Monitoring the Uptake of National AfterSchool Association Physical Activity Standards

Final Report

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Introduction

This report summarizes activities conducted under Active Living Research (ALR) Commissioned Analysis 71566 by RTI International and Wellesley College. This project builds upon a 2013 survey conducted with previous ALR support. The focus of the current project was to obtain a second timepoint regarding uptake of the National AfterSchool Association (NAA) physical activity standards in a national sample of afterschool sites using an online survey. In this report, we compare findings from the 2013 and 2014 surveys. We also present findings from a construct validation substudy comparing online survey data on the types of physical activity offered in respondents' sites with more detailed interview data.

Background

Out-of-school time (OST) programs provide services before and after school and during holidays. In addition to providing academic enrichment and social development opportunities, they typically also offer participants food and physical activity. Over 10 million US children participated in afterschool programs in 2014, almost half from low income households (Afterschool Alliance, 2014). Because of their reach and focus, OST programs are a promising setting for promoting healthy eating and reducing obesity risk. The National AfterSchool Association Healthy Eating and Physical Activity (NAA HEPA) standards were designed to help OST programs with this task. Although the Physical Activity Guidelines for Americans Midcourse Report (Physical Activity Guidelines for Americans Midcourse Report Subcommittee of the President's Council on Fitness Sports & Nutrition, 2012) found limited evidence that community and OST program settings increased physical activity among children and youth, a small body of literature showing modest benefits from targeted efforts is beginning to emerge (Wiecha & Hall, 2014).

The Robert Wood Johnson Foundation (RWJF) has supported a portfolio of research and advocacy efforts to develop healthier OST environments, including a series of activities led by our team (***Exhibit 1).*** Initially, RWJF Grant #67296 to Wellesley College in 2010 enabled Wiecha and Hall, with colleagues from Y-USA, to convene the Healthy Out-of-School Time (HOST) Coalition in order to conduct a needs assessment (J. L. Wiecha, G. Hall, E. Gannett, & B. Roth, 2012a) and develop the 11 NAA HEPA quality standards and best practices. The key output of that grant was eleven standards that define healthy snack, meal and physical activity offerings and describe the program inputs necessary for developing and sustaining them (J. L. Wiecha, G. Hall, E. Gannett, & B. Roth, 2012b).

NAA's board of directors adopted the HEPA standards in 2011. NAA participates in the HOST Coalition and is the largest OST professional membership organization in the US. Since NAA adopted the HEPA standards, NAA and the HOST Coalition have conducted dissemination activities through member websites, peer reviewed publications, conference presentations[1], trade journals, newsletters, and at the

[1] HOST coalition members continually deliver non-research workshop presentations in a range of professional development venues. Research presentations are less common and include: Wiecha, J. L., Hall, G., Barnes, M.,

NAA annual convention. In addition, the HOST Coalition leadership team continues to meet monthly, with semi-annual meetings of the whole membership. RWJF supported Y-USA coordination of HOST activities through the Voices for Healthy Kids (VFHK) initiative from 2013-2015.

At an organizational and field level, impact of the NAA HEPA standards has been considerable. Large national organizations including Y USA, Alliance for a Healthier Generation, National Recreation and Park Association, and Boys and Girls Clubs of America have integrated the standards (in whole or in part) into sizable programmatic initiatives. A 2014 press release about Partnership for a Healthier America noted that by 2020 at least 5 million children will attend programs that have made formal commitments to implementing the NAA HEPA standards (White House Office of the First Lady, 2014). In addition, states have considered regulations that include adaptations of the standards, with legislation enacted in California in 2014 and efforts underway in other states including Florida, South Carolina and Texas. In addition, the NAA HEPA standards influenced content within the current Council on Accreditation standards for OST programs.

Exhibit 1. RWJF grants supporting research and development related to the National AfterSchool Association Healthy Eating and Physical Activity (HEPA) Standards

Year	RWJF #	Prime Grantee	Focus
2010	Active Living Research/Healthy Eating Research Rapid Response Grant #67296	Wellesley College	Develop HEPA standards; conduct needs assessment
2013	Active Living Research #70583	Wellesley College	Assess uptake of PA standards among NAA members
2014	Active Living Research #71566	RTI International	Conduct second PA-focused survey of NAA members
2015	Healthy Eating Research #0001008275	RTI International	Assess uptake of HE standards among NAA members

At a local level, data on HEPA implementation continues to be sparse and largely collected by, and confined to, implementing organizations. Our team's RWJF-funded work has focused on this data gap

Warner, G., Vinlaun, M. H., & Ferree, A. (2014). Promoting physical activity in out-of-school time: Update on the impact of the National AfterSchool Association Physical Activity Quality Standards. Active Living Research, San Diego, CA.; Wiecha, J. L., Hall, G., Gannett, E., & Roth, B. (2012, February). Eating in out-of-school time: the promise and the challenge. Plenary presentation at the Robert Wood Johnson Foundation 6th Annual Healthy Eating Research Conference, Austin, TX; and Wiecha, J. L., Hall, G., & Tracy, A. (2014, February). Do after-school programs serve healthy snacks? Presented at Healthy Eating Research, Chapel Hill, NC.

to improve understanding of the impact of the standards on the OST field. ALR has funded us to develop evidence regarding the impact of the NAA physical activity standards; more recently, Healthy Eating Research funded similar work focused on the healthy eating standards.

In 2013, under ALR CA 70583 Wellesley College and RTI conducted a national survey in partnership with NAA to assess recognition and use of the five NAA physical activity standards. Results indicated that about 60% of respondents were familiar with the NAA physical activity standards, and of those, about 72% reported using them for program planning (Wiecha, Hall, & Barnes, 2014). Familiarity was higher among sites that were licensed, accredited, or part of a parent organization, or if the responding staff was a member of NAA. Intentional use of the standards was associated with modest increments in scores for physical activity content and quality and program capacity measures.

Although these findings were promising, limitations of the 2013 survey constrained their interpretation. The data collection strategy did not allow calculation of an accurate response rate, and the survey instrument merited further development. Validation of survey items was not possible, and selection and social desirability biases may have skewed responses.

Project Goals

The current project's main goal was to obtain a second timepoint to assess uptake of the NAA physical activity standards in a national sample of afterschool sites using an online survey. Other goals were:

1. Improve the survey instrument and data quality through cognitive response testing, observation, and construct validation.

2. Improve the sampling and recruitment strategy to permit better tracking of response rates.

3. Develop replicable surveillance protocols for regular periodic data collection.

The major activities of the project were an online survey and a construct validation substudy. The project was conducted by Dr. Jean Wiecha at RTI International with a subaward to Dr. Georgia Hall at Wellesley College's National Institute on Out-of-School Time. Instruments and data collection protocols were developed jointly. RTI had primary responsibility for analysis and report development. Wellesley College programmed and administered the survey, coordinated pretests and cognitive response interviews, and participated in report development. The NAA collaborated by providing its membership database. The study was reviewed by IRBs at RTI and Wellesley College which determined that it was exempt from human subjects research requirements.

Online Survey Development, Data Collection, and Findings

Instrument Development

In the first research activity, we revised the 2013 NAA physical activity standards survey. We removed items that had yielded redundant information or performed poorly in 2013 and conducted cognitive response interviews to assess respondents' interpretation of questions, recall process, their perceived adequacy of response options, and potential for social desirability bias. Four telephone interviews were conducted with a staff person at four metro-Boston area afterschool sites by an RTI team member using a standardized protocol (Appendix 1). Participants received a gift card as a thank you. Cognitive response interviews led to changes in survey organization and in the wording of several items.

Online Survey Sampling and Recruitment

The sampling frame was the NAA current membership database (summer 2014) and all qualified records in the database were invited to participate. Using Excel, we began with 3,212 individual NAA members. We sorted these by company name and eliminated 139 records that did not provide this information. Through visual review, we eliminated records that unambiguously were not direct service providers, such as university researchers, vendors, or individuals from advocacy organizations. Next, we identified companies with multiple members and randomly selected one individual in these cases. Our final list had 1,584 records. We anticipated a response rate of about 30 percent.

NAA members on the final roster received an email invitation and link to the survey (Appendix 2.) They were allowed to forward the email to a different staff person if necessary to facilitate completion. As an incentive, we selected four respondents randomly to receive a $75 gift card. The survey remained open from November 18, 2014 to January 6, 2015. We received 456 responses.

Online Survey Data Analysis

We conducted statistical analyses using SAS and developed charts in Excel. Descriptive statistics were calculated using frequencies for categorical data and means for summed scores. For correlation analyses, we were interested in the relationship between site and respondent characteristics and implementation scores on the five standards, using the null hypothesis of no difference between groups. We created summary best practice implementation scores for each of the five physical activity standards. There were three to nine best practice items for each standard; each one's implementation level was assessed using a four-point scale in which the positive terminus ("always true") was coded as four points and the negative terminus ("never true") was coded as one point. We calculated the mean scores stratified by key site characteristic. Because the underlying scoring was ordinal, we used non-parametric Kruskal-Wallis tests (using SAS's proc npar1way procedure with the Wilcoxon option) to examine the relationships between site characteristics and summary implementation scores. This test is a non-parametric equivalent to the one-way ANOVA. The null hypothesis of the Kruskal-Wallis test is that the mean ranks of the groups are the same.

Online Survey Results

Throughout this section, we display our results for 2014 along with results from 2013 for ease of comparison. In addition, we limit our display of Likert-type responses to the positive anchor category ("always true") to simplify the presentation. For more detailed 2014 survey results, see appendix 3. For more detail on the 2013 survey, please see our previous report or published article.

Sample Description

In 2014 we received 456 Responses to 1,584 invitations. We eliminated 51 due to missing data, achieving a final sample of 405 for a response rate of 26%. Of these, we were able to match 353 (87%) to the organizations on our original invitation list, and 301 (74% of total) were completed by the individual we invited. An additional 52 responses (13%) came from other individuals at the invited organizations; they reported they received the survey as a forward. We were unable to match 52 others (13%) that were not from a program on our invite list.

Table 1. Characteristics of Respondents and their Afterschool Sites from the NAA Physical Activity Standards Surveys Conducted in 2013 and 2014

	2013 (595)		2014 (405)	
Characteristics	**N**	**%**	**N**	**%**
Respondent Job Title				
Program Director, Coordinator or Manager	239	40.2	350	86.4
Site Director, Coordinator or Manager	311	52.3	-	-
Health and Wellness Specialist, Director, or Coordinator	-	-	2	0.5
Physical Activity Specialist or Coordinator	9	1.5	5	1.2
Other title	36	6.1	42	10.4
Type of facility that Site is located in				
Community-Based Organization	86	14.5	54	13.3
School	401	67.4	271	66.9
Other	84	14.1	80	19.8
Operated/Managed by a Parent Organization				
No	422	70.9	23	5.7
Yes	173	29.1	381	94.1
4-H	3		1	
Boys & Girls Clubs of America	29		13	
Faith-based organization	-		24	
Parks and Recreation Department	-		35	
School District	12		123	
YMCA	51		20	
US Military	1		0	
Unspecified	-		20	
Grades Served by Summer OST Sites				
Pre-School	-	-	70	17.3
Elementary or Primary (K-5)	547	91.9	373	92.1
Middle School or Junior High (6-8)	241	40.5	195	48.1
High School (9-12)	89	15.0	72	17.8

	2013 (595)		2014 (405)	
Characteristics	**N**	**%**	**N**	**%**
21st Century Community Learning Center	159	26.7	121	29.9
Licensed Provider of OST Services	191	32.1	248	61.2
Accredited by the Council on Accreditation (NAA Accreditation)	89	15.0	69	17.0
Respondent is a Member of NAA			272	67.2
Member for Less than 12 months	-	-	65	23.9
Member for 12 to 23 months	-	-	68	25.0
Member for 24 or more months	-	-	135	49.6

We received responses from 45 states and one from Alberta (Canada). The highest number of respondents came from New York State (36) and the average number per state was about 9, with a range of 1 to 36.

Respondent characteristics are shown in Table 1. Most respondents were in leadership roles in both surveys. In both years, the most common facility type was a school (about 67%). Site affiliation with a parent organization is much higher (94%) in the 2014 survey. We believe this reflected changes in question wording and skip pattern analysis between the two surveys. Nine out of ten sites served children in grades K-5 (about 92%) each year, whereas services to grades 6-8 were lower (40 to 48%), and lowest of all for grades 9-12 (15 to 18%) (respondents could select multiple grade categories).

The proportion of sites that were 21st Century Community Learning Centers (a federal program funding academic enrichment in eligible communities) was similar in both years (27% and 30%). Sites that reported they were licensed almost doubled from 32% to 61%, possibly reflecting a change in item wording. Accreditation was consistently low at 15% and 17%.

The 2014 assessment of NAA membership status was worded differently from the 2013 item and not directly comparable. About two thirds of 2014 respondents were NAA members.

Awareness, Use and Implementation of the Standards

Familiarity with the NAA physical activity standards was unchanged in 2014 at about 60 percent (Table 2). Among those that reported familiarity with the standards prior to the survey, there was a marked decrease in the proportion that reported using the standards (72% in 2013 vs. 53% in 2014). This may at least partly reflect changes to the wording of the stem question and the responses to increase their specificity. In 2013 the item asked if respondents used one or more of the standards to "guide" physical activity; in 2014 it asked if they used the standards to "guide how we plan and deliver…"

Table 2. Familiarity with and utilization of NAA physical activity standards among respondents in surveys conducted in 2013 and 2014

	2013		2014	
Survey Item	**N**	**%**	**N**	**%**
I had seen the standards before today (% of total N)	355	60.0	234	57.8
Use of standards (calculated as % of 355 (2013) or 234 (2015)				
We use one or more of the standards to guide physical activity at this site *	257	72.4	125	53.4
At this site, we have thought about using the NAA standards to guide physical activity, but we are not using them at this time (**2014** questionnaire only)	-	-	42	17.9
At this site, we have <u>not</u> thought about using the NAA standards to guide physical activity (**2014** questionnaire only)	-	-	34	14.5
We <u>do not</u> use the standards to guide physical activity at this site (2013 questionnaire only)	66	18.6	-	-
No response	32	15.2	33	14.1

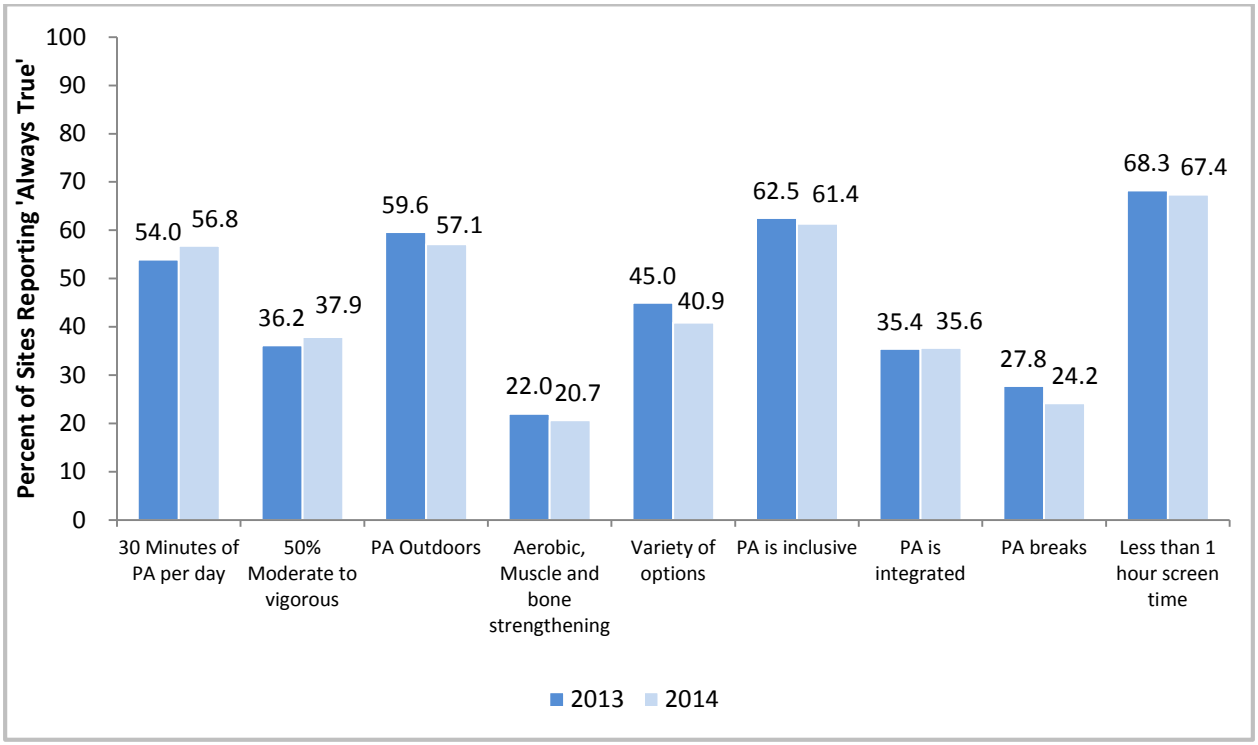
*This wording is from 2013. The item was reworded in 2014 as "At this site, we are currently using one or more of the NAA standards to guide how we plan and deliver physical activity".

NAA physical activity standard PA-01 Content and Quality

Survey respondents answered questions about implementing nine NAA best practices for content and quality of physical activity. Despite some minor changes to wording, the results are very similar across the two years of data. For example,, in both years slightly over half (54% and 57%) of respondents reported they always offer 30 minutes of physical activity per day. For four of the nine best practices, more than half of the sites reported "always true" (Figure 1). *Screen time and digital device time is limited to less than one hour per day* was the best practice with the highest percentage of sites reporting it was "always true", followed by *program offers inclusive physical activities that involve all program attendees regardless of ability/disability*.

The best practice with the lowest percent of sites reporting "always true" was *daily physical activity time includes aerobic, muscle and bone strengthening activities*. This best practice was the focus of our validation study.

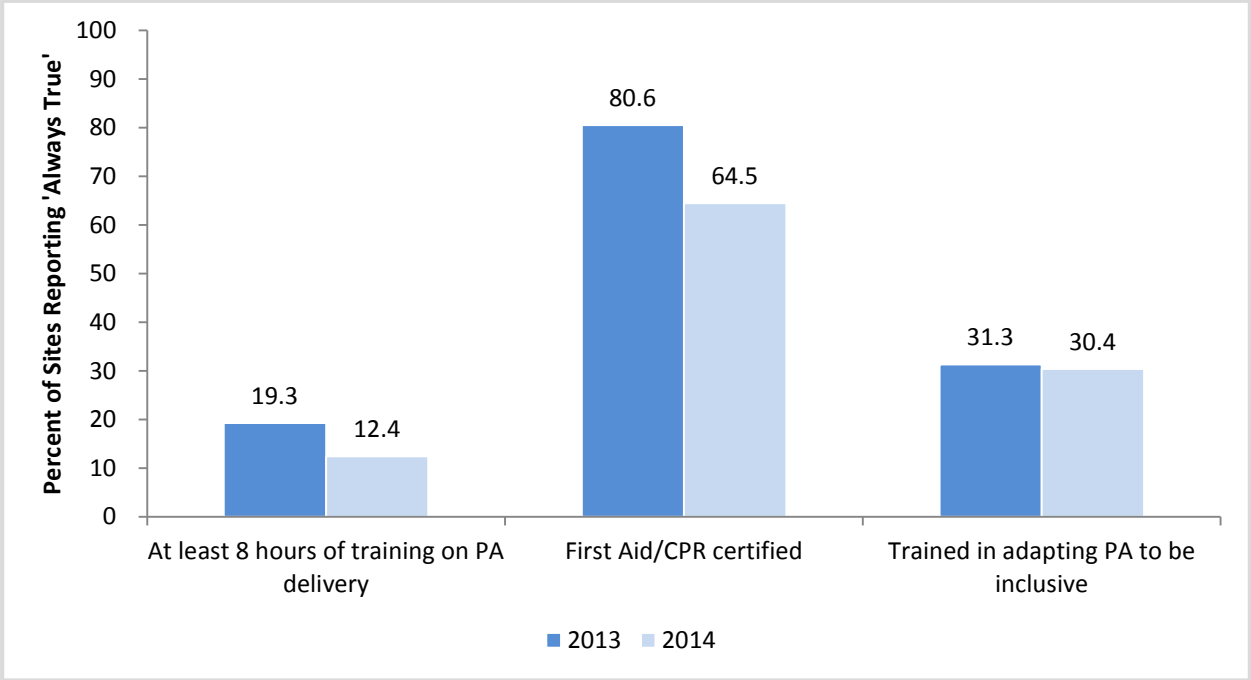
Figure 1. Percent of Sites Reporting 'Always True' for Best Practices comprising Physical Activity Standard PA-01, Content and Quality, in 2013 and 2014.



NAA physical activity standard PA-02 Staff Training

Response patterns were similar across the two years, with the lowest implementation of the first best practice, highest implementation of the second, and middle level implementation of the third (Figure 2). While most sites reported staff were trained in first aid and CPR, far fewer reported implementing best practices specific to physical activity training for staff. We note substantial declines in reports that staff "always" received at least 8 hours of physical activity training, and in first aid/CPR certification.

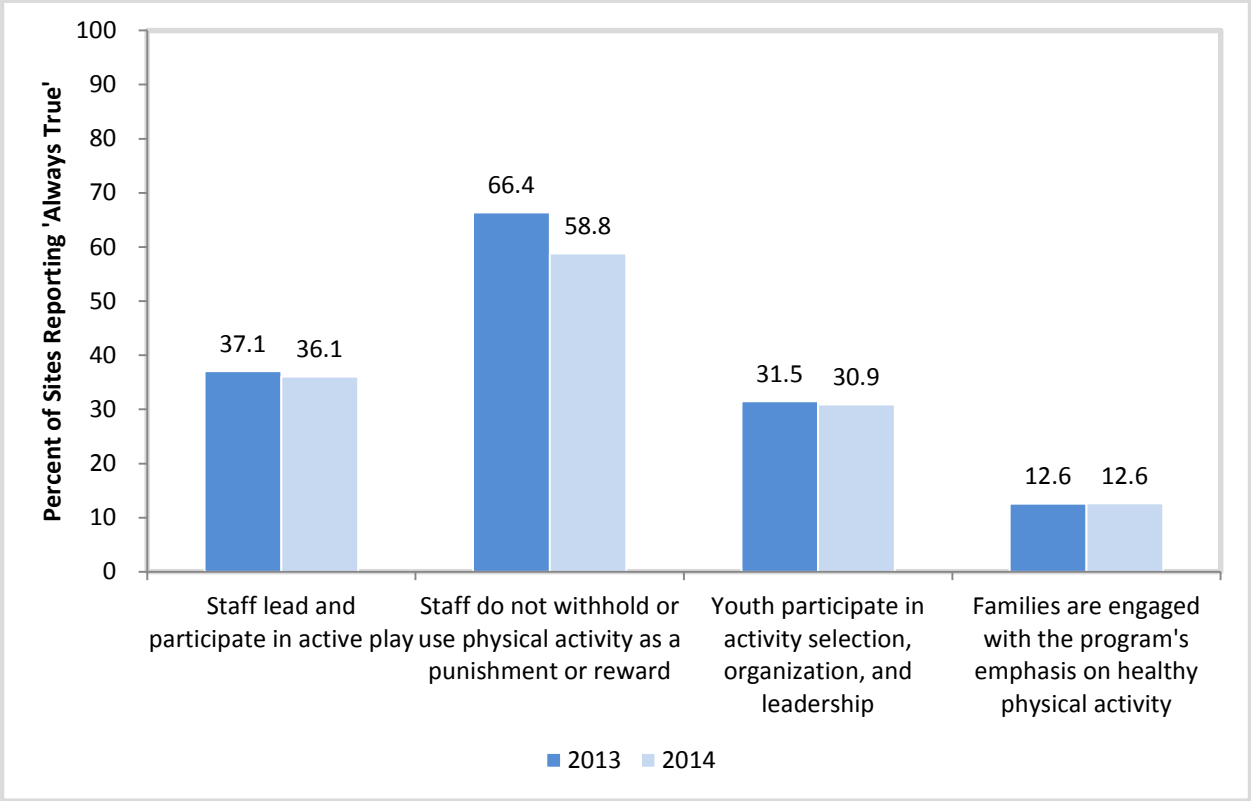
Figure 2. Percent of Sites Reporting 'Always True' for Best Practices comprising Physical Activity Standard PA-02, Staff Training, in 2013 and 2014.



NAA physical activity standard PA-03 Social Support

Respondents answered four questions regarding best practices about social support (Figure 3). Social support refers to group practices and personal interactions that have a positive relationship with physical activity. In both years, only one of the best practices, not using physical activity as a punishment or reward, elicited "always true" from more than half of respondents, and this proportion declined by about 10 percent in 2014. For the other three best practices, levels were steady across the two years, and there is clearly substantial room for improvement.

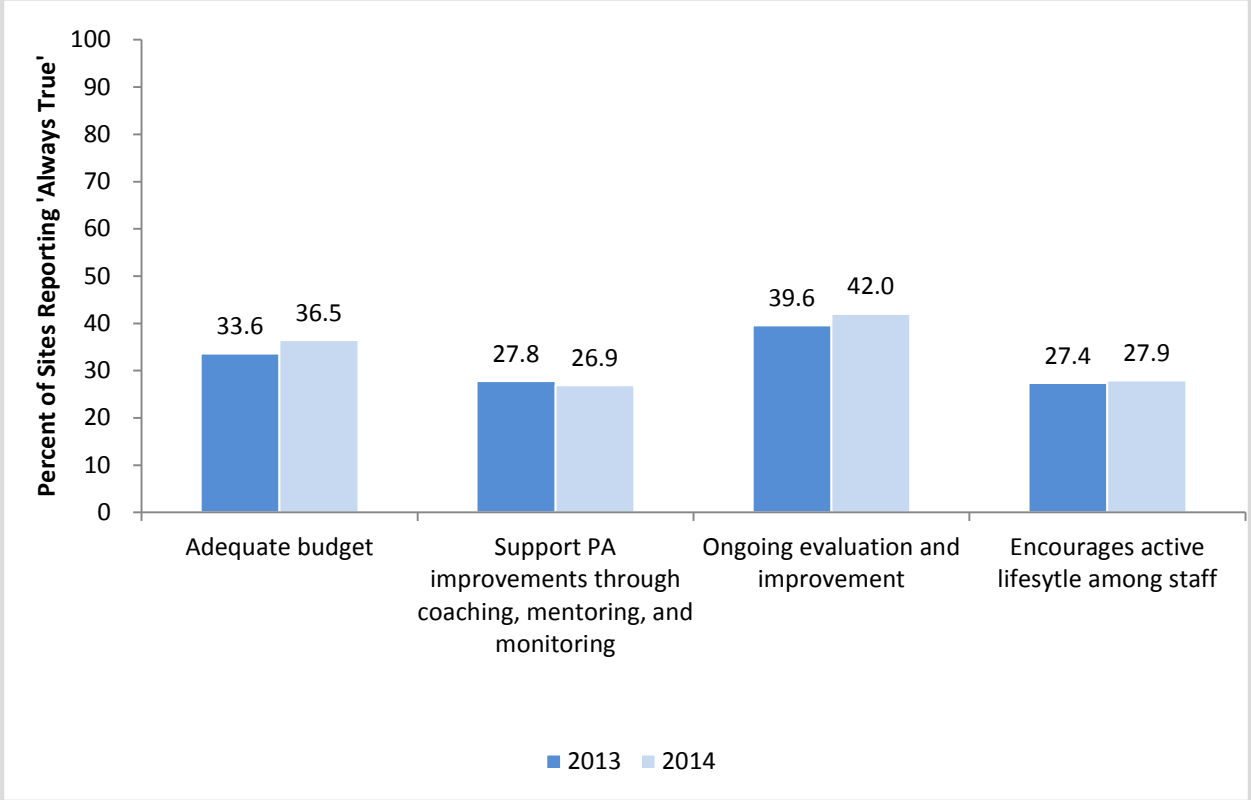
Figure 3. Percent of Sites Reporting 'Always True' for Best Practices comprising Physical Activity Standard PA-03, Social Support, in 2013 and 2014.



NAA physical activity standard PA-04Program Support

The fourth standard, Program Support, covers programmatic infrastructure and practices that enhance program quality. Items include budget, quality monitoring, and staff supervision and development. The results were very similar across years. None of the program support best practices achieved a 50% "always true" rate (Figure 4).

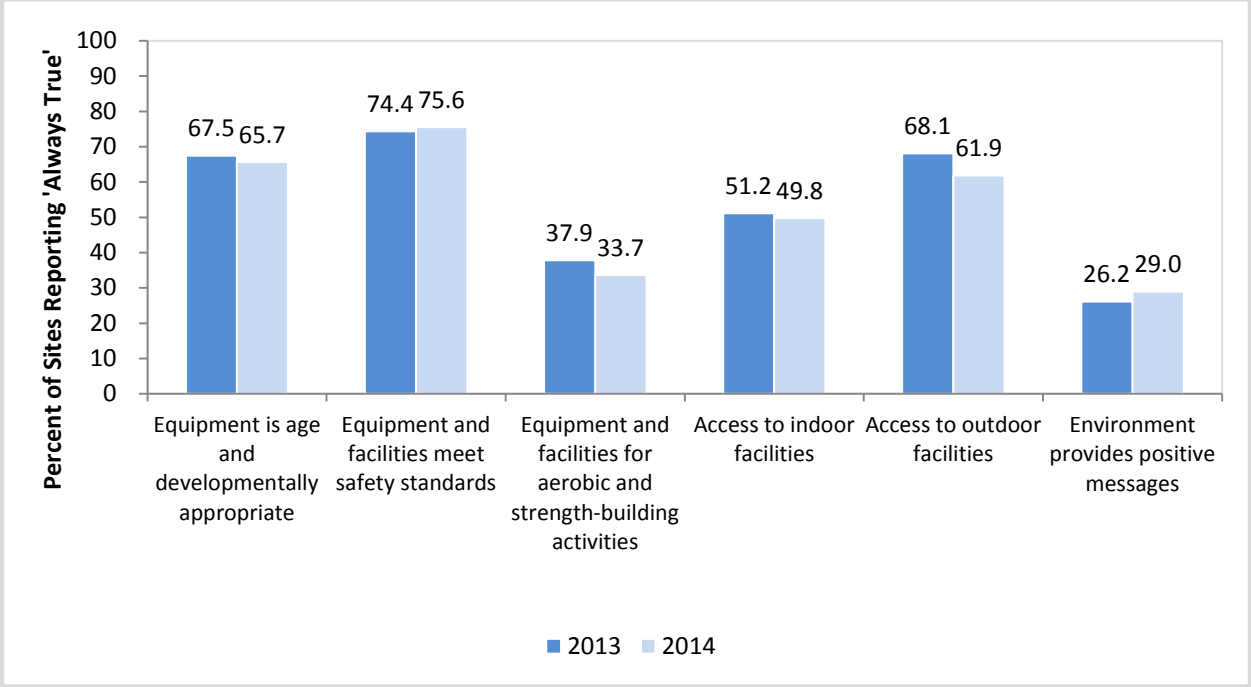
Figure 4. Percent of Sites Reporting 'Always True' for Best Practices comprising Physical Activity Standard PA- 04, Program Support, in 2013 and 2014.



NAA physical activity standard PA-05 Environmental Support

Environmental support refers to facilities, equipment and characteristics of the program space that support physical activity. Results were very similar across years, which the largest change being a drop of 7 percentage points in the best practice related to having access to outdoor facilities. Half or more of sites reported "always true" for four of the six environmental support best practices demonstrating better implementation of this standard than the others (Figure 5). *The program environment provides positive messages about physical activity through posters, pictures, and books* was the environmental support best practice that sites were least likely to have implemented, with just over a quarter reporting this was "always true".

Figure 5. Percent of Sites Reporting 'Always True' for Best Practices comprising Physical Activity Standard PA-05, Environmental Support, in 2013 and 2014.



Are Site Characteristics Associated with Implementation Scores?

We created summary best practice implementation scores for each of the five physical activity standards (there were three to nine best practice items for each standard). All of the scores were based on responses to four-point scales in which the positive terminus ("always true") was coded as four points and the negative terminus ("never true") was coded as one point. We calculated the mean scores for each response level within each characteristic.

We examined whether implementation scores for the standards varied according to characteristics of the program site and the respondent. We present results from 2014 in Table 3 (please see our previous report for a similar analysis of 2013 data). Statistically significant results from Kruskal-Wallis tests are indicated by asterisks. Differences between group means were generally modest.

- Being a 21st Century Learning Center, length of NAA membership, and location type had no statistically significant associations with implementation score distributions.
- NAA members had better implementation scores than others for Program Support.
- Licensed afterschool providers had better implementation scores than others for PA-01, Content and Quality, and PA-02, Staff Training.
- NAA-accredited sites had better implementation scores than others for PA-02, Staff Training and PA-04 Program Support.
- Being familiar with the NAA physical activity standards was associated with better implementation scores for all of the standards except PA-01, Content and Quality.
- The only characteristic associated with better scores for all five standards was using the NAA physical activity standards for program planning—a promising finding although the increments, as noted, are modest.

Table 3. Mean and Median Implementation Scores for Physical Activity Standards Stratified by Site Characteristics, School Year Survey 2014[1]

Site Characteristics		Mean (median) scores for standards				
		PA-01 Content and Quality	**PA-02 Staff Training**	**PA-03 Social Support**	**PA-04 Program Support**	**PA-05 Environmental Support**
21st Century Learning Center	Yes	27.72 (28.00)	8.18 (8.00)	11.92 (12.00)	12.23 (12.00)	19.85 (20.00)
	No	28.80 (29.00)	8.38 (8.00)	11.98 (12.00)	11.70 (12.00)	19.44 (20.00)
	Don't Know	29.67 (31.00)	8.93 (9.00)	12.11 (12.00)	12.26 (12.00)	19.96 (21.00)
Licensed Afterschool Provider	Yes	29.05 (30.00)**	8.71 (9.00)***	12.06 (12.00)	11.87 (12.00)	19.62 (20.00)
	No	28.21 (28.50)	7.99 (8.00)	12.00 (12.00)	12.21 (12.00)	19.65 (20.00)
	Don't Know	26.72 (28.00)	7.36 (7.00)	11.38 (11.00)	11.22 (11.00)	19.49 (20.00)
NAA Accreditation	Yes	29.51 (30.00)	9.06 (9.00)***	12.38 (12.00)	12.87 (13.00)**	20.23 (21.00)
	No	28.65 (29.00)	8.27 (8.00)	11.96 (12.00)	11.80 (12.00)	19.48 (20.00)
	Don't Know	27.48 (28.00)	8.05 (8.00)	11.65 (12.00)	11.36 (12.00)	19.44 (19.00)
NAA Member	Yes	28.67 (29.00)	8.45 (8.00)	12.06 (12.00)	12.16 (12.00)**	19.82 (20.00)*
	No	28.30 (28.00)	8.17 (8.00)	11.79 (12.00)	11.31 (11.00)	19.14 (20.00)
Length of NAA Membership	<12 months	29.26 (30.00)	8.65 (9.00)	12.15 (12.00)	12.03 (12.00)	19.55 (19.00)
	12 to 23 months	27.79 (28.00)	8.31 (8.00)	11.84 (12.00)	12.22 (12.50)	19.87 (20.00)
	24 months or more	28.86 (29.00)	8.48 (8.00)	12.15 (12.00)	12.24 (12.00)	19.99 (20.00)
Location Type = School	Yes	28.76 (29.00)	8.31 (8.00)	12.00 (12.00)	11.98 (12.00)	19.80 (20.00)
	No	28.12 (29.00)	8.44 (8.00)	11.90 (12.00)	11.68 (12.00)	19.22 (19.00)
Familiar with NAA Standards	Yes	28.96 (29.00)	8.76 (9.00)***	12.41 (13.00)***	12.59 (13.00)***	20.11 (21.00)***
	No	27.93 (28.00)	7.78 (8.00)	11.32 (11.00)	10.84 (11.00)	18.86 (19.00)
Uses NAA Standards	Yes	29.77 (30.00)**	9.04 (9.00)***	12.52 (13.00)**	12.97 (13.00)***	20.53 (21.00)***
	No	28.00 (28.00)	8.06 (8.00)	11.72 (12.00)	11.39 (11.00)	19.19 (19.00)
Total		28.55 (29.00)	8.36 (8.00)	11.97 (12.00)	11.88 (12.00)	19.60 (20.00)
Maximum Possible Score		36	12	16	16	24

[1] Statistical significance is based on results from the Kruskal-Wallis test for differences between groups
* p<0.05; ** p<0.01; ***p<0.0001

Physical Activity Best Practices with Substantial Room for Improvement

Knowing which best practices sites were least likely to implement can help direct technical assistance and training efforts, or identify potentially unrealistic targets. Below are the best practices for which at least 25% of respondents responded "sometimes true" or "never true." The source data showing all of the frequencies are in Appendix 3. The list has only one change, an addition from PA-05, from 2013. Many of the percentages we report increased slightly across the two years.

PA-0 1, Content and Quality: Best practices that about 25% or more of respondents indicated were never or sometimes implemented:

- Conducts physical activities that are integrated with enrichment, academic, or recreation content. 2013: 25%; 2014: 26%
- Daily physical activity time includes aerobic, muscle and bone strengthening activities. 2013: 39%; 2014: 44%
- Program provides short physical activity breaks between and/or within learning activities. 2013: 36%; 44%.

PA-02, Staff Training: Best practices that about 25% or more of respondents indicated were never or sometimes implemented:

- Relevant staff receive at least 8 contact hours/year of professional development on physical activity delivery. 2013: 61%; 2014: 65%.
- Relevant staff are trained in adapting physical activity opportunities to include all children regardless of ability or disability status. 2013: 37%; 2014: 43%.

PA-03, Social Support: Best practices that about 25% or more of respondents indicated were never or sometimes implemented:

- Parents/guardians are engaged with the program's emphasis on healthy PA. 2013: 62%; 2014: 62%.

PA-04, Program Support: Best practices that about 25% or more of respondents indicated were never or sometimes implemented:

- All four of the physical activity standards 4 best practices made this list.
- The program provides adequate budget to support quality physical activity opportunities. 2013: 26%; 2013 24% (very close!).
- Program managers support physical activity improvements through coaching, mentoring, and monitoring progress. 2013: 29%; 2014 32%.
- The Program participates in ongoing self-evaluation and program improvement strategies. 2013: 24%; 2014: 27%.
- The program promotes and encourages a physically active lifestyle among staff. 2013: 31%; 2014: 35%.

PA-05, Environmental Support: Best practices that about 25% or more of respondents indicated were never or sometimes implemented:

- The program environment provides positive messages about physical activity through posters, pictures, and books. 2013: 42%; 2014: 39%.
- Equipment facilitates both cardiorespiratory and musculoskeletal fitness. 2014 only: 35%.

Construct Validity: Understanding Respondents' Interpretation of NAA PA-01, Content and Quality.

The purpose of the construct validation substudy was to compare respondents' survey reports of activity offered at their sites with more detailed interview data in order to understand their capacity to report aerobic, bone-strengthening and muscle strengthening physical activity. We focused on one of the PA-01 best practices that appears on the survey: "Daily physical activity time includes aerobic, muscle and bone strengthening activities." Although this best practice represents the crux of PA-01, we lack evidence that service providers understand and can identify aerobic, muscle and bone strengthening physical activity. Service providers that do not understand the NAA physical activity standards cannot implement them with intentional fidelity.

Development of Validation Protocol

Our aim was to develop a brief telephone interview protocol to use with a sample of survey respondents on three random days to obtain descriptions of physical activity they offered on those days. Given the constraints of time and funding associated with this project, the ALR-approved aim was to develop a rapid construct validation approach using a brief phone assessment, rather than a criterion validation approach using objective or observational measurement.

To develop the protocol, we conducted formative testing in 3 local afterschool sites. Team members visited each site sequentially and the research team met after each visit to refine the protocol. The pretests were incentivized. Using a standardized protocol, the researcher observed physical activity at the site; interviewed the provider to elicit a description of the physical activity that had taken place; and determined whether the interview report was consistent with the observation (Appendix 4). The pretests demonstrated that providers had misconceptions about the definitions of aerobic, muscle strengthening and bone strengthening activities. We inferred that a brief phone interview protocol would require elicitation of types of movement children participated in, in order to for the research team to categorize activities as aerobic, muscle strengthening and/or bone strengthening.

The final telephone interview protocol (Appendix 4) was a multiple-pass assessment instrument obtaining increasing detail with each pass (Exhibit 1).

- In the first pass, the researcher asked if the provider offered any physical activity that day. The researcher also assessed if the provider had observed the physical activity in the program that day and was able to stay on the phone to answer a set of questions about the physical activity programming. If yes, the interviewer continued with the second pass.
- The second pass had two parts. The first part asked the participant if he or she thought that the program's physical activity that day included any aerobic, muscle strengthening, and/or bone strengthening activities (three separate questions). The second part asked the respondent to identify by name all of the games and sports offered.

- In the third and final pass, the interviewer read a standardized list of movements to understand what the teacher observed the children actually doing, such as running, hopping, dancing, throwing, etc.in each of the activities identified in the second pass. The list of movements captured types of movements consistent with aerobic, muscle and bone strengthening activities. Following the interviews the research team coded the movements as aerobic, muscle strengthening, and/or bone strengthening, based on a literature scan and expert opinion donated by Scott Crouter (U Kentucky) and Diane Catellier (RTI International).

Exhibit 1. Multiple Pass Validation Interview Sequence

Pass	Examples
1. Was physical activity offered?	Yes or No
2. If so, what activities were offered?	Basketball, zombie tag
3. What movements took place in each activity?	Climbing on equipment; throwing; running; jumping rope; jumping without a rope; pushing an object…

Construct Validity Substudy Sample

After analyzing survey data we stratified the 405 survey respondents on their answers to the criterion item, "Daily physical activity time includes aerobic, muscle and bone strengthening activities", with response categories Never, Sometimes, Usually, or Always True (Table 4). To obtain a sample of 40 sites with discrepant responses to the test variable, we set a sample goal of 20 of the "never true" respondents and 20 of the 83 that answered "Always true." We selected sample in date order of survey receipt. We emailed invitations to a total of 138 survey respondents (Appendix 4), working through the respondent lists sequentially and allowing time for responses in between batches of invitations. We recruited from the "sometimes" category only after it was clear we would not obtain 20 participants from the "never" category. During data collection, we replaced one participant that did not complete the three interviews and lost one participant. The final sample of 39 included an even mix of sites that described their implementation of the test item as "Always true" or "Sometimes/never true" (table 4). Participants that completed all three interviews received an incentive.

Table 4. Validation sample development: Frequency of survey responses to "we offer physical activity that includes…" and representation in validation sample

	Survey Frequency	Percent of survey responses	Invited to participate in validation	Frequency in final validation sample	Percent of final validation sample
Never true	21	5.2	21	8	20.5
Sometimes true	154	38.4	49	12	30.8
Usually true	143	35.7	N/A, did not recruit		
Always true	83	20.7	68	19	48.7

Construct Validity Substudy Data Collection

The Wellesley College team conducted interviews between February and April 2015. To avoid biasing activity on data collection days, we did not pre-arrange calls, but did provide participants with a date range for calls. Each call required 1 to 3 attempts to reach each participant. Calls 1-3 were conducted on three separate weeks.

Construct Validity Substudy Data Analysis

We created three data categories for validation analysis.

1. Survey self-report data ("V1"): Responses to the online physical activity standards survey validation item: "Daily physical activity time includes aerobic, muscle and bone strengthening activities."

2. Telephone interview activity data ("V2"): Responses to the telephone interview questions on activity in the second pass of the interview. The question was broken into three components (aerobic, muscle, and bone strengthening activity).

3. Movement data derived from the telephone interviews ("V3"): In the third pass of the telephone interview, respondents described the types of movements that comprised the activities they offered. The research team then determined if the activities were plausible contributors to aerobic fitness, muscle strengthening and bone strengthening.

Using these three types of data, we tabulated descriptive results and conducted three cross-tabulation analyses:

1. Do interview data on activity type (V2) support the survey self-report data (V1)?
    a. V1 x V 2.
    b. We cross tabulated survey data (V1) by telephone interview data (V2)
    c. V2 scores: On any given day, if the respondent answered YES to all three activity types (aerobic, muscle and bone strengthening activities) we assigned a score of "PASS". Less than all three days received "NOT PASS". We summed the number of PASS scores over three days (zero to three).
    d. We cross-tabulated the total PASS days against the survey data.
2. Do V2 data (interview data on activity type) support the V3 data (Interview data on movement)?
    a. V2 x V 3
    b. This analysis occurred within each of the 3 interview days
    c. We scored the movement data for each day using a scoring rubric assigning movement types to activity categories.

d. Within each interview day, we cross tabulated the movement data score against the activity data score. Thus, we assessed whether a report that aerobic activity took place mapped to any reported movement that was consistent with aerobic activity.
e. Each day was scored as "confirmed" (activity reports and movement scores all match) or "not confirmed" (less than full match).

3. Do interview data on movement (V3) support the survey self-report data (V1)?
    a. V1 x V3
    b. Using data from analysis 2, we developed a score for presence of aerobic, muscle and bone strengthening activity. If V3 data indicated all three types of activity occurred on one day, we assigned that day a score of PASS as in analysis 1. Otherwise, we assigned the day a NOT PASS score. We summed the number of PASS scores over three days (zero to three).
    c. We cross tabulated the objective three-day score with the survey self-report response.

Construct Validity Substudy Results

We conducted three analyses to examine the extent to which survey data were supported by interview data.

Analysis 1: Do site interview activity data support the survey self-report data?

In Analysis 1, we compared survey data to data obtained through the interview questions that formed the first pass of our validation protocol, asking participants whether they offered any aerobic, muscle strengthening, and bone strengthening activities that day. Results are in Table 5.

First, we wanted to know the proportion of "always true" responses on the survey that were confirmed by the validation interviews (three days in which the respondent reported aerobic, muscle or bone strengthening activities on each day). In our analysis, nine of 19 "always true" responses were confirmed by interview report.

Second, we examined the proportion of "sometimes true" survey responses confirmed by interview (one to two days of reported aerobic, muscle or bone strengthening activities). We confirmed seven of the 12 responses in this category.

Finally, we examined the proportion of "never true" survey responses confirmed by interview (zero days of reported aerobic, muscle or bone strengthening activity). Three of 8 "never true" responses were confirmed.

The Spearman's rho correlation between interview and survey data was 0.33 ($p=0.04$), indicating a low moderate strength of association.

Table 5. Cross tabulation of NAA physical activity standards survey responses with number of phone interview days that aerobic, muscle strengthening and bone strengthening activity were reported

		NAA physical activity standards survey response			
		never	sometimes	always	Total
# of phone interview days indicating aerobic, muscle strengthening and bone strengthening activity	0	**3**	3	2	8
	1-2	4	7	8	19
	3	1	2	9	12
Total		8	12	19	39

Analysis 2: Do interview activity data support the interview movement data?

In Analysis 2, we compared respondents' assessments of the different types of activity they offered with our assessment based on their activity descriptions. We compared respondents' answers to the first pass of interview questions to our appraisal of the types of activities they offered. This analysis was done separately for each round of calls. We then calculated occurrences of a match between our assessment and their assessment. The match could be a yes/yes or a no/no.

On the assumption that our assessment was more accurate, participants accurately assessed the types of activity they offered about two thirds of the time. The match rate was 62% for round 1 calls, 74% for round 2 calls, and 64% for round 3 calls (table 6). They were inaccurate about a third of the time, generally in the direction of not reporting an activity type that was actually present. They were most likely to underreport bone strengthening activity (not shown).

Table 6. Frequency of matches between participant report and interviewer assessment of presence of aerobic, muscle strengthening and bone-strengthening activity

		Frequency	Percent
Match between participant report and interviewer assessment: Interview #1	No	15	38.5
	Yes	24	61.5
	Total	39	100.0
		Frequency	Percent
Match between participant report and interviewer assessment: Interview #2	No	10	25.6
	Yes	29	74.4
	Total	39	100.0
		Frequency	Percent
Match between participant report and interviewer assessment: Interview #3	No	14	35.9
	Yes	25	64.1
	Total	39	100.0

Analysis 3: Do interview data on movement data support the survey data?

In Analysis 3 we cross tabulated the survey data with the interview movement data scored by our team. The Spearman's rho correlation between interview movement data and survey data was 0.404 (p=0.011), indicating a moderate strength of association.

As shown below (Table 7), this analysis suggests that 18 out of 19 "always" responses on the survey were completely supported by interview data on movement. These sites offered aerobic, muscle or bone strengthening activities on all three days according to interview movement data; by contrast, interview activity data confirmed only nine of 19 "always" reports (analysis 1). The survey response "sometimes" was confirmed once out of 12 cases, and the "never" response was not confirmed in any of the 8 cases. Assuming the interview movement data are the most accurate data available to us, 31 of the 39 validation participants offered all three types of movement on all three days assessed, rather than only 19 of them as detected on the survey, suggesting that our survey item may underestimate the presence of aerobic, muscle or bone strengthening activities in OST sites.

Table 7. Cross tabulation of NAA physical activity standards survey responses with number of days that aerobic, muscle strengthening and bone strengthening activity occurred based on interview movement data scored by researchers

		NAA physical activity standards survey response			
		never	sometimes	always	Total
# of phone interview days in which movement data indicated aerobic, muscle strengthening and bone strengthening activity	0	0	2	0	2
	1-2	4	1	1	6
	3	4	9	18	31
Total		8	12	19	39

Construct Validity Study Conclusion and Limitations

We conclude that a brief interview that uses a multiple pass method to assess physical activity on three separate days can elicit movement components that can be scored and used to describe physical activity at the site. Moreover, we conclude that the phone assessment was more likely to identify aerobic, muscle strengthening and bone strengthening activity than the survey. In addition, interviews suggest that providers may not understand physical activity terms or how the activities they offer may align with them.

Although this small study was informative, it had three key limitations. First, the approach and sample size were determined largely by time and budget. Our focus was on developing a rapid method for understanding how survey respondents interpret one component of PA-01 and was not a true validation study in the sense of using a criterion method such as observation to assess the accuracy of survey responses. Second, the validation effort took place over several months and did not overlap temporally with the survey. This reflected challenges with completing pretests and interviews in a timely manner due to difficulty reaching respondents, compounded by winter weather which caused extensive work interruptions. Nonetheless, the survey was trying to detect "typical" implementation practices, which are generally stable in a given school year, so while the temporal gap is certainly a weakness, the analysis is still informative. Third, we want to be clear that our analysis only examined what types of physical activity were offered, and did not assess children's activity patterns.

Commissioned Analysis Report Conclusions and Next Steps

With this commissioned analysis, we set out to obtain a second year of data on uptake of the NAA physical activity standards using improved methods for sampling and data collection. On key questions about familiarity with and use of the NAA standards, the 2014 survey obtained very similar results to the 2013 survey. In both years, about 40 percent of respondents had never heard of the NAA physical activity standards. Thus, substantial opportunity to improve awareness and implementation among NAA members exists. Those familiar with the standards and those that use them had higher implementation scores on best practices than others in both years.

Through comparing survey results with results from three telephone interviews, we learned that interviews identify aerobic, muscle strengthening and bone strengthening activity more often than the surveys indicate. Thus, the quality of physical activity offered at afterschool programs may be higher than the online survey suggests. The lack of correspondence between survey and interview findings suggests that afterschool providers may not fully understand the meaning of aerobic, muscle strengthening and bone strengthening activity. Efforts to promote better implementation of the standards may require better marketing, communication, and professional development to address misunderstanding.

This study was able to improve sampling frame development methods relative to 2013 and enabled calculation of a response rate of 26%. We caution against generalizing to NAA members overall or to the larger OST field in the absence of information on how the sample characteristics compare to the underlying distribution of these characteristics in the field. This information does not exist at this time.

In this ongoing body of work we have two efforts underway as next steps. First, we received a Healthy Eating Research commissioned analysis to develop a new survey module addressing the NAA healthy eating quality standards. We are in the process of developing that module and will roll out the survey in fall 2015, using the same sampling and recruitment methodology we developed this year. Pretesting will determine whether the addition of a healthy eating module makes the survey too burdensome; if so, we will conduct a "healthy eating only" version in fall 2015 and work toward securing funding to alternate physical activity and healthy eating surveys going forward.

Second, we were asked to draft a research proposal as a second deliverable for this commissioned analysis. We have been working with NAA to develop that proposal as a way to build upon our findings from the past two surveys. We are submitting the draft proposal in the form of a concept paper under separate cover. We are working with NAA to seek funding to develop and test improved communication about the HEPA standards to NAA members, and assess the impact of these materials among a sample of sites, including measuring physical activity at the child level.

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Appendix

1. Cognitive Interview Protocol
2. NAA Physical Activity Standards Online Survey Materials
3. Detailed 2014 Data
4. Construct Validation Study Protocols

Appendix 1. NAA physical activity standards Cognitive Interview Protocol

Active Living Research Afterschool Physical Activity Survey (APAS)
Cognitive Interview

Date:_____

Participant Name:_____

Email Address to which incentive should be sent:

_____

If no email, provide street address:

_____

_____

Cognitive Interviewer:

Thank you so much for your help today. We are developing a new survey called the online Afterschool Physical Activity Survey (APAS) and we appreciate being able to learn from you about the best ways to ask our survey questions. This survey is gathering information about physical activity in afterschools. Your answers during this interview will help us know if the survey questions we're writing are hard to understand or respond to, or if the way they're written influences how you answer them.

During this phone interview, you'll fill out the APAS while you're on the phone with me. I will ask you specific questions about how you interpret the questions and how you arrived at your responses.

This interview will last about half an hour to 45 minutes. Your participation is voluntary and you may skip questions that you do not want to answer. We will combine your input with those of other participants and use them to revise the questionnaire. We will not use or record your answers to the actual survey questions. Your name will not be used in any report about this project. You will receive an online gift card worth $40.

I will take notes as we are talking. It is hard to write as fast as people talk, so I would like to audio record this discussion. If, at any time, you would like me to stop audio recording, let me know. I will turn off the recording. The audio will only be heard by the study team working on this project. Once we have used the tapes to make sure that my notes are accurate, the audio files will be destroyed.

Do you have any questions for me before we begin?

[Interviewer make sure the participant is sitting at a computer and opens the email with another copy of the study information sheet and a live link to the survey.]

You'll see that the email has a copy of what I just read to you. And, in the body of the email, you'll see a live link to the online survey. Go ahead and click on the link to open the survey now. And we can talk about the survey questions together.

Interviewer start the audio recording and mark start time when the participant is ready to begin.

Start Audio Recorder ***Record start time*** _____

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begin with:

- Any suggestions for how to frame our invitation?
  - What would make you more or less likely to fill out this questionnaire?
  - How would the possibility of winning $75 for your site influence your decision whether to fill out this questionnaire or not?
  - Would you be more likely to respond if the National AfterSchool Association was prominently featured in the invitation?

Survey Item 1:

What is the best wording to convey we want respondent to focus on a specific site—not multiple sites?

Survey Items 1 to 6: see hard copy questionnaire.

Survey Items—let the pt respond and then ask questions

Item 7. Is your site accredited by…

- Question comprehension— are you aware of what accreditation means?
- Retrieval from memory—do you know off hand the answer to this question
- Decision processes— what's going through your head as you decide how to answer?
- Response processes—Do the response options make sense to you? Do you have any recommendations that would align better with your thinking?

Item 10. Please indicate your average daily afterschool attendance at this site…

- Question comprehension— what is your interpretation of this question? [we're trying to gage the size of the site]. When you think about the size of this site, do you have a number in mind that describes how many children are here on a typical day?
- Retrieval from memory—how accurate do you think your number is? Does attendance actually vary a lot from day to day?
- Decision processes— how did you arrive at your final answer? How do you go thru the calculation for coming up with an average daily attendance number or a "typical" attendance number?
- Response processes— Do you have any recommendations about how to ask a question about the number of children this site serves?

Item 12. How familiar were you with the NAA physical activity quality standards before reading them here today?

- Question comprehension—
  - how closely did you read the header text?
  - How do you interpret this question?
- Retrieval from memory—N/A
- Decision processes— what's going through your head as you decide how to answer? do you feel like you "should" answer a certain way? how strong is that feeling? is it strong enough to influence how you actually respond?
- Response processes—Do the response options make sense to you? Do you have any recommendations for response options that would align better with your thinking?

Item 13. Now think about the NAA Physical Activity Quality Standards…Select one of the following statements:

- Question comprehension
  - How closely did you read the header text?
  - How do you interpret the question?
    - We want to know if you are thinking about using any of the standards, or not thinking about using any of them.
- Retrieval from memory—N/A

- Decision processes— what's going through your head as you decide how to answer? do you feel like you "should" answer a certain way? how strong is that feeling? is it strong enough to influence how you actually respond?
- Response processes—Do the response options make sense to you? Do you have any recommendations for response options that would align better with your thinking?

Items 14-18—for each one…

- Respondent should finish each item and then pause so you can ask questions.
  -
- 14
  - Question comprehension— how closely did you read the items in each question?
  - Retrieval from memory and response process— how did you think through or calculate to work toward your answer? Did the responses fit your thinking? Which items were easiest or hardest to answer?
  - Decision processes— what's going through your head as you decide how to answer? do you feel like you "should" answer a certain way? how strong is that feeling? is it strong enough to influence how you actually respond?
  - Response processes—ASK ONLY FOR ITEM 14:
    - Do the response options make sense to you?
    - How do you interpret the scale?
    - Do you have any recommendations for response options that would align better with your thinking?

[Depending on how the first interview goes, we discussed an alternative approach to 15 through 18: Tell the participant they should read the items but not take time to actually answer. Instead, ask them to identify items that they think were confusing or particularly difficult to answer]

- 15
  - Question comprehension— how closely did you read the items in each question?
  - Retrieval from memory and response process— how did you think through or calculate to work toward your answer? Did the responses fit your thinking? Which items were easiest or hardest to answer?
  - Decision processes— what's going through your head as you decide how to answer? do you feel like you "should" answer a certain way? how strong is that feeling? is it strong enough to influence how you actually respond?

- 16
  - Question comprehension— how closely did you read the items in each question?
  - Retrieval from memory and response process— how did you think through or calculate to work toward your answer? Did the responses fit your thinking? Which items were easiest or hardest to answer?
  - Decision processes— what's going through your head as you decide how to answer? do you feel like you "should" answer a certain way? how strong is that feeling? is it strong enough to influence how you actually respond?
- 17
  - Question comprehension— how closely did you read the items in each question?
  - Retrieval from memory and response process— how did you think through or calculate to work toward your answer? Did the responses fit your thinking? Which items were easiest or hardest to answer?
  - Decision processes— what's going through your head as you decide how to answer? do you feel like you "should" answer a certain way? how strong is that feeling? is it strong enough to influence how you actually respond?
- 18
  - Question comprehension— how closely did you read the items in each question?
  - Retrieval from memory and response process— how did you think through or calculate to work toward your answer? Did the responses fit your thinking? Which items were easiest or hardest to answer?
  - Decision processes— what's going through your head as you decide how to answer? do you feel like you "should" answer a certain way? how strong is that feeling? is it strong enough to influence how you actually respond?

Thank you. Do you have any other feedback to share? Now that you've filled it out, do you have any other suggestions about ways to encourage people to respond to it?

End time:

Appendix 2. NAA physical activity standards Online Survey Material.

EMAIL INVITATION

Afterschool professionals are critical contributors to children's health and well-being. That's why the National AfterSchool Association, the National Institute on Out-of-School Time at Wellesley College, and RTI International have teamed up to conduct an important national study about physical activity in after school settings.

You have been randomly selected from NAA's membership to participate in this study. Your participation will take approximately 15 minutes and as a thank you, your site could win one of our four raffles for $75 for classroom supplies.

If you are affiliated with an afterschool program

click HERE to enter the survey if you can complete a questionnaire about physical activity policies and practices at one of your program's afterschool sites.

- Forward this email to another staffperson at your afterschool program if you think someone else is better able to complete the survey.

Thank you for your participation. If you have any questions, please email jwiecha@rti.org or call me at 781-434-1739.

Sincerely,

[signature]

Jean Wiecha, PhD	Georgia Hall, PhD	Gina Warner, JD
Project Director	co project director	Executive Director
RTI International	NIOST	NAA

HOST Annual Program Survey

Afterschool Physical Activity Survey

Afterschool professional are critical contributors to children's health and well-being. That's why the National AfterSchool Association, the National Institute on Out-of-School Time at Wellesley College, and RTI International have teamed up to conduct an important national study about physical activity in afterschool settings.

You have been randomly selected from NAA's membership to participate in this study. Your participation will take approximately 15 minutes and as a thank you, your site could received one of four $75 Amazon gift cards for program supplies. Information on the raffle will follow.

This project is supported by a grant from the Active Living Research program at the Robert Wood Johnson Foundation

WHO SHOULD FILL THIS OUT?
This is a survey of school-year afterschool sites. Please fill this out if your site:

- Serves children and youth in any of grades K-12 during the school year after school on weekdays
- Focuses on multiple content areas, that is, does not exclusively deliver programming based on a single topic like a dance or math tutoring program
- Has one or more paid staff.

The best person to fill out the survey is the staff member most familiar with physical activity policies and practices at the site, such as the site director or coordinator.

HOW LONG WILL IT TAKE?
Please allow about 15 minutes, and plan to complete it at one sitting. You cannot exit and return to the survey.

WHY SHOULD I FILL IT OUT?
Your participation will contribute to national efforts to improve children’s health by promoting physical activity in out-of-school time. Plus, there’s a raffle! Every afterschool site that responds has a chance to win one of four $75 Amazon gift cards! Remember, one survey and entry per site!

CONFIDENTIALITY, RISKS, AND BENEFITS
Filling out the survey indicates your consent to participate. Participation is voluntary, and you have the right to end participation in this survey at any time without penalty. There are no legal, psychological, social or physical risks to participating in the survey. You may skip items you are reluctant to answer. There are no direct benefits to you personally for participating in this survey. Information from the survey will contribute to national efforts to improve physical activity in out-of-school time sites.

Your name is only required if you wish to be entered into the raffle. We request your afterschool site's name and address to map our response patterns, and identify multiple responses from the same site.

We respect your confidentiality. Survey data will only be reviewed by the project's evaluation team at RTI International, Inc. and the National Institute on Out-of-School Time. Individual responses will not be identified in any public reports or analyses based on this survey. All responses will be pooled for analysis.

The email address to which the invitation to this link was sent will not be shared with anyone.

If you have questions, please contact the project director at RTI International, Inc. by emailing HealthyOST@rti.org or calling 1-866-784-1958, extension 2-1739.

About Your Afterschool Site

HOST Annual Program Survey

Fill in these questions about your afterschool site. "Site" is defined as the actual place - a single address - where you provide the services you describe in this survey. If you have responsibility at multiple service sites, please select one of them to describe in this survey.

We are seeking responses from afterschool sites that:

- Serves children and youth in any of grades K-12 during the school year after school on weekdays
- Focuses on multiple content areas, that is, does not exclusively deliver programming based on a single topic like a dance or math tutoring program
- Has one or more paid staff.

1. Please fill in the name and address for your afterschool site.

Site Name

Program Name (If this site is part of a a multi-site program with a different name)

Street Address

City

State

Zip

2. Enter the Raffle!

In order to win one of four $75 Amazon gift cards for your site, we need your name and email adddress. This infomation will be stored separately from your survey data.

First Name

Last Name

email address

3. Please check the box that best describes your job title.

- ◯ Director, Coordinator, or Manager
- ◯ Health and Wellness Specialist, Director, or Coordinator
- ◯ Physical Activity Specialist, Director, or Coordinator
- ◯ Other title

Other (please specify)

4. Is this afterschool site operated/managed by an umbrella organization such as a YMCA, 4-H, Boys & Girls Club, etc?

- ◯ Yes
- ◯ No

5. Please tell us the primary organizational umbrella of this afterschool site, that is, the organization that operates it.

- ◯ YMCA
- ◯ 4-H
- ◯ Boys & Girls Clubs of America
- ◯ Faith-based organization such as a church or temple
- ◯ Parks and Recreation Department
- ◯ School District
- ◯ US Military
- ◯ Other

Other (please specify)

6. Is this site a 21st Century Community Learning Center?

- ◯ Yes
- ◯ No
- ◯ Don't know

7. Is this site a licensed afterschool service provider?

- ◯ Yes
- ◯ No
- ◯ Don't know

8. Is this site accredited, for example by the Council on Accreditation or by the National AfterSchool Association?

- ◯ Yes, we are accredited.
- ◯ No
- ◯ Don't know

9. Please check which of the following statements about NAA membership are true.

- ◯ I am a current member of NAA
- ◯ I am not a current member of NAA

10. How long have you been a member of NAA?

- ◯ Less than 12 months
- ◯ 12 to 23 months
- ◯ 24 months or more

11. What type of facility is this afterschool site located in?

- ◯ Community-Based Organization (including youth-serving organizations such as Boys & Girls Clubs, YMCA)
- ◯ Childcare Agency
- ◯ Church, temple or other faith-based setting
- ◯ Municipal or government facility
- ◯ School
- ◯ Other

Other (please specify)

12. About how many children attended this afterschool site yesterday? (If today is Monday then answer for Friday)

- ◯ 0 to 25
- ◯ 26 to 50
- ◯ 51 to 75
- ◯ 76 to 100
- ◯ More than 100

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13. Which grades does this afterschool site serve?

	Yes	No
Pre-School	◯	◯
Primary or Elementary (K-5)	◯	◯
Middle School or Junior High (6-8)	◯	◯
High School (9-12)	◯	◯

About the NAA Physical Activity Quality Standards

In April 2011, the National AfterSchool Association (NAA) adopted new Healthy Eating and Physical Activity (HEPA) quality standards for afterschool programs. The following questions pertain to the NAA Physical Activity Quality Standards.

Please read the NAA Physical Activity Quality Standards:

Content and Quality
The program's physical activity offerings support the USDHHS 2008 guidelines recommending that all children and youth obtain at least 60 minutes of physical activity per day that includes a mixture of moderate and vigorous intensity activity as well as bone and muscle strengthening activities.

Staff Training
Staff participate in learning about physical activity using effective training models and using content that is evidence-based.

Social Support
The program creates a social environment, including positive relationships, that encourages children to enjoy and participate in physical activity. Research shows that children's physical activity choices are influenced not only by preference and familiarity, but also by social factors including peers, role models, group dynamics, and having multiple options.

Program Support
Infrastructure supports physical activity through management and budgeting practices.

Environmental Support
The program's physical environment supports the physical activity standards.

Now, please respond to the next questions!

14. How familiar were you with NAA's Physical Activity Quality Standards before seeing them here today?

◯ I had never seen them before today.

◯ I had seen them but didn't know they were from NAA.

◯ I had seen them and did know they were from NAA.

15. Now think about the NAA Physical Activity Quality Standards. Select one of the following statements:

◯ At this site, we are currently using one or more of the NAA standards to guide how we plan and deliver physical activity.

◯ At this site, we have thought about using the NAA standards to guide how we plan and deliver physical activity, but we are not using them now.

◯ At this site, we have not thought about using the NAA standards to guide how we plan and deliver physical activity.

16. Please indicate below how "true" each statement is about this afterschool site. Remember, there are no "right" or "wrong" answers and this is not an evaluation or assessment! Also, please remember that your answers will be pooled with everyone else's. No one will be identified in our report.

Content and Quality Practices

	Never True	Sometimes True	Usually True	Always True
We dedicate at least 30 minutes to physical activity at our afterschool site every day.	◯	◯	◯	◯
Youth are moderately to vigorously active for at least 50% of the offered physical activity time.	◯	◯	◯	◯
Physical activity takes place outdoors whenever possible.	◯	◯	◯	◯
Daily physical activity time includes aerobic, muscle and bone strengthening activities.	◯	◯	◯	◯
There are a variety of physical activity options.	◯	◯	◯	◯
Program offers physical activities that include all program attendees regardless of ability/disability.	◯	◯	◯	◯
Physical activities are integrated with enrichment, academic, or recreation content.	◯	◯	◯	◯
Program provides short physical activity breaks between and /or within learning activities	◯	◯	◯	◯

Screen time and digital device time is limited to less than one hour per day.	◯	◯	◯	◯

17. Staff Training Practices

	Never True	Sometimes True	Usually True	Always True
Staff that lead physical activity receive at least eight hour per year of training on physical activity delivery.	◯	◯	◯	◯
Staff that lead physical activity are First Aid/CPR certified.	◯	◯	◯	◯
Staff that lead physical activity are trained in adapting opportunities to include all children regardless of ability or disability status.	◯	◯	◯	◯

18. Social Support Practices

	Never True	Sometimes True	Usually True	Always True
Staff lead and participate in active play.	◯	◯	◯	◯
Staff do not withhold or use physical activity as a punishment or reward.	◯	◯	◯	◯
Youth participate in activity selection, organization and leadership.	◯	◯	◯	◯
Families are engaged with the program's emphasis on healthy physical activity.	◯	◯	◯	◯

19. Program Support Practices

	Never True	Sometimes True	Usually True	Always True
The program provides adequate budget to support quality physical activity opportunities.	◯	◯	◯	◯
Program managers support physical activity improvements through coaching, mentoring, and monitoring progress.	◯	◯	◯	◯
Program participates in ongoing self-evaluation and program improvement strategies.	◯	◯	◯	◯
The program promotes and encourages a physically active lifestyle among staff.	◯	◯	◯	◯

20. Environmental Support Practices

	Never True	Sometimes True	Usually True	Always True
Equipment for games, sports, and activities is age and developmentally appropriate.	◯	◯	◯	◯
Equipment and facilities for physical activity meet all required safety standards.	◯	◯	◯	◯
We have access to equipment and facilities for both aerobic and strength-building activities.	◯	◯	◯	◯
Program has access to adequate indoor facilities for physical activity.	◯	◯	◯	◯
Program has access to adequate outdoor facilities for physical activity.	◯	◯	◯	◯
The program environment provides positive messages about physical activity through posters, pictures, and books.	◯	◯	◯	◯

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21. Please indicate how you were invited to participate in this survey.

- ◯ I received the invitation myself.
- ◯ The link was forwarded to me.
- ◯ Other (please specify)

Thank You!

Your responses will be extremely helpful for understanding and supporting OST efforts to promote healthy youth development and implementation of high quality physical activity experiences.

Appendix 3. Detailed 2014 Survey Data

NAA physical activity standards 1. Content and Quality

Table 1. Best Practices about Content and Quality, School Year Survey 2014

	Never True		Sometimes True		Usually True		Always True	
	N	%	N	%	N	%	N	%
We dedicate at least 30 minutes to physical activity at our afterschool site everyday	8	1.98	57	14.07	110	27.16	230	56.79
Youth are moderately to vigorously active for at least 50% of the offered physical activity time	11	2.72	55	13.61	185	45.79	153	37.87
Physical activity takes place outdoors whenever possible	4	1.00	47	11.78	120	30.08	228	57.14
Daily physical activity time includes aerobic, muscle and bone strengthening activities	21	5.24	154	38.40	143	35.66	83	20.70
There are a variety of physical activity options	8	2.00	70	17.46	159	39.65	164	40.90
Program offers physical activities that involve all program attendees regardless of ability/disability	8	2.00	32	7.98	115	28.68	246	61.35
Physical activities are integrated with enrichment, academic, or recreation content	8	1.98	96	23.76	156	38.61	144	35.64
Program provides short physical activity breaks between and / or within learning activities	25	6.23	152	37.91	127	31.67	97	24.19
Screen time and digital device time is limited to less than one hour per day	15	3.73	29	7.21	87	21.64	271	67.41

Table 2. Mean Scores for Best Practices about Content and Quality, School Year Survey 2014

	Mean	Std Dev
We dedicate at least 30 minutes to physical activity at our afterschool site every day	3.39	0.80
Youth are moderately to vigorously active for at least 50% of the offered physical activity time	3.19	0.77
Physical activity takes place outdoors whenever possible	3.43	0.74
Daily physical activity time includes aerobic, muscle and bone strengthening activities	2.72	0.85
There are a variety of physical activity options	3.19	0.79
Program offers physical activities that involve all program attendees regardless of ability/disability	3.49	0.73
Physical activities are integrated with enrichment, academic, or recreation content	3.08	0.82
Program provides short physical activity breaks between and / or within learning activities	2.74	0.90
Screen time and digital device time is limited to less than one hour per day	3.53	0.79

NAA physical activity standards 2. Staff Training

Table 3. Best Practices about Staff Training, School Year Survey 2014

	Never True		Sometimes True		Usually True		Always True	
	N	%	N	%	N	%	N	%
Relevant staff receive at least eight contact hours per year of professional development on physical activity delivery	140	34.83	123	30.60	89	22.14	50	12.44
Relevant staff are First Aid/CPR certified	6	1.50	44	11.00	92	23.00	258	64.50
Relevant staff are trained in adapting physical activity opportunities to include all children regardless of ability/disability status	41	10.22	130	32.42	108	26.93	122	30.42

Table 4. Mean Scores for Best Practices about Staff Training, School Year Survey 2014

	Mean	Std Dev
Relevant staff receive at least eight contact hours per year of professional development on physical activity delivery	2.12	1.03
Relevant staff are First Aid/CPR certified	3.51	0.75
Relevant staff are trained in adapting physical activity opportunities to include all children regardless of ability/disability status	2.78	0.99

NAA physical activity standards 3. Social Support

Table 5. Best Practices about Social Support, School Year Survey 2014

	Never True		Sometimes True		Usually True		Always True	
	N	%	N	%	N	%	N	%
Staff lead and participate in active play	2	0.49	60	14.81	197	48.64	146	36.05
Staff do not withhold or use physical activity as a punishment or reward	10	2.51	47	11.81	107	26.88	234	58.79
Youth participate in activity selection, organization, and leadership	7	1.75	86	21.45	184	45.89	124	30.92
Parents/guardians are engaged with the program's emphasis on healthy physical activity	53	13.12	196	48.51	104	25.74	51	12.62

Table 6. Best Practices about Social Support, School Year Survey 2014

	Mean	Std Dev
Staff lead and participate in active play	3.20	0.70
Staff do not withhold or use physical activity as a punishment or reward	3.42	0.80
Youth participate in activity selection, organization, and leadership	3.06	0.77
Parents/guardians are engaged with the program's emphasis on healthy physical activity	2.38	0.87

NAA physical activity standards 4. Program Support

Table 7. Best Practices about Program Support, School Year survey 2014

	Never True		Sometimes True		Usually True		Always True	
	N	%	N	%	N	%	N	%
The program provides adequate budget to support quality physical activity opportunities	13	3.23	83	20.60	160	39.70	147	36.48
Program managers support physical activity improvements through coaching, mentoring, and monitoring progress	32	7.98	97	24.19	164	40.90	108	26.93
Program participates in ongoing self-evaluation and program improvement strategies	20	4.98	90	22.39	123	30.60	169	42.04
The program promotes and encourages a physically active lifestyle among staff	29	7.23	111	27.68	149	37.16	112	27.93

Table 8. Mean Scores of Best Practices about Program Support, School Year Survey 2014

	Mean	Std Dev
The program provides adequate budget to support quality physical activity opportunities	3.09	0.83
The program promotes and encourages a physically active lifestyle among staff	2.87	0.90
Program participates in ongoing self-evaluation and program improvement strategies	3.10	0.91
Program managers support physical activity improvements through coaching, mentoring, and monitoring progress	2.86	0.91

NAA physical activity standards 5. Environmental Support

Table 9. Best Practices about Environmental Support, School Year Survey 2014

	Never True		Sometimes True		Usually True		Always True	
	N	%	N	%	N	%	N	%
Equipment for games, sports, and activities is age and developmentally appropriate	2	0.49	18	4.44	119	29.38	226	65.68
Equipment and facilities for physical activity meet all required safety standards	2	0.50	14	3.49	82	20.45	303	75.56
Equipment facilitates both cardiorespiratory and musculoskeletal fitness	32	7.98	109	27.18	125	31.17	135	33.67
Program has access to adequate indoor facilities for physical activity	26	6.47	60	14.93	116	28.86	200	49.75
Program has access to adequate outdoor facilities for physical activity	10	2.49	44	10.97	99	24.69	248	61.85
The program environment provides positive messages about physical activity through posters, pictures and books	26	6.44	130	32.18	131	32.43	117	28.96

Table 10. Mean Scores of Best Practices about Environmental Support, School Year Survey 2014

	Mean	Std Dev
Equipment for games, sports, and activities is age and developmentally appropriate	3.60	0.60
Equipment and facilities for physical activity meet all required safety standards	3.71	0.55
Equipment facilitates both cardiorespiratory and musculoskeletal fitness	2.91	0.96
Program has access to adequate indoor facilities for physical activity	3.22	0.93
Program has access to adequate outdoor facilities for physical activity	3.46	0.79
The program environment provides positive messages about physical activity through posters, pictures and books	2.84	0.92

Appendix 4. Validation Study Protocols

PRETEST OBSERVATION FORM

Observation and Interview Protocol

Physical Activity in Out of School Time Study (PHACT)

Pretest Purpose: Develop a phone interview protocol that we can use with confidence. Our goal is to interview sites by phone to obtain a brief but thorough description of physical activity offered on a data collection day. The description should be accurate enough to permit us to compare their three days of reporting with their response on the survey to how often "Daily physical activity time includes aerobic, muscle and bone strengthening activities".

Instructions: To be completed by project staff (observer) on site at pretest site:

1. Site Name	
2. Date	
3. Time START:	Time END:

4. **Were you able to see all of the physical activity groups that took place during this visit?**
    a. Yes, I saw all of them. How many?
    b. No, I missed one or more. How many?

Complete one set for each activity/group you observe.

Group type (age/sex/etc)	
Number of children:	
Duration of observation:	
Indoors	**Outdoors**
Classrooms Library Cafeteria Gymnasium Hallways Other	Playground with equipment Baseball diamond Basketball court Soccer field Other field Unstructured field (open) Hard surface (asphalt) area

Activity Observed	Place Check Mark in this column	Movements
		Running
		Hopping
		Skipping
		Dancing
		Biking
		Playing on playground equipment
		Climbing equipment
		Tug-of-war
		Swimming
		Climbing trees
		Push-ups
		Pull-ups
		Sit-ups
		Lifting something with weight
		Lifting against resistance
		Pulling against resistance
		Jumping rope
		Brisk walking
		Catching
		Throwing
		Tagging
		Chasing
		Pushing (something)
		Jogging
		Bouncing
		Swinging
		Jumping
		Reaching
		Twisting
		Stretching
		Running in Place
		Marching, Stepping
		Other

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Pretest Staff Phone Interview:

I'd like to ask you to tell me what you offered your students in terms of physical activity today.

1. I would like to talk with you about the physical activity that you supervised or you can connect me to the person who supervised physical activity today. Did one person supervise all the physical activity today?
2. What was the program approach for PA? Did all the children/youth participate in physical activity together or did the program offer physical activity in multiple groups? If groups, tell me how they were split up.

Let's now go group by group:

Did any group spend time in an **organized game/activity/sport** such as basketball, kickball, soccer, etc., as opposed to a free play or open gym/outdoor time?

1.Group (describe them) Activity Duration

a. Can you describe all the types of movement that kids did while they were engaged in this activity?

(Probe for types of movement during the game: running, jumping, hopping, skipping, climbing, pushing, pulling lifting, etc.)

b. About what proportion of kids were actively engaged in what was offered?

c. Do you think this activity offered any aerobic activity?

d. Do you think this activity offered any muscle strengthening activity?

e. Do you think you offered any bone strengthening activity?

2.Group [repeat as for Group 1]

Final Questions

1. When I say aerobic activity what kinds of activity do you think I'm referring to?
2. When I say "muscle strengthening activity" what kinds of activity do you think I'm referring to?
3. When I say "bone strengthening activity" what kinds of activity do you think I'm referring to?

THANK YOU.

Validation Study Recruitment Email

Dear

Thank you for completing the HOST Annual Program Survey on Physical Activity several weeks ago. We were able to connect with over 450 National AfterSchool Association members to learn more about how physical activities happen in afterschool programs around the country.

We have one more task ahead of us for this study which is to collect some additional data by phone from survey respondents. This data collection will involve three brief five minute phone check-ins during the last weeks of March and beginning of April to document the actual physical activity that takes place in programs.

We would ask you to provide us with a phone number where you can be reached during the program hours and also the best time to call in order to check –in with you. In appreciation we will be sending you a $30.00 gift card to thank you for your participation.

Please let me know as soon as possible how to best reach you (phone number) and the best time during the program hours. Also, feel free to call or email with any questions.

This study is funded by the Robert Wood Johnson Foundation Active Living Research program. If you are attending the National AfterSchool Association Convention, please stop by at the National Institute on Out-of-School Time booth (#305) in the Learning Expo to say "hello."

Contact for additional questions about this study:

If you have any questions or have concerns or comments, please feel free to contact project director Jean Wiecha, PhD at RTI International at healthyost@rti.org, or 781-434-1739.

For additional resources on Healthy Out-of-School Time visit: www.healthyost.org

Sincerely,

Diane Gruber

Validation Study Final Telephone Interview Protocol

Site Number _____ **Today's Date _____** **Time of Day _____**

Thank you for your willingness to participate in this final phase of the study of physical activity in OST programs in partnership with the National AfterSchool Association.

Did you offer physical activity in your OST program today/yesterday if am call? Yes No

Can you answer some questions about the physical activity in the program today/yesterday? Yes No

Alternate contact if needed:_____ Best phone _____ Best time _____

Would you say that today in your program you offered activities that were:

Aerobic?	Yes	No
Bone strengthening	Yes	No
Muscle strengthening	Yes	No

What activities did you offer today in the program?

Structured (by that we mean led by staff/organized

1.

2.

3.

4.

Unstructured

1.

2.

3.

4.

I am going to read a list of movement to you that children/youth do during PA. Tell me which of these movements describe what children/youth did during the activity. Let's start with the first activity you mentioned.

Did the activity involve equipment such as Frisbees or balls, including playground equipment, jump ropes, climbing structures, etc.?

Yes No

	1-Yes	2-Yes	3-Yes	4-Yes	5-Yes	6-Yes	7-Yes
EQUIPMENT							
Biking							
Playing on playground equip							
Climbing equip							
Tug-o-war							
Climbing trees							
Lifting something with weight							
Lifting against resistance							
Pulling against resistance							
Jumping rope							
Pushing(something)							
Catching							
Throwing							
Swimming							
MOTOR							
Running							
Hopping							
Skipping							
Dancing							
Brisk walking							
Tagging							
Chasing							
Jogging							
Swinging arms							
Jumping (no rope)							
Reaching							
Stretching							
Running in place							
Marching, Stepping							

	1-Yes	2-Yes	3-Yes	4-Yes	5-Yes	6-Yes	7-Yes
EXCERCISE							
Pull-ups							
Sit-ups							

Thank you! I am going to call you two more times like this in the next two weeks. Thank you again for your participation!

Any Notes from Researcher: