Educational Outcomes for Boys & Girls Club Members in California, 2021-22

July 2024

BOYS & GIRLS CLUBS

RESEARCH FOR ACTION

Acknowledgements

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About Research for Action

Research for Action (RFA) is a Philadelphia-based nonprofit organization. We seek to use research as the basis for the improvement of educational opportunities and outcomes for traditionally underserved students. Our work is designed to strengthen public schools and postsecondary institutions; to provide research-based recommendations to policymakers, practitioners, and the public at the local, state, and national levels; and to enrich the civic and community dialogue about public education. For more information, please visit our website at www.researchforaction.org.

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Introduction

As a leader among out-of-school time (OST) providers, Boys & Girls Clubs of America (BGCA) has as its mission "to enable all young people, especially those who need us most, to reach their full potential as productive, caring, responsible citizens."[1] They do so through the work of more than 4,700 local club facilities that serve approximately 4.3 million young people in a typical year.[2] In California, BGCA served nearly 196,000 Club members across nearly 900 sites in 2022.

In line with best practices for high-quality OST programming and youth development, Boys & Girls Club's programming focuses on the program environment (e.g., physical safety, presence of routine/structure and social norms), the establishment of positive relationships (e.g., adult-youth and youth-youth), opportunities for youth development (e.g., engagement, self-direction, and skill-building) and opportunities for families to engage.[3] Research has consistently shown that participation in high-quality OST programming, including BGCA, has a positive impact on a young person's social and emotional development, academic achievement, and engagement in risky behaviors.[4]

The overall aim of this study is to assess the educational outcomes of young people who participated in any of California's BGC programs.[5] Our study extends prior research on Boys & Girls Club programming to address several limitations of prior work, thus offering a more rigorous examination of impact. Similar to prior work, our study utilizes self-reported data from surveys of Club members but also triangulates self-reports with statewide administrative educational records, which are less prone to measurement error and bias. Additionally, while some studies compare outcomes of participating young people to non-participating young people, they tend to focus on specific programs offered at Clubs or Clubs in a specific city. In contrast, this study leverages a comparative design of data from across the state, thus improving the generalizability of the findings across contexts.

In this introductory section, we describe the specific goals and research design of our study. We also provide details about the sample and its limitations. Following the introduction, we present the results of our analysis of the educational outcomes of BGC members in California in order to understand the extent to which BGC programming helps to support student success and improve educational outcomes for young people.

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[1] https://www.bgca.org/about-us/our-mission-story

[2] Boys & Girls Clubs of America, 2020

[3] Hartmann, et. al. 2017; Boys & Girls Clubs of America, 2020

[4] Lauer, et al., 2006; Durlak, Weissberg, & Pachan, 2010; Regional Education Laboratory, 2004; Arbreton, 2009; Arbreton, Sheldon, & Herrara, 2005; Enns, 2019

[5] This report uses the term "educational outcomes" to refer to a range of school-based outcomes, including grades, test scores, grade promotion, and discipline incidents.

What are the research goals and design of this study?

This report examines statewide OST programming offered by Boys & Girls Clubs (BGC) in California and is part of a larger study of the impact of BGC. To conduct the research presented in this report, Research for Action (RFA) partnered with Boys & Girls Clubs of America and local Club organizations in California and acquired data from the California Department of Education.

Table 1 below elaborates on the specific goals of this research, the associated research questions, and the analytic approach taken to answer each question. Further description of our analytic approach and definitions of each studied outcome can be found in Appendix A.

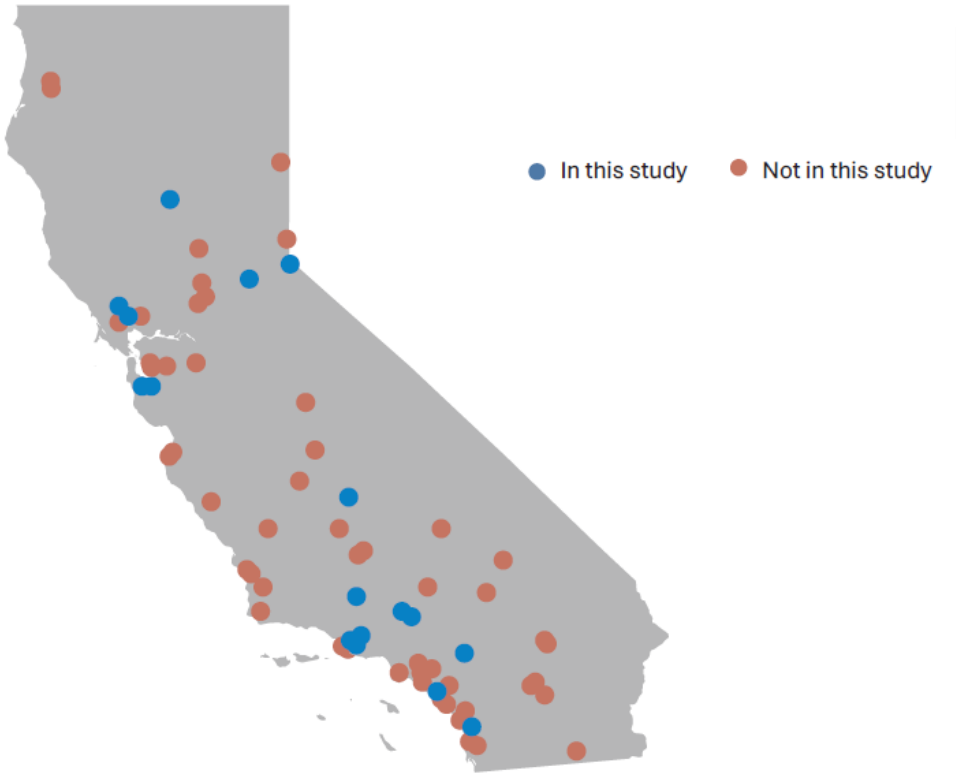
Table 1. Research goals, questions, and analytic approaches used in this report

Research Goal	Research Question	Analytic Approach
Primary goal: To understand whether BGC programming helps to support student success and improve educational outcomes for Club members.	1. What are the characteristics and educational outcomes of young people who participate in Boys & Girls Clubs?	**Descriptive analyses** comparing socio-demographic and educational outcomes of BGC members, overall and by degree of participation, to statewide averages of non-Club members.
	2. How do Club members fare compared to similar non-Club members on educational outcomes?	**Quasi-experimental design** using propensity scores to match Club members to similar non-Club members, based on youth socio-demographic characteristics, prior year educational outcomes, and enrolled school.
	3. How do educational outcomes vary across student subgroups?	**Quasi-experimental design** comparing educational outcomes of Club members to similar non-Club members, by grade-level and socio-demographic characteristics.
Secondary goal: To understand the utility and/or limitations of student self-reported educational data for program adaptation and revision	4. How do educational outcomes measured by administrative data compare to BGCA's National Youth Outcomes Initiative (NYOI) self-reported outcomes among Club members?	**Descriptive analyses** comparing members' self-reported measures to educational outcome data reported by the state.

Who is included in this study?

The sample that informs this study represents approximately one-quarter of total Club organizations and BGC members in California in 2021-22.[6] In total, BGC participation data from 2021-22 was collected from 28% of Club organizations in California (36 out of 129), covering 26% of Clubs (234 out of 884). Figure 1 shows this coverage visually by mapping each Club location and showing which clubs' data were included in this study.

Figure 1. Statewide map showing locations of Boys & Girls Clubs, by whether or not their data is included in this study, 2021-22



Data source: BGC participation data (2021-22)

From the 234 Clubs included in this study, we obtained data for 30,917 Club members. We were able to also obtain educational outcomes data for 17,856 of these members (58%) from statewide administrative records. Table 2 below shows the number of students included in each analysis, based on data availability and analytic approach.

Table 2. Number of students included in the analysis by research question

	Number of Students in Each Analytic Sample
Research Question 1: What are the characteristics and educational outcomes of young people who participate in Boys & Girls Clubs?	
BGC members with participation and administrative education data	17,856
Non-Club members with administrative education data statewide[7]	6,037,077

7 Since not all Club organizations provided participation data, some young people in this group may have attended BGC programming at a Club organization that did not share data. See more discussion in the limitations section.

Research Questions 2 & 3: How do Club members fare compared to similar non-Club members on educational outcomes? How do educational outcomes vary across student subgroups?	
BGC members with participation and administrative education data, excluding non-matched students	12,948
Non-Club members with administrative education data who were similar to at least one BGC Club member	12,948
Research Question 4: How do educational outcomes measured by administrative data compare to BGCA's NYOI self-reported outcomes among Club members?	
BGC members with participation, administrative education, and NYOI survey data	3,033

Data source: BGC participation data and California Department of Education administrative data (2021-22).

Limitations

There are three design limitations to this study.

- **First, our analysis may underestimate descriptive outcome differences between BGC members and non-Club members.** As is shown in Figure 1 above, not all Clubs in California provided participation data that could be used for this study, which means that some young people in the comparison group of "non-Club members" may have attended BGC programming at a Club that did not share data. This means that non-Club member outcome data may inadvertently include some BGC members. This limitation is not likely to alter our quasi-experimental impact estimates, which matches members to non-members based in part by their enrolled school. Since Clubs tend to draw from unique geographies, this makes it unlikely that any comparison students participated in Club programming.

- **Second, the impact of BGC on educational outcomes in this study rests on observational data. Thus, the unobserved could be a source of potential bias, unlike a randomized study.** The study design for our second and third research questions uses propensity score matching to identify non-Club members who are similar to Club members. This methodology is intended to approximate a randomized control trial where Club members and non-Club members differ, on average, only by their exposure to BGC. However, the matching method is constrained by what is observable, meaning there may be unobserved characteristics that distinguish Club members from non-Club members that are associated with educational outcomes. This limitation is further discussed in Appendix A.

- **Third, this study includes outcome measures that may not adequately measure the full impact of a multipurpose youth program such as BGCA.** Research suggests that some of the primary effects of youth programs, such as family employment, homework completion, access to new opportunities, and youth health and wellness, cannot be fully measured by existing data collection and analysis strategies. Additionally, educational outcome measures such as standardized test scores are shown to be an unreliable metric

7 Since not all Club organizations provided participation data, some young people in this group may have attended BGC programming at a Club organization that did not share data. See more discussion in the limitations section.

for measuring student achievement.[8] This limitation is further discussed in Appendix A. Given the multi-purpose nature of BGCA programs and experiences, future studies or evaluations should consider adopting multiple measures to fully understand how participating in BGCA is linked to changes to members' experiences in schools.

Section 1: Supporting student success and improving educational outcomes for Boys & Girls Club members

In this section, we examine the participation, socio-demographic characteristics, and educational outcomes of young people who participate in Boys & Girls Clubs. Using statewide data, we first compare socio-demographic characteristics between BGC members and the general population of non-Club members in California. Second, we how frequently they participated in BGC programs. Then, we examine their educational outcomes, first descriptively and then in a comparative context using statistical methods (i.e., propensity score matching) to estimate the impact of BGC participation on educational outcomes.

Who participated in Boys & Girls Clubs and to what degree?

Socio-demographic characteristics of BGC members in California

Before turning to the educational outcomes of BGC members, we first take a look at how BGC members included in this study compare to non-Club members on a range of socio-demographic characteristics (Table 3). Research shows that the socio-demographic characteristics of young people are associated with their educational experiences and access to opportunities, which can directly impact student outcomes.[9] Thus, any observed differences in educational outcomes between BGC members and non-members would likely reflect their different educational experiences and opportunities just as much as participating in BGC programming. Based on 2021 data, BGCA reported that 62% of its participants nationwide came from households that qualified for free/reduced lunch programs, compared to the national rate of 52%. Additionally, the organization hosts 275 clubs in public housing and 2,277 on Native lands, making it the largest youth development provider to Native communities.[10] These organization-level factors may influence the populations BGCA serves and how they compare to the overall youth population.

Table 3. Socio-demographic characteristics of BGC members and non-Club members included in this study

The percent of students in each sample who were	BGC members *(N= 17,856)*	Non-Club members *(N=6,037,077)*
Gender		
Female	37.4%	39.8%
Male	43.6%	42.2%
Neither male nor female	0.0%	0.1%

[8] Tienken et. al., 2017; White et. al., 2016.

[9] Au, 2014; Johnson, Boyden, & Pittz, 2001

[10] (2022) "2022 National Outcomes Report: Measuring the Impact of Boys & Girls Clubs," National Youth Outcomes Initiative.

Data unavailable	18.9%	17.9%
Race / Ethnicity		
Asian	3.5%	9.6%
Black or African-American	6.2%	4.4%
Hispanic or Latinx	44.6%	45.6%
White	21.1%	17.3%
Other	5.1%	4.3%
Data unavailable	19.6%	18.9%
Grade-level		
K-2	29.2%	22.1%
3-5	38.0%	22.0%
6-8	24.3%	22.6%
9-12	8.4%	33.3%
Urbanicity[11]		
Urban	73.3%	76.9%
Suburban	7.2%	4.3%
Rural	0.2%	0.5%
Receiving Special Education Services (has an IEP or 504 plan)		
Yes	10.5%	11.4%
English Learner		
Yes	24.1%	23.6%
Economically Disadvantaged		
Yes	67.0%	65.3%

Data source: BGC participation data and California Department of Education administrative data (2021-22).

Boys & Girls Clubs in California serve a population of young people whose socio-demographic characteristics are similar to the general population.

- The composition of Club members was similar to that of the general population in terms of gender, urbanicity, economic advantage, English learner status, and special education status.
- The main differences observed were by grade level, with BGC serving a smaller percentage of youth at the high school level and a greater percentage of youth in grades 3-5.

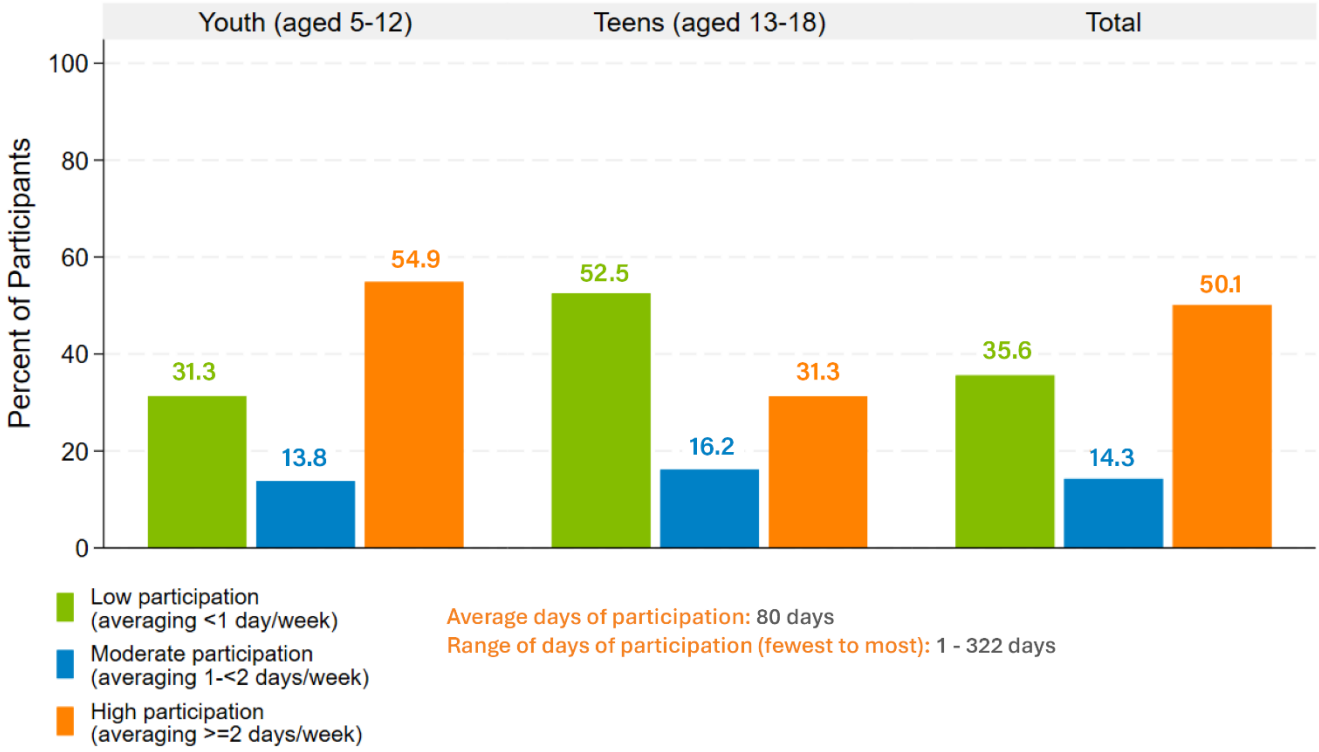
[11] This urbanicity measure is based on the U.S. Department of Agriculture (USDA) Economic Research Service (ERS) 2010 Rural-Urban Commuting Area (RUCA) Codes, which classifies U.S. census tracts and zip codes based on measures of population density, urbanization, and daily commuting. See more about this measure here: USDA ERS - Rural-Urban Commuting Area Codes. From the 9 levels in the Primary RUCA codes, we condensed the measures down to 3-levels to facilitate analyses across multiple measures.

- The Club members studied had a slightly larger percentage of White and a slightly smaller percentage of Asian youth, compared to non-Club youth.

Degree of BGC participation

In this study, all Club members participated in programming an average of 80 days over the course of the 2021-22 school year, equivalent to about 2 days per week. However, Club member attendance ranged widely, from 1 to 322 days. In Figure 2, we look more closely at degree of participation in BGC programming (i.e., low, moderate, and high) in California in 2021-22, overall and by the age of the participant.

Figure 2. Percent of BGC Club members by degree of participation, overall and by age group



Notes: Participation rates were calculated over the duration of their membership the 2021-22 school year. The total sample size for this analysis was 17,856 Club members (14,260 Youth and 3,596 Teens). Data source: BGC participation data (2021-22).

Figure 2 shows:

- **Half of Club members (50%) had high participation**, averaging 2 or more days of participation per week over the course of their membership.
- **About one third of Club members (36%) had low participation,** averaging less than 1 day of participation per week.
- **In addition to being less likely to participate (see Table 3), a greater share of Teen Club members (those in the 13-18 age range) participated less frequently**, with 53% having low participation rates compared to 31% of Youth (those aged 5-12).[12]

[12] This aligns with prior research which found that teens attend afterschool programming less frequently than their younger peers, due to a combination of factors including an increased number of activities available to teens, employment opportunities, and/or family commitments (Afterschool Alliance, 2020).

Table 4 below shows the ways participation varied by socio-demographic characteristics. Each row shows the share of Club members in each socio-demographic group with low, moderate, and high Club participation. For example, the first row shows the share of female identified Club members with low (35.8%), moderate (14.8%), and high (49.4%) participation.

Table 4. Socio-demographic characteristics of BGC members by degree of BGC participation

	Percent of club members with…			
	Low participation *(Less than a day per week)*	**Moderate participation** *(About 1 day per week)*	**High participation** *(2 or more days per week)*	**Number of Club members**
Gender				
Female	35.8%	14.8%	49.4%	6,685
Male	39.7%	14.8%	45.5%	7,794
Neither male nor female	--	--	--	--
Race / Ethnicity				
Asian	45.4%	8.2%	46.5%	624
Black or African-American	41.6%	12.6%	45.8%	1,099
Hispanic or Latinx	33.6%	14.1%	52.3%	7,961
White	44.1%	17.2%	38.8%	3,762
Other	40.5%	17.5%	42.0%	916
Urbanicity				
Urban	37.5%	14.0%	48.5%	13,083
Suburban	43.0%	22.3%	34.7%	1,280
Rural	41.7%	--	--	36
Economically Disadvantaged				
Yes	33.3%	14.1%	52.6%	11,970
No	40.3%	14.6%	45.1%	5,886
English Learner				
Yes	25.9%	13.1%	61.0%	4,312
No	38.7%	14.6%	46.7%	13,544
Receiving Special Education Services (has an IEP or 504 plan)				
Yes	41.6%	13.7%	44.7%	1,876
No	34.9%	14.4%	50.8%	15,980

Note: -- indicates data was suppressed due to small cell size.
Data source: BGC participation data and California Department of Education administrative data (2021-22).

The table above shows:

- **Along most of the social-demographic dimensions we examined, degree of participation patterns roughly mirrored those of Club members overall (see Figure 2), with about half of Club members having high participation, a relatively small share of Club members having moderate participation, and the remainder having low participation.** For example, 49% of females had high participation (2 or more days a week), 15% had moderate participation, and the remaining 36% had low participation (less than a day a week).
- In some cases, the shares of participants with high and low participation were more evenly distributed or reversed, with greater shares of participants with low participation than high. Participation challenges were most heavily concentrated among Asian students, White students, and suburban students (with 46%, 44%, and 43% having low participation, respectively).
- The socio-demographic group with the largest share of Club members with high participation was English Learners, 61% of whom had high participation.

Summary: Who participates in BCG and to what degree?

Overall, the data suggest that Clubs successfully promote participation across the general population, as the shares of Club members closely aligned to those of non-Club members across socio-demographic groups. About half of Club members had high participation, and participation was particularly successful among English Learners, with 61% having high participation.

Yet, participation challenges are notable for some school-aged young people, particularly those at the high school level. Similar to other OST programs,[9] young people in grades 9-12 were underrepresented in programming, making up just 8% of all Club members despite comprising 33% of the general population. Older young people also participated less frequently; 53% of Teens participated less than one day a week, on average. Additionally, young people identified as Asian were underrepresented among BGC membership compared to the general population (4% compared to 10%) and had a greater likelihood than their peers of having low participation.

Educational outcomes of BGC members compared to non-Club members statewide

Now that we understand who participated in BGC programming (and to what degree) in 2021-22, in this section, we begin to examine how the educational outcomes of Club members compared to non-Club members statewide, starting first with descriptive differences. As discussed above, the differences we see in outcomes below are likely due to a mix of Club members' and non-Club members' unequal experiences and opportunities as well as potential impacts of BGC programming. We follow this descriptive analysis with results from statistical models to address compositional differences in Club and non-Club members observed in the previous section.

Table 5. Educational outcomes among BGC members compared to non-Club members

Percent of young people with each outcome	Club members	Non-Club members
School attendance rate of at least 95%	44.7%	45.3%
Passed a standardized state exam in math	30.1%**	33.1%
Passed a standardized state exam in English	39.8%**	46.7%
7th-12th grade students who received a Grade Point Average of 2.5 or higher[13]	36.7%**	30.4%
Received zero suspensions[14]	96.6%**	97.2%

*Notes: Statistical significance denoted by: * p<0.05; ** p<0.01. Sample sizes vary by outcome and group, ranging from 3,216 to 17,844 Club members and 2,582,998 to 5,972,132 Non-Club members. Specific sample sizes for each item can be found in Appendix Table B1. Data source: BGC participation data and California Department of Education administrative data (2021-22).*

Table 5 shows that overall, educational outcomes among Club members compared to non-Club members were mixed. Compared to non-Club members, a significantly greater share of Club members earned a GPA of 2.5 or higher (37% vs. 30%). However, Club members had less favorable outcomes than their peers in terms of standardized testing and suspension rates. No difference was found in terms of high attendance rates. This shows that Club members are not systematically higher or lower performing than non-Club members, rather that the outcomes vary.

The patterns seen here in academic achievement and suspensions might be impacted by unequal opportunities available to youth in these two groups. While Table 3 shows that the socio-demographic characteristics of Club members and non-Club members in these analyses are similar along many dimensions, these analyses do not take into account the environment where the youth live or go to school. For example, there could have been differences in the curriculum, discipline policies, or educational opportunities present in the schools young people attended.[15]

13 GPA could rarely be computed for students in grades K-6, either because no grade data was available or it was shared but did not have detail of how many credits each course was worth.

14 Ample research has shown that certain populations of young people, in particular Black and other minority young people and young people with disabilities, experience exclusionary discipline actions at disproportionate rates from their peers (Townsend, 1999; Mallett, 2017; Skiba, et al., 2002). In fact, school districts with more Black and Latinx youth are more likely to adopt zero-tolerance policies which disproportionally targets and punishes these student groups while increasing the probability that they will come into contact with the criminal legal system (Schlesinger, et al.,2021). Researchers have also utilized Critical Race Theory (CRT) and Critical Race Feminism (FemCrit) to investigate the ways that dominant narratives, which frame Black girls as less innocent and feminine, are employed by school personnel to disproportionally surveille and punish Black girls within schools (Annamma, et al., 2019). It's important to contextualize suspension data received by school districts within the larger history of chattel slavery and settler colonialism in the U.S. especially as this has present-day repercussions on the ways that different groups of youth are policed and criminalized within schools.

15 Anyon, 2014; Flores, 2007; Cardichon et al., 2020

Thus less favorable educational outcomes between Club members and non-Club members in this full descriptive sample might reflect inequities experienced by youth attending Clubs.

Educational outcomes by degree of participation

In prior research on out-of-school programming, impacts on educational outcomes are documented for regular attendees but not among young people who attend sporadically.[16] We know from our earlier analysis that participation rates varied among all young people and patterns differed by students' ages. With those participation trends in mind, Table 6 displays the average educational outcomes for three groups of BGC members based on their degree of program attendance (i.e., low, moderate, and high). For comparison, we also include the statewide averages for non-Club members in the same age group.

Table 6. Educational outcomes among Club members by age group and participation level compared to non-Club members

Percent of young people who	Grouped by degree of BGC participation			Average among non-Club members
	Low BGC participation *(< 1 day per week)*	Moderate BGC participation *(1 to <2 days per week)*	High BGC participation *(2+ days per week)*	
Students in Grades K-6				
School attendance rate of at least 95%	41.9%	38.1%**	44.6%**	42.6%
Passed a standardized state exam in math	36.7%	30.9%**	28.6%**	36.1%
Passed a standardized state exam in English	42.7%	38.0%**	36.4%**	44.3%
Received no suspensions	97.3%**	97.2%**	98.5%	98.7%
Students in Grades 7-12				
School attendance rate of at least 95%	46.7%	47.9%	60.3%**	48.2%
Passed a standardized state exam in math	27.5%	24.3%*	23.7%**	29.2%
Passed a standardized state exam in English	44.5%**	42.3%**	42.0%**	49.8%
Received a Grade Point Average of 2.5 or higher	31.8%	42.9%**	42.2%**	30.4%
Received no suspensions	90.8%**	91.6%**	93.4%**	95.6%

*Notes: Statistical significance of difference between outcomes of each Club member participation category and non-Club members denoted by: * p<0.05; ** p<0.01. "--" indicates the data was omitted due to small sample size. Sample sizes vary by outcome and group, ranging from 453 to 3,082,453. Specific sample sizes for each item can be found in Appendix Table B2.*
Data source: BGC participation data and California Department of Education administrative data (2021-22).

Table 6 shows that descriptively, Club members with higher degrees of BGC participation had better school attendance and GPA outcomes, compared to non-Club members statewide. A significantly larger percentage of Club members with high participation had strong school

[16] Vandell et al, 2007; Afterschool Alliance, 2015

attendance rates, compared to non-Club members statewide. The difference was particularly pronounced for Club members in grades 7-12, where 60% of Club members attended school at least 95% of the time, compared to 48% of non-Club members in grades 7-12. In addition, a significantly larger percentage of Club members with moderate (43%) or high (42%) participation received a GPA of 2.5 or higher, compared to non-Club members statewide (30%).

However, Club members with higher levels of BGC participation showed lower standardized state exam passing rates, compared to non-Club members statewide. For example, the percentage of K-6 Club members with low BGC participation who passed the standardized state exam in math (37%) was similar and not statistically different from the percentage of non-Club members who passed statewide (36%). However, Club members with high participation (29%) passed the math exam at a rate that was almost 8 percentage points lower than non-Club members. This pattern was true across grade groups and subject areas.

While Club members tended to have similar or slightly worse rates of receiving zero suspensions, there is some evidence that degree of Club participation is associated with improved rates of receiving zero suspensions. Focusing on Club members in grades 7-12, 90% of Club members with low BGC participation received no suspensions, whereas 93% of Club members with high participation received no suspensions. While both of these percentages were significantly lower than the percentage of non-Club 7-12th graders statewide (96%), the fact that a larger share of high participants had no suspensions is a positive sign. Interestingly, the difference in suspension rates became so similar as to be insignificant for K-6 students with high participation, as compared to K-6 non-Club members statewide.

How do Club members fare on educational outcomes compared to similar non-Club members?

The preceding section provided a descriptive look at the educational outcomes of young people in California, comparing those who did and did not participate in BGC programs. We also demonstrated while the students who participated in BGC programming were similar to the population of non-Club members statewide, there were differences in the grade levels and race/ethnicity of Club members (Table 3 above). An assessment of the impact of BGC on educational outcomes should take those differences into account. Thus, for this next section of the report we strengthened our approach of comparing the educational outcomes of Club members versus non-Club members in two ways:

1) We refined our sample of non-Club members to only include young people who are similar to at least one BGC member, using propensity score matching with socio demographic information and prior year outcomes when available.
2) We estimated a regression model to adjust for observed compositional differences across Club member and non-Club member groups.[17]

More details about our matching and modeling methods can be found in Appendix A. In this section we present the model-adjusted outcomes between students who did and did not participate in BGC

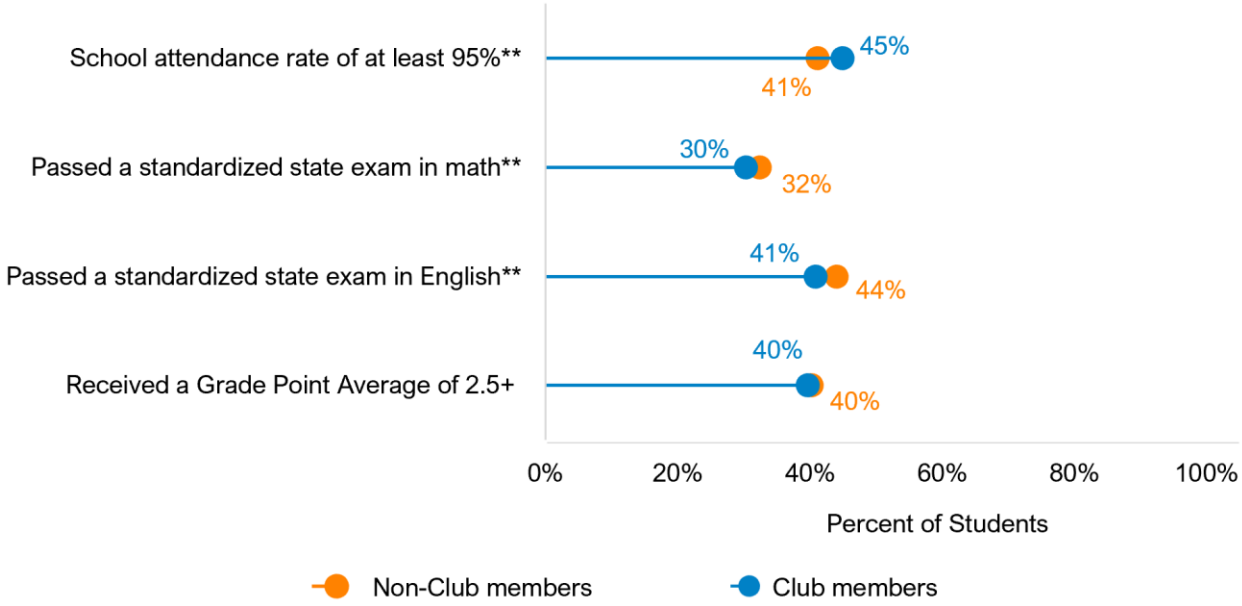
[17] Building a regression model allows us to study how students' outcomes varied *statistically* based on a number of characteristics or past experiences, including BGC participation. This allows us to isolate the *statistical* contribution made by BGC participation, but it does not shield these findings from bias in terms of measurement or structural disparities born from inequities in access and opportunity. (Gillborn et. al., 2017) More detail about how we designed our regression model can be found in Appendix A.

programming during the study year. We also explore who the model-adjusted outcomes between the BGC programing participant and non-participant groups vary by degree of participation and across socio-demographic subgroups. Appendix C provides the unadjusted and adjusted outcomes.

Educational outcomes of Boys & Girls Clubs members compared to similar peers

Figure 3 below presents model-adjusted educational outcomes[18] for BGC members and their matched comparison students who were not Club members and thus did not participate in BGC programming. While the statistical models that produce these model-adjusted outcomes only account for observed differences, accounting for the full dynamic processes that advantage some students over others is not feasible within the scope of an observational study. Thus, we urge caution in interpreting these findings as definitive evidence of impact.

Figure 3. Educational outcomes of Club members compared to matched non-Club members, adjusted for observed student characteristics



*Notes: Presented outcomes are based on regression-adjusted results based on a propensity-score matched sample, accounting for differences across BGC Club member and non-Club member groups in prior year school attendance and GPA, grade, gender, race/ethnicity, enrolled district, and binary statuses for economic disadvantage, disability, English Learner, homelessness, and gifted program enrollment. Unadjusted outcomes can be found in Appendix Table C1. Sample sizes vary by outcome and group, ranging from 2,576 to 25,612. Specific sample sizes for each item can be found in Appendix Table B3. Statistical significance compared to the reference group of non-Club members denoted by: * p<0.05; ** p<0.01. Data source: BGC participation data and California Department of Education administrative data (2021-22).*

Overall, our analysis suggests that when comparing young people who participated in BGC programming to their peers with similar characteristics, our results are mixed.

- A statistically significant larger share of Club members (45%) had high attendance rates in schools, compared to similar students who were not Club members (41%).
- Compared to similar non-Club members, a statistically significant smaller share of Club members passed state standardized exams in math and English.

[18] Regression analyses could not be completed on the suspension outcome, due to the low prevalence of suspensions statewide. Unadjusted rates of suspension among the regression sample are provided in Appendix Table C1.

- Club members and similar non-Club members had similar rates of earning a GPA of 2.5 or above.

Across most measures, differences between the groups are less pronounced than in our descriptive analysis (see Table 5). Since the differences are reduced when comparing Club members to similar non-Club members, the compositional differences between those who do and do not participate in BGC programming state-wide (e.g. grade-level, enrolled school, etc.) may account for much of the descriptive differences in educational outcomes,.

- For example, descriptively, approximately 47% of non-Club members passed the English standardized test compared to about 40% of Club members, a difference of 7 percentage points. When comparing similar non-Club and Club members, the difference is reduced by more than half to 3 percentage points, though it remains statistically significant.
- This is also the case with GPA, where a substantially larger share of Club members earned a GPA of 2.5 or higher (37%) than non-Club members (30%) in our descriptive analysis. In our matched analysis, there is no longer a difference between the groups in the measured GPA outcome.
- However, there is a more pronounced difference in school attendance between Club members and similar non-Club members. Whereas in our descriptive analysis there was no difference in the percentage of Club members versus non-Club members with high attendance rates, in our matched-sample analysis there is a statistically significant difference of 4%, with Club members outperforming non-Club members (45% versus 41%).

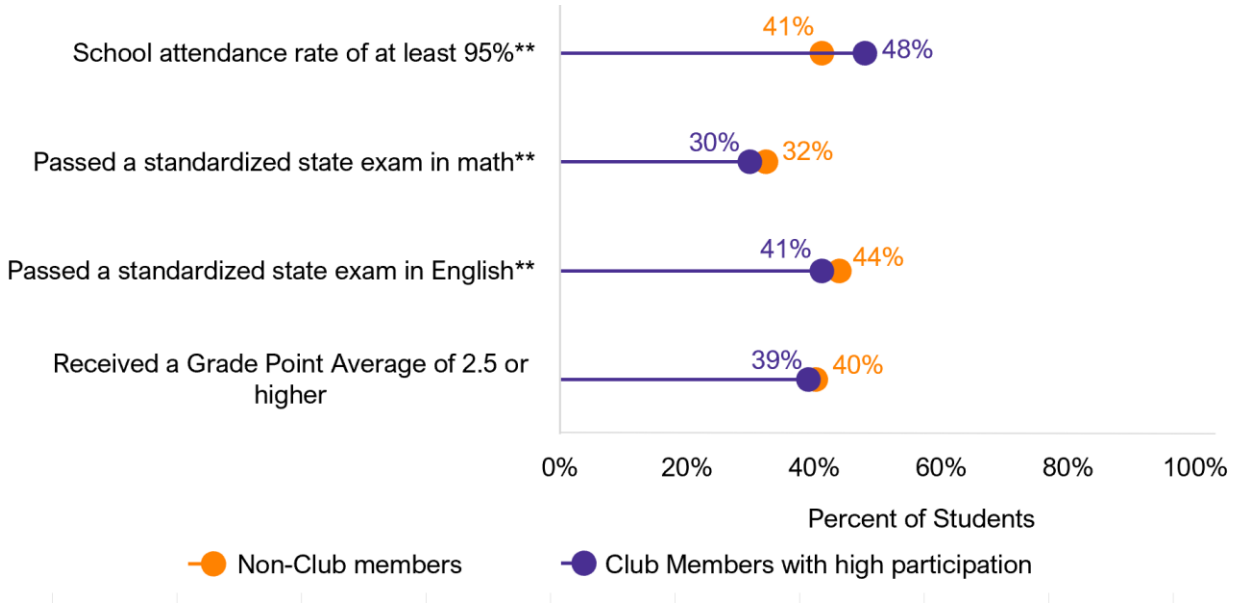
Educational outcomes of Club members with high participation compared to similar non-Club members

Knowing again, that prior research has found that out-of-school-time programming impacts educational outcomes more often only for those who participate in programming regularly, Figure 4 below presents predicted educational outcomes for Club members with high participation compared to the outcomes of the matched comparison students who were not Club members and thus did not participate in BGC programming.

As we showed in our earlier analysis, youth who participate in BGC are similar in many ways to the population statewide. However, we saw some variation in Club members by degree of participation. Specifically, we saw that more highly active participants were English Learners, whereas fewer were White, Asian, or from suburban areas. Due to systemic challenges present in the education system nationwide, youth matching the demographic makeup of highly active BGC participants typically have lower educational outcomes on average than their peers.[19] While our model allows us to account for these observed differences, there are many other unobserved differences that may jointly impact these educational outcomes. Thus, we again urge caution in interpreting these differences as caused by BGC participation.

19 Au, 2014; Townsend, 1999; Mallett, 2017; Skiba, et al., 2002; Anyon, 2014; Flores, 2007; Cardichon et al., 2020

Figure 4. Educational outcomes of Club members compared to matched non-Club members, by degree of BGC participation, adjusted for student characteristics



*Notes: Predicted outcomes are based on regression-adjusted results and a propensity-score matched sample, accounting for differences across groups in prior year school attendance and GPA, grade, gender, race/ethnicity, enrolled district, and binary statuses for economic disadvantage, disability, English Learner, homelessness, and gifted program enrollment. Unadjusted outcomes can be found in Appendix Table C2. Sample sizes vary by outcome and group, ranging from 2,576 to 25,612. Specific sample sizes for each item can be found in Appendix Table B4. Statistical significance compared to the reference group of non-Club members denoted by: * p<0.05; ** p<0.01. Data source: BGC participation data and California Department of Education administrative data (2021-22).*

On most outcomes, Figure 4 shows similar results to the analyses comparing all Club-members to similar non-Club members (Figure 3). As in the analyses including all Club-members, a significantly smaller percentage of Club members with high attendance passed the state standardized exams, compared to similar non-Club members, with differences of 2-3 percentage points. Also matching analyses including all Club-members, there was no significant difference in the percentage of Club members with high attendance who received a GPA of 2.5 or above, compared to similar non-Club members.

However, Club-members with high participation outperformed similar non-Club members by a larger margin on the school attendance outcome. Nearly half (48%) of Club members with high participation had a school attendance rate of at least 95%, whereas 41% of similar non-Club members had strong school attendance. That 7-percentage point difference is larger than the 4-percentage point difference found above when comparing all Club-members to similar non-Club members.

How can we interpret these findings?

We caution against a strong interpretation of these results as causal, due to the observational nature of this study. While these analyses compare groups of youth who are similar to each other along observable characteristics, our models do not include enough information to allow us to adjudicate between alternative explanations for the results. For example, the less positive test scores among Club members could be because BGC participation is taking away from time spent on homework or otherwise deepening academic content knowledge. This would suggest that BGC participation negatively impacts academic achievement. In contrast,

underperformance among Club members compared to non-Club members in academic achievement may reflect differences in their environments: Club members may choose to participate because BGC gives them access to resources like Wi-Fi that they might not otherwise have at home. If neighborhood conditions are associated with academic achievement, differences between Club members and non-Club members in academic achievement may reflect differences in their environments, not the impact of BGC programming. Our models account for as many observed characteristics that make Club members and non-Club members different from each other, but not all. Thus, we caution against interpreting these findings as definitive causal evidence of impact, positive or negative.

Variation in educational outcomes by sociodemographic characteristics

Another important consideration when studying if out-of-school programming has an effect on participants is to think about *which* students might be impacted by the programming. In this section, we used our model to understand how educational outcomes varied by gender, race/ethnicity, grade-level, and program status of the student to investigate if the same patterns seen above persist across student subgroups. The following tables present the model-adjusted educational outcomes among each socio-demographic subgroup.

Table 7. Attendance and grade promotion rates among Club members compared to matched non-Club members by demographic group, adjusted for student characteristics

Outcome Measure	School attendance rate of at least 95%			Received a Grade Point Average of 2.5 or higher		
Subgroup	*Club members*	*Non-Club members*	*Difference*	*Club members*	*Non-Club members*	*Difference*
Gender						
Female	44.8%	42.5%	2.3%**	43.7%	42.9%	0.8%
Male	44.7%	40.2%	4.5%**	36.3%	38.2%	-1.9%
Neither male nor female	--	--	--	--	--	--
Race / Ethnicity						
Asian	59.4%	56.7%	2.7%	43.1%	53.5%	-10.4%
Black or African-American	44.7%	39.2%	5.5%*	41.1%	34.3%	6.8%
Hispanic or Latinx	43.1%	40.0%	3.1%**	39.0%	39.4%	-0.4%
White	45.6%	41.1%	4.5%**	41.4%	43.2%	-1.8%
Other	45.8%	43.6%	2.2%	37.4%	41.2%	-3.8%
Grade-level						
K-2	41.3%	35.1%	6.2%**	N/A	N/A	N/A
3-5	44.0%	41.2%	2.8%**	N/A	N/A	N/A
6-8	47.1%	44.0%	3.1%**	44.4%	46.7%	-2.3%
9-12	48.4%	47.1%	1.3%	32.6%	31.0%	1.6%

Receiving Special Education Services (has an IEP or 504 plan)						
Yes	43.1%	38.0%	5.1%**	39.5%	41.5%	-2.0%
No	44.9%	41.6%	3.3%**	39.7%	40.1%	-0.4%
English Learner						
Yes	48.9%	43.6%	5.3%**	34.4%	34.9%	-0.5%
No	43.4%	40.5%	2.9%**	41.1%	41.8%	-0.7%
Economically Disadvantaged						
Yes	42.6%	38.8%	3.8%**	38.6%	40.1%	-1.5%
No	49.1%	46.2%	2.9%**	42.7%	40.8%	1.9%

*Notes: Statistical significance compared to non-Club members denoted by: * p<0.05; ** p<0.01. Sample sizes vary by outcome and group, ranging from 49 to 11,460. Specific sample sizes for each item can be found in Appendix Table B5. -- indicates data was suppressed due to small cell size. Data source: BGC participation data and California Department of Education administrative data* (2021-22).

Key findings from Table 7:

- **Across almost all subgroups, a significantly larger percentage of Club members had high school attendance, compared to similar non-Club members.**
  - The largest difference was for students in grades K-2, where the percentage of Club-members with high school attendance was 6 percentage points higher than that for similar non-Club members.
  - The attendance differences were not significant for Asian youth, youth with "other" race/ethnicities, and high school youth.
- **GPA was not significantly different among any subgroups studied.**

Table 8. State exam performance among Club members compared to matched non-Club members by demographic group, adjusted for student characteristics

Outcome Measure	Passed an end of grade exam in English			Passed an end of grade exam in math		
Subgroup	*Club members*	*Non-Club members*	*Difference*	*Club members*	*Non-Club members*	*Difference*
Gender						
Female	45.0%	47.9%	-2.9%**	27.1%	30.0%	-2.9%**
Male	37.4%	40.6%	-3.2%**	33.2%	34.5%	-1.3%
Neither Male nor Female	--	--	--	--	--	--
Race / Ethnicity						
Asian	54.9%	59.0%	-4.1%	51.1%	53.3%	-2.2%
Black or African-American	33.3%	34.5%	-1.2%	22.1%	18.8%	3.3%
Hispanic or Latinx	37.8%	41.3%	-3.5%**	25.6%	29.3%	-3.7%**
White	46.7%	50.4%	-3.7%*	36.3%	37.7%	-1.4%

Other	43.6%	43.5%	0.1%	35.8%	33.4%	2.4%
Grade-level						
3-5	40.6%	43.1%	-2.5%*	34.0%	35.7%	-1.7%
6-8	40.8%	44.7%	-3.9%**	26.3%	28.5%	-2.2%*
9-12	53.0%	52.7%	0.3%	26.2%	31.2%	-5.0%
Receiving Special Education Services (has an IEP or 504 plan)						
Yes	23.8%	28.2%	-4.4%*	19.2%	21.0%	-1.8%
No	43.0%	46.0%	-3.0%**	31.8%	33.9%	-2.1%**
English Learner						
Yes	32.4%	31.5%	0.9%	23.6%	23.4%	0.2%
No	43.5%	47.9%	-4.4%**	32.2%	34.9%	-2.7%**
Economically Disadvantaged						
Yes	36.4%	39.6%	-3.2%**	25.4%	28.1%	-2.7%**
No	50.0%	53.2%	-3.2%*	38.5%	39.8%	-1.3%

*Notes: Statistical significance compared to non-Club members denoted by: * p<0.05; ** p<0.01. Standardized tests are administered in CA in grades 3-8 and 11. Sample sizes vary by outcome and group, ranging from 173 to 6,009. Specific sample sizes for each item can be found in Appendix Table B5. -- indicates data was suppressed due to small cell size. Data source: BGC participation data and California Department of Education administrative data (2021-22).*

Table 8 shows that **across many subgroups, Club members passed the standardized tests at lower rates than non-Club members.** However, passing rates varied by subgroup and subject.

- In each socio-demographic grouping examined, there was one subgroup that had significantly lower passing rates on both exams.
    - **Among Females, Hispanic or Latinx youth, and youth in grades 6-8, a significantly smaller percentage of Club members passed the standardized tests in English and math**, compared to similar non-Club members in the same subgroup. This finding matches what we found when comparing all Club members to non-Club members (Figure 3) and the degree of differences are similar across subgroups (2 to 4 percentage points).
    - **In addition, among students who did not receive Special Education Services, were not English Learners, and who were economically disadvantaged, a significantly smaller percentage of Club members passed the English and math exams.** The differences in passing rates were again 2 to 4 percentage points. Interestingly, these subgroups were the ones represented by a majority of Club participants (see Table 3).
- **However, for most other subgroups, a similar percentage of Club members and non-Club members passed the English and math exams.** For example, 33% of Black Club members passed the math exam, compared to 35% of similar Black, non-Club members, a difference that was not statistically significant. This is particularly interesting for the English Learner subgroup, where Club members and non-Club members have similar exam passing rates while a significant difference exists between the non-English Learner groups.
    - **There were a few subgroups where significant differences were present on the English exam only**: Males, White youth, youth in 3-5th grades, youth receiving Special Education services, and non-economically disadvantaged youth. Among those groups, a smaller percentage of Club members passed the English exam, compared to similar non-Club members.

Section 2: How do educational outcomes compare to self-reported outcomes among Club members?

The final research question studied in this report focuses on how measures from the Boys & Girls Club's annual survey, the National Youth Outcomes Initiative (NYOI),[20] compared to the educational outcomes reported by schools. These comparisons aim to assess whether the indicators gathered through the NYOI can be used as early predictors of educational outcomes. The NYOI survey asks young people directly about their achievements and membership experiences in the past year.

For this study we focused on four domains of the NYOI survey:

- **Academic success** – This domain included metrics where students reported if they were on track to graduate from high school and if high school students were earning grades that indicated they were post-secondary ready.
- **Club experience** – This domain provides insight into Club members' perceptions of the Club they attended. These measures aim to capture the degree to which Clubs are providing high-quality experiences rooted in positive youth development principles.
- **Social and emotional skills** – This domain captures the degree to which young people have developed social and emotional skills (e.g., impulse control, problem-solving, and empathy).
- **Character & Citizenship** – This domain asks about a young person's participation in community service, avoidance of involvement in the juvenile justice system, and development of conflict resolution skills.[21]

In the sections below, we describe how some of the self-reported measures in these four domains compare to the educational outcomes those young people achieved according to California's educational records. For each domain, we only included the outcomes that we determined could be theoretically linked to the measures in each self-reported domain. While some of the NYOI indicators are similar to what is captured in the administrative educational data, none are exactly the same. Other NYOI measures are quite different from the educational measures. Regardless, BGCA's theory of change is designed to impact educational outcomes in the long run. **This analysis studies whether variation in educational outcomes can be seen in the same year as the NYOI survey response and thus whether the NYOI measure has predictive validity in the shorter term.**

It is important to note that only a subset of the Club members included in our study had NYOI survey data (17% of our sample, as shown in Table 2). This is in part based on the fact that the NYOI is administered during a specific period of time each year, thus a young person could only have responded if the young person was attending their Club at that time, in part because the survey itself is voluntary, and in part because it was not always possible to definitively pair survey responses with participation records based on differences in identifying information in the two data sources. Based on the limited sample size, we were only able to report on a subset of outcome variables. Appendix Table B6 displays the number of records used to produce each value reported in this section.

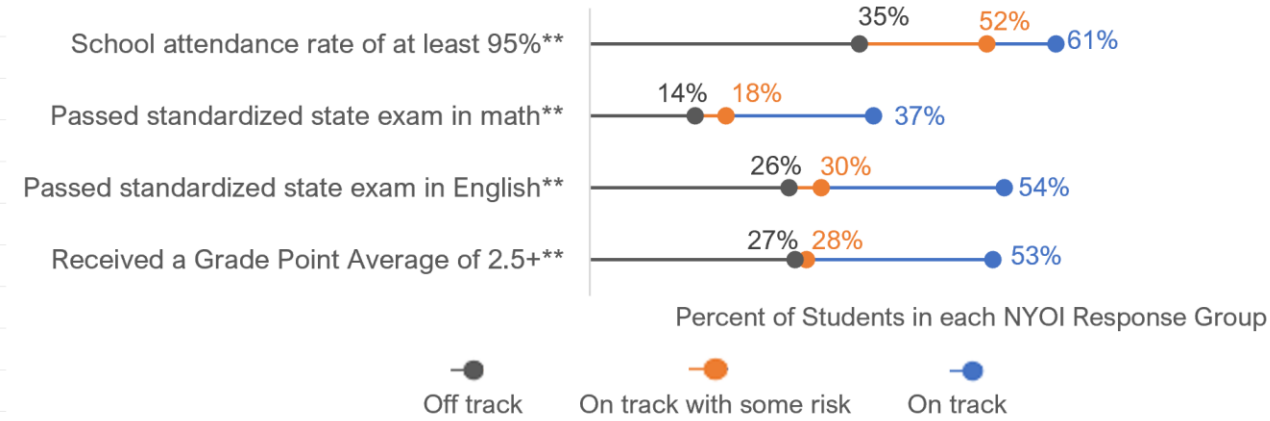
[20] The NYOI was launched in 2011 to measure the impact of Clubs on the youth they serve. Each year, BGCA administers the survey and analyzes the data to understand the impact nationally. (Boys & Girls Clubs of America, 2020)
21 Exact survey items from these 4 domains are included in Appendix D.

Academic success – On track to on time graduation

The NYOI's measure for being "On track to on time graduation" aims to approximate a young person's progress towards on track graduation from high school and is calculated using four indicators from the NYOI survey. It uses three self-reported measures (frequency of skipping school in the past month, grades on schoolwork, and expectations of academic success) as well as an indicator based on the student's date of birth for being older than expected for the current grade (and thus possibly having been retained). These four indicators are combined from a single administration of the NYOI to create a single composite measure that assesses if a student is "on track", "on track with some risk", or "off track" to on time graduation.

Figure 5 below displays several educational outcomes from the California Department of Education's administrative data for students in each category of the "on track to on time graduation" measure based on their NYOI responses.

Figure 5. Educational outcomes of Club members who were "on track", "on track with some risk", and "off track" according to their responses to four items the NYOI survey



*Notes: Statistically significant differences among groups denoted by: * p<0.05; ** p<0.01. Sample sizes vary by outcome and group, ranging from 116 to 1,079. Among Club members included in this analysis, 1,079 were "on track", 371 were "on track with some risk", and 535 were "off track". Specific sample sizes for each item can be found in Appendix Table B6. Data source: On track data come from BGC survey data and educational outcome data come from California Department of Education administrative data (2021-22).*

Key findings from Figure 5:

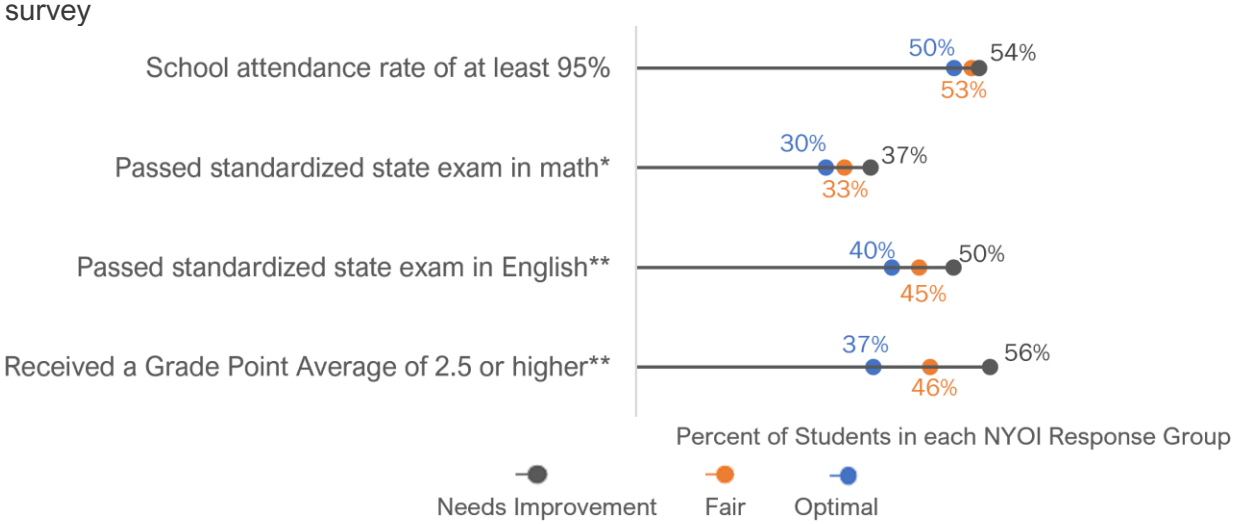
- **The On Track measure from the NYOI tracks closely to educational outcomes reported by the state.** For example, respondents whose survey responses indicated they were on-track to graduate on time had substantially better rates of high school attendance (61% attending at least 95% of days), compared to young people whose responses indicated that they were off track to graduation (35%). This pattern held for all educational outcomes studied here.
- Across all outcomes, respondents were "on-track with some risk" had educational outcomes that were between those of respondents who were on track and those who were off track. However, for three of the measures (the state exams and GPA) there was little separation in the outcomes of respondents who were "on-track with some risk" and those who were "off track."

Club experience – Overall experience

Based on BGCA's "Formula for Impact", positive experiences at a Club that allow a young person to feel safe, connected, and engaged in meaningful activities, are expected to impact a young person's educational outcomes as well as outcomes in other domains.[22] This report focuses on the impact seen on educational outcomes and so in this section we analyze how a young person's Club experience is correlated with their educational outcomes.

Specifically, below we study the Overall Club Experience measure, which is constructed by combining responses to seven individual questions that ask about a young person's sense of belonging, emotional safety, physical safety, fun, adult connections, staff expectations, and recognition while at the Club. Figure 6 below displays several educational outcomes from the California Department of Education by the degree to which the students had an optimal Club experience based on their NYOI responses.

Figure 6. Actual educational outcomes of Club members who had club experiences that were "optimal", "fair", or "needs improvement" according to their responses to 7 items on the NYOI survey



*Notes: Statistically significant differences among groups denoted by: * p<0.05; ** p<0.01. Sample sizes vary by outcome and group, ranging from 113 to 1,430. Among Club members included in this analysis, 1,430 had an "optimal" Club experience, 840 had a "fair" experience, and 581 had an experience that "needs improvement". Specific sample sizes for each item can be found in Appendix Table B6. Data source: Club experience data come from BGC survey data and educational outcome data come from California Department of Education administrative data (2021-22).*

Figure 6 shows a negative relationship between a respondent's overall club experience and most of their state reported educational outcomes. For example, respondents whose overall club experience "needs improvement" had substantially higher rates of receiving a GPA of 2.5 or higher, compared to respondents with an "optimal" or "fair" club experience. The patterns in passing state exams are also fairly clustered.

However, there was no relationship present between overall club experience and school attendance. About half of respondents in each category of overall club experience attended school at a rate of at least 95%.

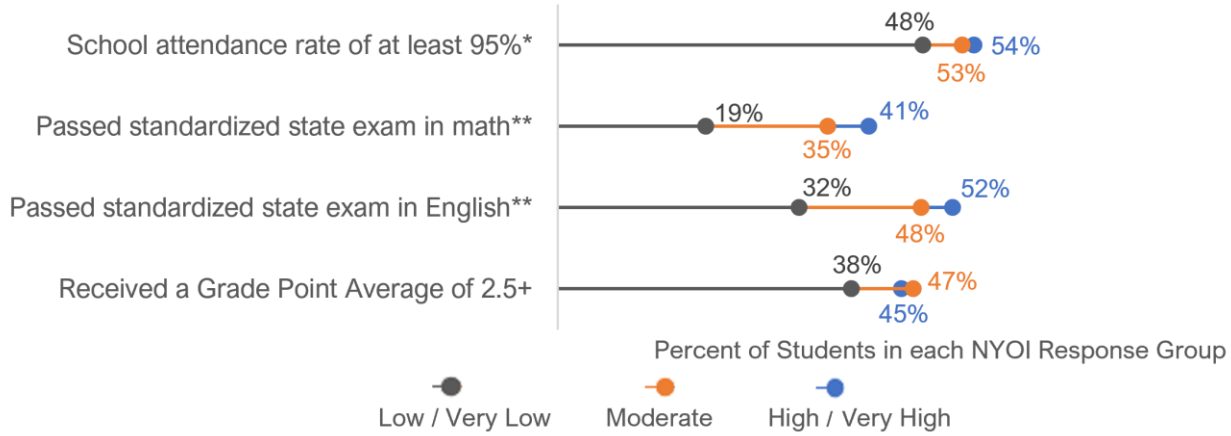
[22] Boys & Girls Clubs of America (2020)

Social and emotional development – Coping with challenge

An important focus of programming at BGC is the development of social and emotional skills in young people. Research has shown that people who develop social emotional skills during childhood are more likely in adulthood to develop positive self-esteem, avoid physical and mental health challenges and to make positive decisions regarding substance use and criminal activity.[23] This section of the report studies whether the social and emotional skills young people possess according to their NYOI responses are correlated with their educational outcomes. This analysis does not assess whether participation in BGC programming helps young people develop those key social emotional skills, however.

To study the correlation between social and emotional development and educational outcomes, we utilized a composite measure of a young person's ability to "cope with challenge" from the NYOI survey. This measure is a composite of eight individual questions that ask young people to rate how "true" each statement is about themselves on a 4-point scale from "very true" to "not true at all". Some example statements are "When I have trouble doing something, I give up." and "When something important goes wrong in my life, I tell myself I'll do better next time." Figure 7 below displays several educational outcomes from California Department of Education by the degree to which the students showed an ability to cope with challenges based on their NYOI responses.

Figure 7. Actual educational outcomes of Club members who had "high"/ "very high", "moderate", or "low" / "very low" ability to cope with challenge according to their responses to 8 items on the NYOI survey



*Notes: Statistically significant differences among groups denoted by: * p<0.05; ** p<0.01. Sample sizes vary by outcome and group, ranging from 149 to 1,097. Among Club members included in this analysis, 812 had "high"/ "very high" coping ability, 1,097 had "moderate" coping ability, and 804 had "low" or "very low" coping ability. Specific sample sizes for each item can be found in Appendix Table B6. Data source: Coping data come from BGC survey data and educational outcome data come from California Department of Education administrative data (2021-22).*

Figure 7 shows that the "coping with challenge" measure is positively correlated with some educational outcomes. For example, fewer respondents who reported low or very low abilities to cope with challenge passed the state exam in math (19%), compared to young people reporting moderate or high coping abilities (35% and 41%, respectively). A similarly large difference existed in the percentage of students who passed the state exam in English and a smaller, but still significant gap existed in the school attendance. The difference seen GPA measures was not statistically significant. However, there was no association present between coping abilities and receiving suspensions [not pictured].

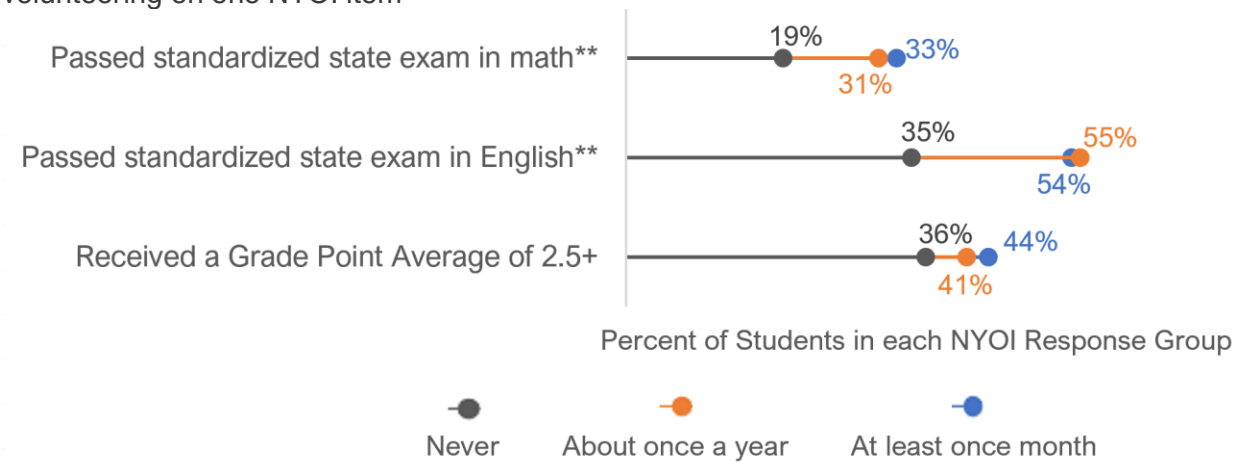
[23] Centers for Disease Control and Prevention, 2014; Frydenberg & Lewis, 1999

Character and citizenship – Community service

Part of BGCA's vision is to support young people in demonstrating good character and becoming good citizens. Participation in community service can help a young person develop personally and socially while also developing a sense of civic responsibility.[24] Most relevant to this work, research has shown a link between volunteerism and educational outcomes like school attendance, course grades, and discipline incidents.[25]

With that prior research in mind, we elected to examine the relationship between NYOI respondents' educational outcomes and their answer to the survey question focused on volunteerism. The NYOI survey asked teens how often they "volunteered in your school, neighborhood, or out in the community" in the past year. Figure 8 below displays several educational outcomes from the California Department of Education by the frequency that the students reported volunteering. This analysis focuses on whether young people who self-report volunteering more frequently experience better educational outcomes. This analysis does not study whether BGC members are more likely to volunteer.

Figure 8. Actual educational outcomes of Club members by their self-reported frequency of volunteering on one NYOI item



*Notes: Statistically significant differences among groups denoted by: * p<0.05; ** p<0.01. Sample sizes vary by outcome and group, ranging from 98 to 246. Among Club members included in this analysis, 246 volunteered "at least once a month", 128 volunteered "about once a year", and 225 "never" volunteered. Specific sample sizes for each item can be found in Appendix Table B6. Data source: Volunteering data come from BGC survey data and educational outcome data come from California Department of Education administrative data (2021-22).*

Figure 8 shows a positive association between the volunteering measure and standardized exam outcomes. A larger share of respondents who volunteered at least once a year passed standardized state exams in math (31-33%) and English (54-55%), compared to those who reported never volunteering (19% and 35%, respectively). A smaller, non-significant difference existed when comparing the percentage of respondents who received a high GPA by degree of volunteering and no difference existed in rates of high school attendance [not pictured].

[24] Billig, 2000

[25] Scales et. al, 2006; Moore & Allen, 1996; Billig, 2000

Conclusion

From the data included in this study, we found that California Boys & Girls Clubs successfully promote participation among young people that closely match the socio-demographic characteristics of young people statewide. Most Club members were from elementary or middle school grades and about half of all Club members participated with high frequency (e.g., two or more times per week, on average). A larger share of Club members who were English Learners participated with high frequency (61% of English Learners, compared to 50% of all Club members). Club members who were teenagers, Asian Club members, and those from suburban areas had disproportionately low participation rates (e.g. averaging less than one day of participation per week).

When comparing the educational outcomes of Club members to similar non-Club members, the results were mixed. Specifically, a higher proportion of non-Club members received high scores on standardized tests (state examinations in math and English). In line with findings from other studies of out-of-school-time programming, the one outcome studied here that had a positive association with Boys & Girls Club participation was school attendance. When comparing Club members to similar non-Club members, we found a small, but significant difference in the percentage of young people who had strong school attendance. This difference was larger when comparing Club members with high participation to non-Club members. There was no difference between Club members and similar peers in the percentage of young people who received a high GPA and a lower percentage of Club members passed standardized state exams, compared to similar peers. These trends were mostly consistent across subgroups by gender, race/ethnicity, and grade-level. While the analyses conducted here used models that accounted for many observable characteristics that make Club members and non-Club members different from each other, there are likely other characteristics, observable or not, which were not included based on data limitations. Thus, we caution against interpreting these findings as evidence of impact, positive or negative.

In our exploratory analysis comparing data from the National Youth Outcomes Initiative to educational outcomes data reported by schools, we also found mixed results. The "on track to on time graduation" measure tracked closely with the educational outcomes studied here. For the measures of "coping with challenge" and volunteering, respondents with the lowest degree of each measure stood out has having substantially poorer educational outcomes. The association between a respondent's overall club experience and their educational outcomes, however, was either not present or in the opposite direction of expectations (i.e. respondents reporting poorer club experiences had better outcomes). These results indicate that some constructs from the NYOI survey could be useful indicators of young people who might benefit from additional support.

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Appendix A. Research Methodology

Study Design

Two of the four research questions for this study (#1 and 4) used a purely descriptive design, by comparing demographics or educational outcomes of BGC members to non-Club members and then comparing Club members' self-reported measures to educational outcome data reported by the state.

The other two research questions focused on how the educational outcomes of BGC members compared to those of *similar* non-Club members, overall and among subgroups of students. To answer that question, we utilized a quasi-experimental design to account for two possible sources of bias in our descriptive analyses:

1. BGCs seek to serve all young people, but by design focus on "those who need us most", meaning the population of Club members is likely to look different from the state overall, and
2. the fact that young people self-selected into participating in a BGC.

In order to account for those sources of bias, we used propensity score matching (PSM) to identify a comparison group with similar characteristics to the Club members. We used 1-to-1 matching without replacement to match Club members to similar young people who we did not have a record of participating in BGC using observable demographic variables (gender, race/ethnicity, and grade-level), enrolled school, program statuses (economic disadvantage, disability, English Learner, homelessness, and gifted program enrollment) and prior year educational data (school attendance and GPA). Table A1 below shows the baseline equivalence of the population of young people who were served by BGCA in the study year and the samples used to assess the differences in educational outcomes descriptively (question #1) and using the matched sample in the QED (questions #2 and 3).

Table A1. Demographic characteristics and baseline equivalence of the descriptive sample and the quasi-experimental samples

The percent of students in each sample who were	Club members statewide *(N=195,969)*	Descriptive Analysis Sample (Question #1)		Quasi-Experimental Analysis Sample (Questions #2 & 3)	
		Club members *(N= 17,856)*	Non-Club members *(N=6,037,077)*	Club members included in impact analysis *(N=12,948)*	Non-Club members selected through PSM *(N=12,948)*
Sex					
Female	47%	37.4%	39.8%	46.0%	45.7%
Male	53%	43.6%	42.2%	53.9%	54.2%
Neither male nor female	0%	0.0%	0.1%	0.0%	0.1%
Cohen's *d*		-0.046		0.007	
Race / Ethnicity					

Asian	8%	3.5%	9.6%	4.3%	4.3%
Black or African-American	8%	6.2%	4.4%	7.7%	7.4%
Hispanic or Latinx	48%	44.6%	45.6%	56.5%	57.1%
White	17%	21.1%	17.3%	25.3%	25.1%
Other	12%	5.1%	4.3%	6.2%	6.0%
Cohen's *d*		-0.204		-0.005	
Grade-level					
K-2	34%	29.2%	22.1%	23.0%	22.5%
3-5	33%	38.0%	22.0%	38.7%	38.6%
6-8	24%	24.3%	22.6%	28.4%	29.0%
9-12	11%	8.4%	33.3%	9.9%	9.8%
Cohen's *d*		0.479		0.012	
Receiving Special Education Services (has an IEP or 504 plan)					
Yes	Data not available	10.5%	11.4%	11.6%	11.5%
No	Data not available	89.5%	88.6%	88.4%	88.5%
Cohen's *d*		0.027		-0.003	
English Learner					
Yes	Data not available	24.1%	23.6%	24.3%	23.9%
No	Data not available	75.9%	76.4%	75.7%	76.1%
Cohen's *d*		-0.013		-0.011	
Economically Disadvantaged					
Yes	Data not available	67.0%	65.3%	69.4%	69.4%
No	Data not available	33.0%	34.7%	30.6%	30.6%
Cohen's *d*		-0.037		-0.002	
Frequency of BGC attendance[26]					
High	25%	36.8%	N/A	39.0%	N/A

[26] The categories of attendance computed for Club members statewide do not exactly align to the categories used in the study samples. The statewide values use the raw number of days attended, whereas the study values account for the frequency of attendance during the enrolled period. Despite the differences in calculation, the categories do still provide insight into basic degrees of participation and thus provide information about the approximate distribution of the samples.

Medium	24%	15.5%	N/A	14.5%	N/A
Low	51%	47.7%	N/A	46.5%	N/A

Notes: Cohen's d values that are small (typically <0.2) indicate equivalence of samples. Data Source: BGC participation data and California Department of Education administrative data

Once a matched sample was selected, we employed logistic regression modeling to estimate the impact of BGC participation on educational outcomes among the matched samples. We included the same covariates used in propensity score matching in these outcome regression models. We also included interaction terms between the treatment indicator and several socio-demographic variables to enable us to provide estimates of impact among subgroups of young people. In addition to a base model assessing how Club members' outcomes compared to non-Club members, we also estimated a model that included a categorical for degree of participation as the "treatment" indicator. We used the same definitions of high/med/low participation that we used during the analysis of RQ2, along with a fourth category for non-participation.

For easier interpretation of the estimated program impact, we computed the regression adjusted outcome for participating vs. non-participating young people within the sample using Stata's margins or predict command. This used the model coefficients along with the observed covariate values for each record and then averaged the predicted outcome over the estimation sample. For binary outcomes using a logit regression, we used the same margins/predict command to convert the logit coefficients into predicted probabilities for each record and again average over the estimation sample. These regression-adjusted means and predicted probabilities are what we reported in the main section of the report. Unadjusted outcomes are reported in Appendix C.

Data and Variables

Three different sources of administrative data were accessed for this work, all obtained in partnership with BGCA.

1. **Participation and demographic data** - BGCA worked with California's State Alliance director to manage collecting data on participant's demographics, geographical location, and degree of club participation in 2021-22 directly from Club Organizations.
2. **National Youth Outcomes Initiative (NYOI) survey data**- BGCA provided data from the 2021-22 NYOI survey.
3. **State Educational Agency data** – BGCA and RFA partnered with State Alliance directors to request outcomes data from the California Department of Education. Student demographics and outcomes were obtained from the 2021-22 school year and limited outcomes data from the 2020-21 school year were obtained for PSM purposes.

Table A2 holds definition of each outcome measure studied in this report.

Table A2. Definition of outcome measure studied

Outcome Measure	Definition
State-collected measures	
School attendance rate	Percent computed by dividing the number of days a student attended an in-state public school by the number of days the student was enrolled in an in-state public school.

Percent of tested students who passed state standardized assessments in English or math	Percent of students passing Smarter Balanced Summative or California Alternate Assessment in English or math. Passing is defined as "meeting" or "exceeding" the standard for Smarter Balanced Summative assessments. Passing is defined as a Level 3 score (which demonstrates "understanding") for California Alternate Assessments.
Grade Point Average	Unweighted grade point average, on a 0.0 – 4.0 scale, from grades earned within the 2021-22 school year
Percent received zero suspensions	Percent of students who received zero suspensions in the 2021-22 school year.
Self-reported measures	*Measured by responses on the NYOI survey*
Club experience domain	
Overall Club Experience	An aggregate measure of seven components of the NYOI survey focused on a young person's experience at their BGC, specifically: sense of belonging, emotional safety, physical safety, fun, adult connections, staff expectations, and recognition. Each of the seven components is comprised of 3-7 survey questions.
Academic success domain	
On-track to Graduate On Time	A construct aggregating of three self-reported measures (frequency of skipping school in the past month, grades on schoolwork, and expectations of academic success) as well as an indicator of being older than expected for the current grade (and thus possibly having been retained). These four indicators are combined to create a single measure that estimates if a student is "on track", "on track with some risk", or "off track" to on time graduation.
Social and emotional development domain	
Coping with Challenge	This measure is a composite of eight individual questions that ask young people to rate how "true" each statement is about themselves on a 4-point scale from "very true" to "not true at all". Some example statements are "When I have trouble doing something, I give up." and "When something important goes wrong in my life, I tell myself I'll do better next time."
Character and citizenship domain	
Volunteering	A single item on the NYOI survey asked teens how often they "volunteered in your school, neighborhood, or out in the community" in the past year. Options included "never", "about once a year", "about once a month", "about once every two weeks", or "about once a week or more".

It is important to note that BGCA clubs are considered multipurpose youth programs as they offer other resources, such as recreational activities and snacks/meals, in addition to academic services such as homework help and enrichment opportunities. Multipurpose youth programs are expected to promote the following outcomes, only some of which are academically based:

- Youth safety and supervision
- Family employment
- Homework completion
- New experiences and opportunities
- Youth health and wellness
- School behavior and attitudes
- Academic achievement
- Noncognitive, developmental outcomes

Research suggests that OST programs tend to produce outcomes directly linked to the program's content, implying that the impacts of BGCA can likely be seen across all domains listed above.[27] However, this study is only able to measure the program's impact based on the limited data given, and therefore may not truly capture the extent of the program's effects on participating youth.

Additionally, while this study uses the percentage of students passing state assessment exams as an educational outcome, it also recognizes that standardized test scores are not always the most accurate or relevant measure of student achievement.

1. Standardized test scores are strongly influenced by non-school factors and should not be interpreted as solely the product of an educational program or initiative. One study found that it is possible to accurately predict the passing rate of students at a school district using only the district's average household income, the percentage of residents at or below the poverty line, and the average level of educational attainment. [28]Another found that socioeconomic status and race alone hold such a substantial influence on state exam passing rates that no change in school-level factors, such as teacher mobility or class size, could significantly lessen the achievement gap.[29]
2. Standardized test scores often do not show positive correlations with other educational outcome metrics, suggesting it may not be an accurate representation of academic ability or achievement. In one study, researchers found that ACT test scores had a weak, inconsistent, and sometimes negative correlation with college readiness and completion at the individual student level. [30]Another study found that Black and Latinx students were disproportionally underrepresented in the highest SAT/ACT score decile (5%) when compared to their representation in the highest GPA decile (23%). [31]

[27] (2017) "The Value of Out-of-School Time Programs", RAND Corporation.

[28] (2017) Tienken et. AL., "Predicting Middle Level State Standardized Test Results Using Family and Community Demographic Data."

[29] (2016) White et. Al., "The Increasing Impact of Socioeconomics and Race on Standardized Academic Test Scores across Elementary, Middle, and High School".

[30] (2017) Guiser et. Al., "Norm-Reference Tests and Race Blind Admissions: The Case for Eliminating the SAT and ACT at the University of California."

[31] (2020) Allensworth et. Al., "High School GPAs and ACT Scores as Predictors of College Completion."

Appendix B. Sample Sizes

Table B1. Sample sizes by outcome measure and Boys & Girls Clubs participant status for descriptive analysis in Research Question 1, 2021-22

Outcome Measure	Number of Club members with valid data	% Club members with missing data on outcome	Number of Non-Club members with valid data	% Non-Club members with missing data on outcome
School attendance rate of at least 95%	17,844	0.1%	5,972,132	1.1%
Passed a standardized state exam in English	11,149	37.6%	2,987,446	50.5%
Passed a standardized state exam in math	11,152	37.5%	2,991,660	50.4%
7th-12th students who received a Grade Point Average of 2.5 or higher	3,216	18.4%	2,582,998	11.7%
Received zero suspensions	17,844	0.1%	5,972,132	1.1%

Table B2. Sample sizes by outcome measure and degree of BGC participation for descriptive analysis in Research Question 1, 2021-22

Outcome Measure	Number of Club members with…			Number of non-Club members
	Low BGC attendance *(< 1 day per week)*	Moderate BGC attendance *(1 to <2 days per week)*	High BGC attendance *(2+ days per week)*	
Students in Grades K-6				
School attendance rate of at least 95%	4,300	1,920	7,695	3,082,453
Passed a standardized state exam in math	2,772	1,187	4,533	1,705,606
Passed a standardized state exam in English	2,781	1,179	4,521	1,699,702
Received no suspensions	4,300	1,920	7,695	3,082,453
Students in Grades 7-12				
School attendance rate of at least 95%	2,046	630	1,253	2,889,679
Passed a standardized state exam in math	1,236	453	971	1,286,054

Passed a standardized state exam in English	1,245	454	969	1,287,744
Received a Grade Point Average of 2.5 or higher	1,725	515	976	2,582,998
Received no suspensions	2,046	630	1,253	2,889,679

Table B3. Sample sizes by outcome measure and BGC participant status for model-based analysis in Research Question 2, 2021-22

Outcome Measure	Number of Club members	Number of Non-Club members
School attendance rate of at least 95%	12,948	12,948
Passed an end of grade exam in math	6,707	6,707
Passed an end of grade exam in English	6,741	6,741
Received a Grade Point Average of 2.5 or higher	1,666	1,666

Table B4. Sample sizes by outcome measure and degree of BGC participation for model-based analysis in Research Question 2, 2021-22

Outcome Measure	Number of Club members with…			Number of Non-Club members
	Low BGC attendance *(< 1 day per week)*	Moderate BGC attendance *(1 to <2 days per week)*	High BGC attendance *(2+ days per week)*	
School attendance rate of at least 95%	5,046	1,879	6,023	12,948
Passed an end of grade exam in math	2,540	1,016	3,151	6,707
Passed an end of grade exam in English	2,562	1,017	3,162	6,741
Received a Grade Point Average of 2.5 or higher	933	271	462	1,666

Table B5. Sample sizes by outcome measure and sociodemographic characteristics for descriptive analysis in Research Question 3, 2021-22

Outcome Measure	School attendance rate of at least 95%		Received a Grade Point Average of 2.5 or higher	
Number of students with each outcome measure, by subgroup	*Club members*	*Non-Club members*	*Club members*	*Non-Club members*

Gender				
Female	5,961	5,919	740	762
Male	6,982	7,020	925	903
Neither Male nor Female	--	--	--	--
Race / Ethnicity				
Asian	555	554	66	49
Black or African-American	992	964	95	91
Hispanic or Latinx	7,314	7,397	1,105	1,133
White	3,281	3,254	311	314
Other	806	779	89	79
Grade-level				
K-2	2,980	2,914	N/A	N/A
3-5	5,015	5,002	N/A	N/A
6-8	3,677	3,759	789	800
9-12	1,276	1,273	877	866
Receiving Special Education Services (has an IEP or 504 plan)				
Yes	1,500	1,488	262	214
No	11,448	11,460	1,404	1,452
English Learner				
Yes	3,150	3,091	358	362
No	9,798	9,857	1,308	1,304
Economically Disadvantaged				
Yes	8,992	8,983	1,245	1,249
No	3,956	3,965	421	417

Outcome Measure	**Passed an end of grade exam in English**		**Passed an end of grade exam in math**	
Subgroup	*Club members*	*Non-Club members*	*Club members*	*Non-Club members*
Gender				
Female	3,079	3,115	3,061	3,100
Male	3,662	3,622	3,646	3,603
Neither Male nor Female	--	--	--	--
Race / Ethnicity				
Asian	298	315	294	312

Black or African-American	494	456	495	454
Hispanic or Latinx	3,835	3,908	3,826	3,898
White	1,732	1,696	1,717	1,681
Other	382	366	375	362
Grade-level				
3-5	3,649	3,618	3,633	3,601
6-8	2,907	2,943	2,887	2,921
9-12	177	173	179	179
Receiving Special Education Services (has an IEP or 504 plan)				
Yes	781	732	769	721
No	5,960	6,009	5,938	5,986
English Learner				
Yes	1,656	1,616	1,644	1,607
No	5,085	5,125	5,063	5,100
Economically Disadvantaged				
Yes	4,614	4,579	4,593	4,554
No	2,127	2,162	2,114	2,153

Table B6. Sample sizes by outcome measure and NYOI response category for descriptive analysis in Research Question 4, 2021-22

Outcome Measure	**Number of Club members with…**		
NYOI construct - On Track to Graduation	*Off-track*	*On-track with some risk*	*On-track*
School attendance rate of at least 95%	535	371	1,079
Passed a standardized state exam in math	498	336	992
Passed a standardized state exam in English	494	336	996
Received a GPA of 2.5 or higher	130	116	371
NYOI construct – Overall club experience	*Needs Improvement*	*Fair*	*Optimal*
School attendance rate of at least 95%	581	840	1,430
Passed a standardized state exam in math	560	802	1,321
Passed a standardized state exam in English	558	801	1,322
Received a GPA of 2.5 or higher	113	164	324

NYOI construct – Coping with Challenge	*Low / Very Low*	*Moderate*	*High / Very High*
Received any suspensions	804	1,097	812
School attendance rate of at least 95%	804	1,097	812
Passed a standardized state exam in math	755	1,028	772
Passed a standardized state exam in English	755	1,027	773
Received a GPA of 2.5 or higher	185	243	149
NYOI construct – Community Service	*Never*	*About once a year*	*At least once a month*
School attendance rate of at least 95%	225	128	246
Passed a standardized state exam in math	184	98	183
Passed a standardized state exam in English	182	98	185
Received a GPA of 2.5 or higher	165	109	182

Appendix C. Adjusted and Unadjusted Outcomes from Regression Models

Table C1. Adjusted and unadjusted educational outcomes of Club members compared to matched non-Club members, 2021-22

Outcome Measure	Sample	Model-Adjusted Value	Unadjusted Value	Difference
School attendance rate of at least 95%	Club members	44.7%**	44.5%**	0.3%
	Non-Club members	41.2%	41.3%	-0.1%
Passed an end of grade exam in math	Club members	30.4%**	29.8%**	0.5%
	Non-Club members	32.4%	32.1%	0.4%
Passed an end of grade exam in English	Club members	44.7%**	44.5%**	0.5%
	Non-Club members	44.0%	44.0%	0.0%
7th-12th Grade Students who Received a Grade Point Average of 2.5 or higher	Club members	39.7%	31.5%	8.1%
	Non-Club members	40.3%	33.0%	7.4%
Received zero suspensions	Club members	--	96.2%**	--
	Non-Club members	--	97.2%	--

*Notes: Statistical significance denoted by: * p<0.05; ** p<0.01 when comparing to non-Club members.*

Table C2. Adjusted and unadjusted educational outcomes of Club members compared to matched non-Club members by degree of BGC participation, 2021-22

Outcome Measure	Sample	Model-Adjusted Value	Unadjusted Value	Difference
School attendance rate of at least 95%	High participation	48.0%**	46.3%**	1.7%
	Moderate participation	41.0%	40.1%	0.8%
	Low participation	42.1%	43.8%**	-1.7%
	Non-Club members	41.2%	41.3%	-0.1%
Passed an end of grade exam in math	High participation	29.9%**	27.0%**	3.0%
	Moderate participation	29.1%*	27.6%**	1.6%
	Low participation	31.3%	34.3%*	-3.0%
	Non-Club members	32.4%	32.1%	0.4%
Passed an end of grade exam in English	High participation	41.3%**	37.5%**	3.7%
	Moderate participation	39.7%**	39.1%**	0.6%
	Low participation	41.0%**	44.5%	-3.5%
	Non-Club members	44.0%	44.0%	0.0%

Outcome Measure	Sample	Model-Adjusted Value	Unadjusted Value	Difference
Received a Grade Point Average of 2.5 or higher	High participation	39.1%	34.2%	4.9%
	Moderate participation	40.7%	39.1%*	1.6%
	Low participation	39.6%	28.0%**	11.6%
	Non-Club members	40.3%	33.0%	7.4%

*Notes: Statistical significance denoted by: * p<0.05; ** p<0.01 when comparing to non-Club members.*

Appendix D. Survey Items Analyzed from NYOI Survey

The survey items analyzed in this report come from the Boys & Girls Clubs of America National Youth Outcomes Initiative Member Survey. The exact items asked to comprise each studied domain are detailed in the table below.

Domain	Sub-Domain	Survey Items
Academic success: On track to on time graduation	On Track to Graduate	Putting them all together, what were your grades like last year?
		How many whole days have you missed school because you skipped or "cut"? (Last 4 Weeks)
	Academic expectations	How far in school do you think you will get?
		How important are the things you are learning in school going to be for you later in life?
	On Grade Level for Age	What year were you born in?
		What grade are you in in school?
Club experience: Overall experience	Sense of Belonging	I feel like I belong here.
		I feel like my ideas count here.
		People listen to me here
	Emotional Safety	People make sure rules about how we treat each other are followed.
		I feel respected by staff at this Club.
		I feel respected by other kids at this Club.
		This Club has rules for how people are supposed to treat each other.
	Physical Safety	I feel safe when I am at this Club.
		If someone wanted to hurt me or beat me up here, someone at this Club would stop them.
		Compared to when you are hanging out somewhere else, how safe do you feel when you are hanging out at this Club?
	Fun Items	At the Club, I have a good time.
		I enjoy coming to this Club.
		I have more fun at this Club than other places I spend time.
	Adult Connections	About how many staff at this Club… …pay attention to what's going on in your life?
		…would say something to you if something in your life wasn't going right?
		…say something nice to you when you do something good?
		…could you talk to if you are upset or mad about something?
		…could you go to for help in a crisis?

		…could you go to if you need advice about personal problems?
		…could you go to for help if you had a big problem?
	Staff Expectations	At the Club, there is an adult who believes that I will be a success.
		At the Club, there is an adult who expects me to follow the rules.
		At the Club, there is an adult who always wants me to do my best.
	Recognition	At this Club, staff reward me when I do a good job.
		At this Club, staff let others know when I do a good job.
		At this Club, staff notice when I try hard.
Social & Emotional Development: Coping with challenge	Coping with Challenge	For each of the following statements, choose the answer that best describes you. When something important goes wrong in my life, I just can't stop worrying about it.
		When something important goes wrong in my life, I try to keep people from finding out.
		If I don't understand something right away, I stop trying to understand.
		When I have trouble doing something, I give up.
		When something important goes wrong in my life, I try to figure out how to do better next time.
		If something is really hard, I keep working at it.
		When something important goes wrong in my life, I talk about it with someone to understand what happened.
		When something important goes wrong in my life, I tell myself I'll do better next time.
Character & Citizenship: Community service	Volunteering	In the last year, how often have you volunteered in your school, neighborhood, community?