

Effects of YMCA Middle School Youth
Institute Participation on School
Performance and Attendance
Academic Year: 2010 - 2011

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Table of Contents

	Page
Introduction	3
Methods	3
Data Collection	3
Sample	4
Measures	7
Analyses	8
Results	8
One Year Comparisons between Middle School Youth Institute and Comparison Students on Academic Measures	8
Two Year Comparisons between 8 th Grade Middle School Youth Institute and Comparison Students on Academic Measures	9
Discussion	10
References	11

Introduction

The YMCA Middle School Youth Institute (MSYI) is a school-based academic support and enrichment program that uses technology as an integral mechanism for promoting positive youth development and enhancing the academic success of low-income, culturally-diverse middle school students at Stephens Middle School in the Long Beach Unified School District (LBUSD). Program participants can be involved in the program in several ways. First, some participants are part of a daily, school-based after-school program that incorporates homework assistance, recreation, technology, academic enrichment and community service. Second, some participants are accepted into a smaller, four-week summer program which includes a week-long wilderness retreat that focuses on team building and leadership skill development which is followed by three weeks of immersion into high-end technology and movie-making. Finally, some program participants are involved in both program components.

The primary program goals are: (a) To improve the technology knowledge and skills of participants, (b) To use positive youth development principles and project-based learning to develop leadership and decision-making skills, and (c) To improve youth attitudes toward education and their academic achievement. The purpose of this report is to present the effects of the program on participants' academic performance including grades, tests scores and school attendance during the 2010 – 2011 school year. A second analysis was also completed, investigating the effects program participation over a two-year period.

Methods

Data Collection

All of the data used for this research was collected from secondary sources. Both youth and their parents signed consent forms agreeing to allow the YMCA and school district to release information to the research team. The YMCA provided the researchers with a computer file that

contained school district identification numbers, days of attendance in the after-school program between September, 2010 and June, 2011, and whether the participant had attended the summer program in 2010. LBUSD then provided the researchers with academic grade point average (GPA), cumulative academic GPA, total GPA, cumulative total GPA, absences, truancies, and standardized test scores from all students enrolled at Stephens. The two files were then matched by student identification numbers so program participants could be classified for analysis.

The academic measures used in this study came from the semester prior to the start of or at the beginning of the 2010 – 2011 school year (pre-test) and the final semester of the 2010 – 2011 school year (post-test). For 6th graders, the pre-test measure was taken from the first semester of the 2010 – 2011 school year since the elementary school report card was substantially different. For 7th and 8th graders, the pre-test measure was taken from the last semester of the 2009 – 2010 school year. One study limitation is that youth may have been involved in the program prior to the collection of these pre-test measures since the first grading point for 6th graders may have come after they started the program and 7th and 8th graders may have been in the program the prior year as well.

Sample

One-hundred and forty-one youth participated in the MSYI program at least once during the 2010 – 2011 school year. However, in order to be designated as a MSYI participant for these analyses, participants had to attend at least 10 days of the after-school program. The attendance ranged from 10 to 204 days with an average of 126 days with a standard deviation of 57. Of the 141 MSYI youth, 126 (89%) met this criteria and were designated as MSYI participants. Of these, 82 (65%) had both parent and youth consents as well as useable data and were included in these analyses.

The district provided data on 816 Stephens students who had not participated in the MSYI program. Of the 816 students, 759 (93%) had useable data and were included in these analyses as the comparison group.

For the two-year analysis, only students who had data over the two years (beginning in 2009 and ending in 2011) were selected. Three years (2008-09, 2009-10, 2010-11) of attendance data was taken into account when determining the MSYI sample. In order to be classified as MYSI student, youth had to have attended at least 50 days within the last three years. The three year attendance ranged from 51 to 594 days, with an average of 280 days and a standard deviation of 183. The two-year analysis consisted of only 8th graders, since they were the only group that had the pre- and post-test measures. The two-year MSYI sample consists of 27 youth and the comparison sample consists of 187 youth.

Prior to examining program effects, the researchers explored whether there were ethnic, gender or grade differences between MSYI participants and comparison students for both the one-year and two-year samples. No significant differences were found. Table 1 presents demographic descriptions of the MSYI and comparison sample for the 2010-11 school year. Table 2 presents the demographic descriptions of the two-year MSYI and comparison sample.

Table 1
 Sample Description of YMCA Middle School Youth Institute Participants and Comparison
 Students (2010 - 2011)

	YMCA MSYI Participants (N = 82)		Comparison Students (N = 759)	
	%	N	%	N
Gender				
Male	52%	43	54%	411
Female	48%	39	46%	348
Ethnicity				
Latino	66%	54	64%	486
African-American	20%	16	17%	127
Asian-American/Filipino/Pacific Islander	11%	9	16%	126
European-American	2%	2	2%	12
Other	1%	1	1%	8
Grade				
6 th	33%	27	33%	254
7th	43%	35	32%	240
8th	24%	20	35%	265

* Significant differences between groups at the .05 level

Table 2

Sample Description of YMCA Middle School Youth Institute Participants and Comparison Students (Two-Year Analysis 2009 - 2011)

	YMCA MSYI Participants (N = 27)		Comparison Students (N = 187)	
	%	N	%	N
Gender				
Male	37%	10	55%	103
Female	63%	17	45%	84
Ethnicity				
Latino	67%	18	69%	129
African-American	18%	5	12.5%	23
Asian-American/Filipino/Pacific Islander	11%	3	17%	32
European-American	4%	1	1%	2
Other	0%	0	.5%	1

* Significant differences between groups at the .05 level

Measures

The first grade measure was academic grade point average (GPA) which was the mean of the four academic courses required of all middle school students (Language Arts, Math, History, Science) for a specific semester. The second grade measure was total grade point average (GPA) which was the mean of all courses taken for the semester. The third and fourth grade measures, for 7th and 8th graders only, were cumulative academic GPA and cumulative total GPA. These measures combined GPA across semesters. Absenteeism was measured using the number of days the student missed during that semester. Truancy was the number of unexcused absences from

school during that semester. Test scores were measured using the standardized scores from the district content standards tests for English Language Arts (ELA) and Math.

Analyses

Chi square tests were used to compare the demographic differences between the two groups. Multivariate analysis of co-variance (MANCOVA) was used to compare outcome differences between MSYI participants and comparison students while controlling for baseline.

Results

One Year Comparisons between Middle School Youth Institute and Comparison Students on Academic Measures

As shown in Table 3, MSYI participants had significantly fewer absences, $F(1, 764) = 6.65, p < .05$, and truanancies, $F(1, 764) = 4.43, p < .05$, than comparison students. There were no grade differences between the two groups. GPA difference scores were also calculated to determine the percentage of MSYI youth whose academic GPAs increased over the academic year. Thirty-one (38%) of the 82 MSYI participants improved their academic GPAs over the year compared to 40% ($N = 304$) of comparison students.

Table 3

Comparisons of School Performance between MSYI Participants and Comparison Students for 2010-2011

Measure	MSYI Participants		Comparison Students		F-Value
	Adjusted Mean	N	Adjusted Mean	N	
Academic GPA	2.53	80	2.52	709	.01
Total GPA	2.72	80	2.70	711	.13
Cumulative Academic GPA	2.43	53	2.40	453	.50
Cumulative Total GPA	2.61	53	2.58	453	.60
Absences	5.43	75	7.78	692	6.65**
Truancies	2.15	75	3.59	692	4.43**
Content Standards					
English Language Arts	322.75	75	323.57	686	.03
Math	347.84	75	342.42	684	.83

* Approaching significance at the .10 level.

** Significant differences between groups at the .05 level

Two Year Comparisons between 8th Grade Middle School Youth Institute and Comparison Students on Academic Measures

As shown in Table 4, over the course of two years, 8th grade MYSI participants had significantly higher academic GPAs, $F(1, 211) = 4.04, p < .05$, and somewhat higher total GPAs, $F(1, 211) = 2.81, p < .10$, than comparison students. Sixteen (59%) of the 27 MSYI 8th graders improved their academic GPAs over the two years, compared to 45% (N = 84) of comparison students.

Table 4

Two Year Comparisons of School Performance between 8th Grade MSYI Participants and Comparison Students (2009 – 2011)

Measure	MSYI Participants		Comparison Students		F-Value
	Adjusted Mean	N	Adjusted Mean	N	
Academic GPA	2.53	27	2.20	187	4.04**
Total GPA	2.69	27	2.44	187	2.81*
Cumulative Academic GPA	2.45	27	2.32	182	2.25
Cumulative Total GPA	2.62	27	2.52	182	1.47
Absences	7.77	27	7.11	187	.18
Truancies	3.40	27	3.41	187	.00
Content Standards					
English Language Arts	334.86	25	330.38	179	.49
Math	359.60	26	355.76	180	.20

* Approaching significance at the .10 level.

** Significant differences between groups at the .05 level

Discussion

One of the primary goals of the YMCA Middle School Youth Institute is to promote academic success for low-income, culturally-diverse youth. MSYI participants in the 2010 – 2011 school year were significantly less likely than their non-involved counterparts to be absent or truant from school. It is encouraging that the MSYI group was more likely to attend school since school attendance has been linked to both better academic achievement (Roby, 2004; DeKalb, 1999; Shutt, 2000) and a decreased risk of school dropout (National Education Goals Panel, 1994). Given the link between school attendance and achievement, it is possible that, if the higher levels of attendance continue, MSYI youth may also, over time, exhibit better grades than their peers.

Unlike last year, when 7th and 8th grade MSYI youth had better cumulative grade point averages and better math test scores, no differences were found on academic measures within the year sample. These may suggest the need to focus on improving the homework and educational supports for program youth or that the program impact on grades takes longer than a year. The results of the two-year evaluation provide an indication that the latter explanation may be true although the sample size is small. Among those 8th graders who had been involved in the program since 6th grade, MSYI participants had a significantly higher academic GPA and a somewhat higher total GPA than non-involved youth. The findings reported here, combined with those from prior years, provide some support for the notion that the MSYI can have a positive impact on educational success both by improving school attendance and by increasing academic achievement. As noted in prior reports, efforts to obtain consents from parents and youth to participate in the research may prove beneficial as only 58% of the youth involved in the program were included in these analyses.

References

- DeKalb, J. (1999). Student truancy. Eugene, OR: ERIC Clearinghouse on Educational Management, ED429334.
- National Education Goals Panel (1994). The National Education Goals Report: Building a Nation of Learners. Washington DC: U.S. Government Printing Office.
- Roby, D. E. (2004). Research on school attendance and student achievement: A study of Ohio schools. *Educational Research Quarterly* 28(1), 3 – 16.
- Shutt, T. R. (2000). The relationship between absenteeism and academic achievement in Metropolitan Tennessee. Tennessee State University.