lower GPAs, and were more delinquent to begin with.

INSERT TABLE 8

Conclusions

The first objective was to confirm the applicability of the YES to other samples because of its limited prior use. Our analyses indicated that the YES was reliable and the discriminative validity was supported for a younger, low SES, mostly minority sample. This finding is important for future researchers who desire to use the YES with a sample that differs from that used by Hansen and Larson (2005).

The primary objective of the study was to explore whether students with certain characteristics choose to participate in specific activities and if such selection effects account for differences in experiences and outcomes. Overall, consistent with Eccles and colleagues (Barber et al., 2001; Barber et al., 2005; Eccles & Barber, 1999; Eccles et al., 2003), leisure activities appear to be a context in which personal characteristics and experiences coalesce relating to youth development. In general, youth who chose basketball and football were more likely to be at-risk at the pre- and post-test and were more likely to report more negative experiences during their activities. Although experiences in activities may be important, these effects were not strong enough in this study to overcome the initial risk levels of youth participating in basketball and football.

Of course leisure activities do not occur in isolation and both individual and contextual level factors will influence activity choices and intensity of participation, experiences during activity participation, and outcomes. In a review of activity participation on outcomes, Feldman and Matjasko (2005) listed a number of selection mechanisms (e.g., age, SES, parent

involvement, peer influence, size of school) that influence participation and that may drive the relationship between activity participation and development. For example, presumably younger youth (such as those included in this study) are more likely to participate in a wider variety of activities as they explore their interests. As a result, frequency or intensity of participation in any one activity may be lower to allow for greater breadth. The variety and intensity of activities younger youth participate in are also more likely to be influenced by their parents compared to older youth. Therefore parenting processes will likely influence activity selection and participation as well as developmental experiences and outcomes. Moreover if youth are forced into activity participation by parents they may be less engaged in the activity, possibly explaining the lack of association between activity participation and positive experiences. The lack of data on these additional factors makes it impossible to make further inferences about the effects of activity participation on developmental experiences and outcomes. The implications of these findings for research and activity design are discussed in the following section.

Discussion

Limitations

This research has four primary limitations. First, the external validity is unclear because the study is not generalizable to populations beyond the particular study sample used. While the study supports the use of the YES for populations other than predominately middle-SES, white high school students, the limited generalizability of our sample suggests the need for further replication.

Second, the construct validity of leisure activity participation in this study is also questionable. First, our measure of leisure activities captures only activities that occurred during the after school hours. Much of the prior research on this topic (Eccles et al., 2003; Hansen et

al., 2003; Krasnor et al., 2006; Larson et al., 2006) has included activities occurring during the non-school hours. To the extent that after school activities differ from evening and weekend activities, the results reported herein will not generalize to leisure activities more generally. Second, the activity survey measured only participation compared to non-participation in activities. Information on the context of the reference activities, the specific processes occurring during these activities, and intensity of participation was unavailable. For example, a "basketball" experience could have involved a community league, a basketball camp, or a pick-up game in the neighborhood, as long as the youth indicated that it was the activity in which he or she "spent the most time". Moreover, as mentioned, younger youth may be involved in a greater variety of activities, limiting the intensity of participation in any given activity. Lower frequency of participation may not provide enough opportunities to have appreciable effects on the experiences or outcomes.

Third, our analysis of the influence of leisure activity participation on selected outcomes is conservative in that it examines effects over a relatively short time period – one school year. By controlling for a time 1 measure of the dependent variable, we limit the outcome variability of interest to that which is not explained by the pre-test measure. That is, we examine change in each outcome measure over the course of the school year as a function of leisure activity participation. To the extent that the effect of participation in after school leisure activities on the outcomes examined here is expected to take longer than an academic year, our results are conservative.

Finally, the statistical conclusion validity is questionable because of the inherent instability of multiple regression coefficients (i.e., significant findings may be due to chance). There are a number of ways to validate statistical models, two preferred methods being cross

validation and collection of new data (Snee, 1977). Cross validation was not feasible with this sample due to the low power of the two random halves that would have resulted. Thus, we recommend the collection of new data to examine whether the results found replicate in a different sample.

Despite these limitations, there are important research and policy implications that can help to improve knowledge on positive youth development through leisure activity participation.

Future Directions for Research

Many characteristics of an activity are likely to affect whether there will be positive or negative effects, or any effect, on later outcomes. These characteristics may include the structure, setting, content, extent of participation by youth, interactions with staff, characteristics of staff, and the extent of supervision. For example, as cited above, the level of structure of an activity appears to matter and may moderate the effects of activities on intervening mechanisms and outcomes. Perhaps those involved in basketball and football were participating in low structure activities that may have also been unsupervised by adults. The finding that basketball and football participants also had fewer positive peers suggests that they may have had more opportunities for deviance and fewer opportunities for positive experiences and development; thus explaining the more negative experiences and outcomes. More in depth research on activities and their contexts is necessary to determine both mediating and moderating processes.

This research contrasted effects of different activities youth selected as having spent the most time in. As such, each youth was associated with only one major activity. Future research should examine the multiple contexts in which youth spend their time. Realistically, youth select into a *variety* of activities and examining the influence of any one type of activity on developmental outcomes likely presents an overly simplistic view of activity participation.

Krasnor, Busseri, Willoughby, and Chalmers (2006) found evidence with a large high school sample supporting two dimensions of activity involvement; breadth (i.e., the number of activities) and intensity (i.e., participation frequency). These dimensions were related and both influenced the outcomes (risk behavior, well-being, academic orientation, and social relations). However, the effect of breadth of participation was more robust. Similarly, Bartko & Eccles (2003) conducted a person oriented analysis, and a cluster analysis provided evidence for six profiles of activity involvement (sports, school, uninvolved, volunteer, high involved, and work). Overall participation (compared to the uninvolved group) was associated with positive outcomes (academic performance, problem behaviors, psychological, and behavioral functioning), but there were differences between these categories. These studies suggest the need to create a more holistic measure of youth time expenditure during the after-school hours. The experiences and competencies lacking in one activity choice may be supplemented in another. Perhaps the youth in this sample who chose non-sports also engaged in basketball and football and may have reported similar negative experiences during these activities. Future research examining the effects of multiple contexts may provide a more complete picture of the effects of leisure activities on outcomes. Perhaps such research will show that providing youth with a variety of activities targeting different experiences is a better approach to altering development than focusing on one activity or program.

Future Directions for Practitioners and Policy Makers

Our results suggest that individual characteristics were more important for explaining outcomes and developmental experiences during leisure activities than the developmental experience themselves. This is supported by the regression analyses including the control variables which account for the variation in the dependent variable. The reported developmental

experiences were not strong enough to improve youth outcomes. Therefore, it may be necessary to design activities *specifically* targeting experiences such as those measured by the YES. Only then may activities produce strong enough effects for these experiences to influence outcomes and to also reduce the more negative experiences reported by some youth. Leisure activities have the potential to be used as avenues for positive youth development but they must be developed to target specific goals and must address both positive and negative experiences that may occur during these activities.

Best practices from the after school programs and prevention research areas should be used as avenues to improve potential positive effects of leisure activities on youth development. Moreover, bridging best practices in after school programming with youth sports programs, which have tended to be disconnected, may help to broaden youth experiences and improve developmental outcomes (Coatsworth & Conroy, 2007). The tendency of youth participating in basketball and football to display more negative experiences and outcomes suggests that these youth may benefit from quality programming that includes both traditional programming and physical activities.

References

Agnew, R. and Petersen, D.M. (1989). Leisure and delinquency. *Social Problems, 36*, 332-350.

Barber, B.L., Eccles, J.S., & Stone, M.R. (2001). Whatever happened to the jock, the brain, and the princess? Young adult pathways linked to adolescent activity involvement and social identity. *Journal of Adolescent Research, 16*, 429-455.

Barber, B.L., Stone, M.R., Hunt, J.E., & Eccles, J.S. (2005). Benefits of activity participation: The roles of identity affirmation and peer group norm sharing. In Mahoney, J.L., Larson, R.W., & Eccles, J.S. (Eds.), *Organized Activities as Contexts of Development; Extracurricular Activities, After-School and Community Programs* (pp.3-22). Mahwah, NJ: Lawrence Erlbaum Associate, Inc.

Bartko, W. T. & Eccles, J. S. (2003). Adolescent participation in structured and unstructured activities: A person-oriented analysis. *Journal of Youth and Adolescence, 32,* 233-241.

Coatsworth, J.D. & Conroy, D.E. (2007). Youth sport as a component of organized afterschool programs. In Perkins, D.F. & Le Menestrel, S. (Eds.). *New Directions for Youth Development: Sports Based Youth Development* (pp. 57-74). San Francisco, CA: Wiley Periodicals, Inc.

Dworkin, J.B., Larson, R., & Hansen, D. (2003). Adolescents' accounts of growth experiences in youth activities. *Journal of Youth and Adolescence, 32*, 17-26.

Eccles, J.S. & Barber, B.L. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Journal of Adolescent Research, 14*, 10-43.

Eccles, J.S., Barber, B.L., Stone, M., & Hunt, J. (2003). Extracurricular activities and adolescent development. *Journal of Social Issues, 59*, 865-889.

Feldman, A.F. & Matjasko, J.L. (2005). The role of school-based extracurricular activities in adolescent development: A comprehensive review and future directions. *Review of Educational Research, 75*, 159-210.

Fredricks, J.A. & Eccles, J.S. (2006). Is extracurricular participation associated with beneficial outcomes? Concurrent and longitudinal relations. *Developmental Psychology, 42*, 698-713.

Gottfredson, D.C., Gerstenblith, S.A., Soulé, D.A., Womer, S.C., & Lu, S. (2004). Do after school programs reduce delinquency? *Prevention Science, 5*, 253-266.

Gottfredson, G.D. & Gottfredson, D.C. (1992). *What About You*. Ellicott City, MD: Gottfredson Associates, Inc.

Gottfredson, D.C., Gottfredson, G.D., & Weisman, S.A. (2001). The timing of delinquent behavior and its implications for after-school programs. *Criminology and Public Policy, 1*, 61-83.

Hansen, D.M. & Larson, R. (2005). The Youth Experience Survey 2.0: Instrument revisions and validity testing. Unpublished Manuscript. http://web.aces.uiuc.edu/youthdev/UnpublishedManuscriptonYES2111%20(2).doc.

Hansen, D.M., Larson, R.W., & Dworkin, J.B. (2003). What adolescents learn in organized youth activities: A survey of self-reported developmental experiences. *Journal of Research on Adolescence, 13*, 25-55.

Holland, A. & Andre, T. (1987). Participation in extracurricular activities in secondary school: What is known, what needs to be known? *Review of Education Research, 57*, 437-466.

Kahne, J., Nagaoka, J., Brown, A., O'Brien, J., Quinn, T., & Thiede, K. (2001). Assessing after-school programs as contexts for positive youth development. *Youth & Society, 32*, 421-

446.

Krasnor, L. R., Busseri, M. A., Willoughby, T., & Chalmers, H. (2006). Breadth and intensity of youth activity involvement as contexts for positive development. *Journal of Youth and Adolescence, 35*, 385-499.

Larson, R.W., Hansen, D.M., & Moneta, G. (2006). Differing profiles of developmental experiences across types of organized youth activities. *Developmental Psychology, 42*, 849-863.

Larson, R.W., Wilson, S., Brown, B.B., Furstenberg Jr., F.F., & Verma, S. (2002). Changes in adolescents' interpersonal experiences: Are they being prepared for adult relationships in the twenty-first century? *Journal of Research on Adolescence, 12*, 31-68.

Mahoney, J.L., Larson, R. W., Eccles, J.S., & Lord, H. (2005). Organized activities as developmental contexts for children and adolescents. In Mahoney, J.L., Larson, R.W., & Eccles, J.S. (Eds.), *Organized Activities as Contexts of Development; Extracurricular Activities, After-School and Community Programs* (pp.3-22). Mahwah, NJ: Lawrence Erlbaum Associate, Inc.

Mahoney, J.L., Stattin, H., & Magnusson, D. (2001). Youth recreation centre participation and criminal offending: A 20-year longitudinal study of Swedish boys. *International Journal of Behavioral Development, 25*, 509-520.

Poulin, F.S. (2003). *A Self-Report Measure of Deviancy Training and Susceptibility to Peer Pressure in Young Adolescents' Friendships*. Paper Presentation at the European Conference on Developmental Psychology, Milan, Italy.

Roth, J.L. & Brooks-Gunn, J. (2003). Youth development programs: Risk, prevention and policy. *Journal of Adolescent Health, 32*, 170-18.

Snee, R.D. (1977). Validation of regression models: Methods and examples. *Technometrics, 19*, 415-428.

Tanglewood Research. (2008). *All Stars Student Surveys*. Retrieved July 1, 2006, from http://www.allstarsprevention.com/programs/programsEvaluationOA.asp

Table 1

Scale Reliabilities and Descriptives

Scale	# Items	α	N	Range	Mean	SD
YES Scales						
Positive Experiences						
Identity	6	.76	314	1.00-4.00	2.66	.73
Initiative	12	.89	314	1.00-4.00	2.93	.69
Basic Competencies	10	.86	313	1.00-4.00	2.94	.73
Positive Relationships	8	.84	313	1.00-4.00	3.05	.72
Teamwork and Social Skills	10	.89	314	1.00-4.00	3.08	.74
Adult Networks and Social Capital	7	.87	306	1.00-4.00	2.81	.88
Negative Group Experiences						
Stress	3	.81	308	1.00-4.00	2.11	1.02
Negative Influence	4	.86	305	1.00-4.00	1.82	.95
Social Exclusion	3	.86	304	1.00-4.00	1.73	.98
Negative Group Dynamics	3	.78	301	1.00-4.00	1.86	.96
Youth Survey Scales						
Positive Peer Influence – Pre-test	12	.77	311	0.00-1.00	.83	.20
Positive Peer Influence – Post-test	12	.78	313	0.00-1.00	.78	.22
Problem Classroom Behavior – Pre-test	3	.64	311	1.00-3.00	1.35	.47
Problem Classroom Behavior – Post-test	3	.63	308	1.00-3.00	1.59	.57
Delinquency – Pre-test	7	.68	311	0.00-5.00	.46	1.00
Delinquency – Post-test	7	.80	311	0.00-7.00	.86	1.52
School Data						
2005-2006 GPA	--	--	155	.75-4.00	2.45	.75
2006-2007 GPA	--	--	309	.50-4.00	2.54	.74

Table 2

Discrete Activities within Each Activity Category Grouping

Activity Category	Activities
Other Sports	Swimming, Soccer, Track, Wrestling, Volleyball, Gymnastics, Golf, Exercising, Weightlifting, Bike Riding, Other Sports
Non-Sports	After-school Program, Boys/girls Club, Scouts, Student Government, Newspaper, Honor Society, Chess Club, Dance, Band/Music Lessons, Art Club, Chorus, Drama, Youth Groups, Tutoring, SADD, Cheerleading, Other After School Program, Other Academic Club, Other Performance and Fine Arts Based Club
Basketball and Football	Basketball, Football

Table 3

Correlations among the YES 2.0 Scales

YES Scales	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Identity	-									
2. Initiative	.64**	-								
3. Basic Competencies	.50**	.63**	-							
4. Teamwork & Social Skills	.50**	.65**	.66**	-						
5. Positive Relationships	.51**	.63**	.64**	.70**	-					
6. Adult Networks & Social Capital	.56**	.60**	.63**	.66**	.67**	-				
7. Stress	.14*	.13*	.06	.13*	.11*	.24**	-			
8. Negative Influence	.14*	.15*	.08	.11	.11	.26**	.73**	-		
9. Social Exclusion	.11	.13*	.08	.08	.10	.20**	.67**	.82**	-	
10. Negative Group Dynamics	.16**	.21**	.15**	.21**	.21**	.28**	.62**	.71**	.65**	-

Note. N's range from 301 - 314.

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

Table 4

Correlations between YES 2.0 Scales and the Outcome Measures

YES Scales	Positive Peer Influence	GPA	Problem Class Room Behavior	Delinquency
Positive Experiences				
Identity	.11	-.03	-.13*	-.16**
Initiative	.06	.02	-.09	-.04
Basic Competencies	.10	-.05	-.10	-.09
Teamwork & Social Skills	.07	-.03	-.08	-.05
Positive Relationships	.04	.00	-.08	-.07
Adult Networks & Social Capital	.03	-.13*	-.02	-.02
Negative Experiences				
Stress	-.34**	-.18**	.26**	.20**
Negative Influence	-.32**	-.19**	.22**	.20**
Social Exclusion	-.29**	-.16**	.20**	.14*
Negative Group Dynamics	-.30**	-.17**	.11*	.19*

Note. N's range from = 300 - 313.

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

Table 5

Group Differences on Demographics and Controls

	Non-Sports (N = 150)		Other Sports (N = 52)		Basketball and Football (N = 112)		
	Mean	SD	Mean	SD	Mean	SD	Contrasts
Demographics							
Age*	12.04	.92	12.05	.92	12.33	1.03	bf > ns
Gender**	.34	.48	.31	.47	.87	.34	bf > ns, os
Race	.67	.47	.56	.50	.74	.44	
Income	41902.58	35383.37	44757.66	34122.97	42008.87	39586.39	
% Living with Two Parents	39.33	.49	46.15	.50	40.18	.49	
% Subsidized Meals	57.05	.50	53.85	.50	63.64	.48	
Time 1							
Measures							
Positive Peer Influence**	3.50	.59	3.46	.67	3.24	.75	bf < ns
GPA*	2.55	.75	2.59	.66	2.23	.74	bf < ns
Problem Classroom Behaviors	1.33	.46	1.25	.37	1.41	.51	
Delinquency*	.34	.85	.33	.58	.68	1.28	bf > ns

Notes. ns = non-sports, os = other sports, bf = basketball and football. N's for scales range from 72 – 150 for Non-Sports, 25 – 52 for Sports, and 58 – 112 for Basketball and Football.

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

Table 6

Regression of Positive YES Experiences on Activity Categories

	Other Sports		Non-Sports	
	B	*SE B*	*B*	*SE B*
Identity	.09	.12	.02	.09
Initiative	.10	.12	-.07	.09
Basic Competencies	-.21	.12	-.08	.09
Teamwork and Social Skills	-.16	.12	-.09	.09
Positive Relationships	-.06	.12	.03	.09
Adult Social Networks and Social Capital	-.26	.15	-.20	.11

Notes. Omitted category is basketball and football. N's for models range from 306 – 314.

R^2's range from .00 - .13. No significant differences.

Table 7

Regression of Negative YES Experiences on Activity Categories

	Other Sports				Non-Sports			
	Model 1		Model 2		Model 1		Model 2	
	B	*SE B*	*B*	*SE B*	*B*	*SE B*	*B*	*SE B*
Stress	-.09	.17	.05	.18	-.49**	.13	-.32*	.14
Negative Influence	-.21	.16	.01	.17	-.43**	.12	-.19	.13
Social Exclusion	-.03	.16	.07	.18	-.46**	.12	-.34*	.14
Negative Group Dynamics	-.15	.16	.06	.17	-.47**	.12	-.24	.13

Notes. Model 1 includes only the two activity dummy variables. Model 2 includes controls for age, gender, race, and positive peer influence at pre-test. Omitted category is basketball and football. N's for models range from 302 – 314. R^2's range from .04 - .13.

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

Table 8

Regression of Outcomes on Activity Categories

	Positive Peer Influence				GPA				Problem Classroom Behaviors				Delinquency			
	B	*SE B*	*B*	*SE B*	*B*	*SE B*	*B*	*SE B*	*B*	*SE B*	*B*	*SE B*	*B*	*SE B*	*B*	*SE B*
Reference Activity[a]																
Other Sports	.09	.12	.02	.12	.49**	.12	.13	.12	-.19*	.10	-.03	.09	-.92**	.34	-.26	.36
Non-Sports	.26**	.09	.14	.09	.30**	.09	-.01	.10	-.15*	.07	-.04	.07	-.70**	.24	-.22	.26
Control Variables																
Age	--	--	-.11**	.04	--	--	-.02	.05	--	--	.08**	.03	--	--	.19	.11
Gender	--	--	.10	.08	--	--	-.12	.09	--	--	.07	.06	--	--	.49*	.25
Race	--	--	.16*	.08	--	--	.08	.08	--	--	.05	.06	--	--	.02	.23
Positive Peer Influence	--	--	.52**	.06	--	--	--	--	--	--	--	--	--	--	--	--
GPA	--	--	--	--	--	--	.77**	.05	--	--	--	--	--	--	--	--

Problem																
Classroom	--	--	--	--	--	--	--	--	--	--	.55**	.06	--	--	--	--
Behavior																
Delinquency	--	--	--	--	--	--	--	--	--	--	--	--	--	--	.38**	.09
R^2	.03		.31		.06		.64		.02		.28		--		--	
Pseudo R^2	--		--		--		--		--		--		.02		.05	
N of Cases	313		310		309		151		309		306		311		308	

[a]Omitted Category is Basketball and Football.

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