

Presidential Youth Fitness Program Evaluation Report: 2013-2016



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Program Partners



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PRESIDENTIAL YOUTH FITNESS PROGRAM EVALUATION: 2013-2016

Executive Summary

The decline in children's physical activity participation has become an increasing concern in public health, as the prevalence of childhood obesity has reached an all-time high in the new millennium (Ogden et al., 2012; Ogden et al., 2014). When active, children have the capacity to increase their health-related fitness as a means of reducing risk for disease, because they gain multiple benefits such as the reduced likelihood of obesity and diabetes (Ekelund et al., 2012). Improving physical fitness among children is best accomplished when physical activity opportunities in schools are increased, the physical activity is positive and developmentally appropriate and expanded understanding of health-related fitness concepts is a primary outcome (Institution of Medicine [IOM], 2013). Additionally, intrapersonal influences such as being a healthy role model (Centers for Disease Control and Prevention [CDC], 2013) and the presence of knowledgeable physical activity champions are valuable for creating health oriented cultures (Carson et al., 2014; Centeio, Castelli & Erwin, 2014). Given these characteristics, schools are an ideal venue for promoting health and physical fitness (IOM, 2013).

Since the 1960's, there has been a national effort to develop school-based fitness assessments that included a recognition component (The President's Council on Physical Fitness, 1961). For more than 50 years, children could receive presidential recognition for skill-related fitness achievements. Recently, the growing prevalence of public health issues such as childhood obesity have coincided with reductions in recess and physical education in schools (only 16% of all states offer daily recess and there are only 6 states that require children to have physical education in grades K-12; CDC, 2011 & 2013), raising new concerns about the role of school practices in promoting children's health.

Recognizing the role schools can play in advancing the health of children called into question the relevance of emphasizing skill- over health-related fitness (Zhu, 1998). In response, the Presidential Youth Fitness Program (PYFP) launched in September 2012. The result of a public/private partnership

between the President's Council on Fitness, Sports, & Nutrition, Centers for Disease Control and Prevention, National Foundation on Fitness, Sports & Nutrition, SHAPE America, and The Cooper Institute®, the new program placed emphasis on health-related fitness while preserving the tradition of offering presidential recognition for children. Further, partners sought to provide targeted professional development (PD) to physical education teachers, due to their potential to facilitate change in children's fitness.

With major support provided by The General Mills Foundation, the non-federal program partners established a funding opportunity for schools to support program adoption. Simultaneously, a call for proposals was released to identify an evaluation team to conduct a process evaluation of the funded schools. The components and results of that evaluation are summarized herein. Accordingly, the purpose of this process evaluation was to confirm the efficacy of the PYFP in schools by examining the inputs (school factors, teacher PD), behavioral outcomes (teacher knowledge), and intermediate outcomes (if a school administered the FitnessGram®, number of children assessed, number of children in the Healthy Fitness Zone).

The program evaluation participants, over a three-year period, included a total of 892 schools (n=540 Elementary, n=321 Middle or High, and n=31 K-12). The participating schools were from 154 distinct school districts located in 45 different states. Individual participants were teacher champions within schools that had applied for and were awarded funding to implement the PYFP. The most common role of the champion was as a physical education teacher, but this was not the case in all schools. A total of 489 (Round 1) schools were selected in the first year of PYFP funding. The average enrollment was 585±410 (range 62-2,900). The proportion of children receiving free or reduced lunch averaged 52%±28%. Schools were spread across 224 school districts from 48 different states. In the second year of the PYFP funding opportunity,

403 (Round 2) schools received funding. Of these schools, 57% were elementary, 40% secondary and 3% had children in grades K-12. The average enrollment was 546 ± 372 (range 62-3,867). The proportion of children receiving free or reduced lunch averaged $56\% \pm 26\%$.

Data were collected using six primary (i.e., PYFP Index (Cance et al., under review), teacher knowledge checks at the end of a virtual course, course evaluations, end of year program survey, phone interviews and site visits) and three secondary data sources (i.e., the program funding application, artifacts and aggregated FitnessGram® data presented in the Presidential Youth Fitness Award (PYFA) report). The University of Texas at Austin Institutional Review Board approved the current process evaluation as a research study (FWA# 00002030; IRB# 2013-12-0050).

Based on the degree to which teachers were able to implement specific components of the PYFP in schools (e.g., complete the PD courses; administer the FitnessGram®) each school was categorized as non-compliant, non-implementer, partial implementer or full implementer. At the end of Year 2, when a total of 695 schools were attempting to implement the PYFP, 118 schools (17%) were identified as full implementers. Specifically, 64.4% ($n = 76$) were elementary schools, 33.1% ($n = 39$) were middle/high schools, and 2.5% ($n = 3$) of K-12 were full implementers (see Table 1). When considering both partial and full implementers, 432 schools (62%) had implemented at least two components of the PYFP. An additional 30 schools were selected for teacher interviews and site visits based on quantitative data sources reflecting teachers' efforts to implement the PYFP.

Results

The PYFP had multiple benefits from which to build upon for future iterations. Among these benefits were the provision of relevant PD for physical education teachers, movement toward national surveillance of health risk among school-aged children and the continued acknowledgement of achievement. The PYFP provided key resources including virtual PD, software and awards which are believed to be necessary for teachers to administer the FitnessGram® in a valid and reliable manner and

for teachers to be able to track a child's progress toward recognition for their fitness achievements (PYFP Evaluation: Year 1 & Year 2; Castelli et al., 2014 & 2015).

A comprehensive list of how and where the findings were disseminated is listed in Table 2. Key findings include:

- Eighty-seven percent of all schools participating in the first two rounds of funding were already conducting fitness assessments, with 70% having an existing school policy about fitness testing. Assessment of fitness among school-aged children is already commonplace in schools.
- The majority of physical education teachers (89.1%) were required by his/her school district to participate in professional development (PD), but only 5% of the schools reported that the district PD was related to physical activity, physical education or health-related fitness. Although required, there are few, easily accessible and cost-effective PD opportunities for physical education teachers that is focused on physical or fitness education content.

Over the program evaluation period, teacher knowledge and the degree of the implementation of the PYFP significantly increased. After completing the PYFP virtual courses, teachers were knowledgeable in Course #1: *Essentials of the Presidential Youth Fitness Program* (M = 87.6/100, SD = 6.51), Course #3: *Physical Best Gets FITT* (M = 88.87/100, SD = 7.22), and Course #4: *Motivating Students to Become Their Physical Best* (M = 87.42/100, SD = 6.62). Course #2: *Role of Assessment* (also known as the FitnessGram® online course), was available to the PYFP teachers, but because the course was open to individuals beyond the participants in PYFP process evaluation, it was not included in the analysis.

- For teachers in schools that lacked content specific PD, the virtual PYFP courses met a critical need.
- Among the 39,354 children whose aggregated Presidential Youth Fitness Award report was provided, fitness declined by grade level. As the grade level increased, children were less likely to be in the HFZ and thus unlikely to be eligible to receive recognition. Fitness education needs

to be introduced at an early age and continue into secondary schools, while comprehensive models need to be introduced to provide physical activity across the school day and into the community (see the CDC Comprehensive School Physical Activity Program: A Guide for Schools (2013) at <http://www.cdc.gov/healthyschools/physicalactivity/cspap.htm>, to get started).

- Those schools that provided nutrition education at baseline had an advantage over those schools that were still developing nutrition content (see Hwang et al., under review). No specific PYFP PD course addressed how nutrition and healthy eating contribute to physical fitness, yet this was a valuable element that emerged from the data analysis.
- Over the course of three years, 62.2% of the participating schools were able to partially or fully implement the PYFP. The 37.8% of schools that were unable to implement at least two elements of the PYFP because the teacher could not overcome the barriers that they encountered related to technology or administrative support (see PYFP Evaluation: Year 1 report, Castelli et al., 2014) or the teachers simply had to discontinue (e.g. illness, job change, etc.). Full implementation of the PYFP is difficult to achieve in one year, thus three or more years of support for the schools may be necessary for full implementation of the PYFP and corresponding potential increases in children fitness.
- Schools with more PYFP Index factors in place and higher teacher knowledge were more likely to conduct fitness assessments and have more children who qualified for the Presidential Youth Fitness Award than schools with fewer PYFP Index factors and lower teacher knowledge.

The Evaluation Team recommends the PYFP:

- Continue to offer the PD for teachers and incorporate "teaching tips" into the PD content of Course 3, Course 4 and the webinars as a mechanism for displaying practical examples of how teachers can use this information in their daily routines (Barcelona et al., under review; Bryant et al., under review).

- Expand the nutrition education content in the teacher PD (Bryant et al., under review; Castelli et al., under review).
- Recruit more secondary schools to participate in the PYFP, since physical fitness declines with increasing grade level (Castelli et al., 2016).
- Introduce the PYFP program to physical education teacher education programs to purposefully connect the FitnessGram® assessments and children’s health risk data to instructional practice (Castelli et al., under review).
- Recognize the teachers who implement the PYFP. The inclusion of educational gamification elements, such as a progress bar reflecting task completion or digital badges awarded for task completion should be integrated into the program. Like the children, teachers should be recognized for their efforts to enhance fitness education in their school (Castelli et al., under review). We recommend creating a “PYFP Fitness Champion” patch and digital badge.

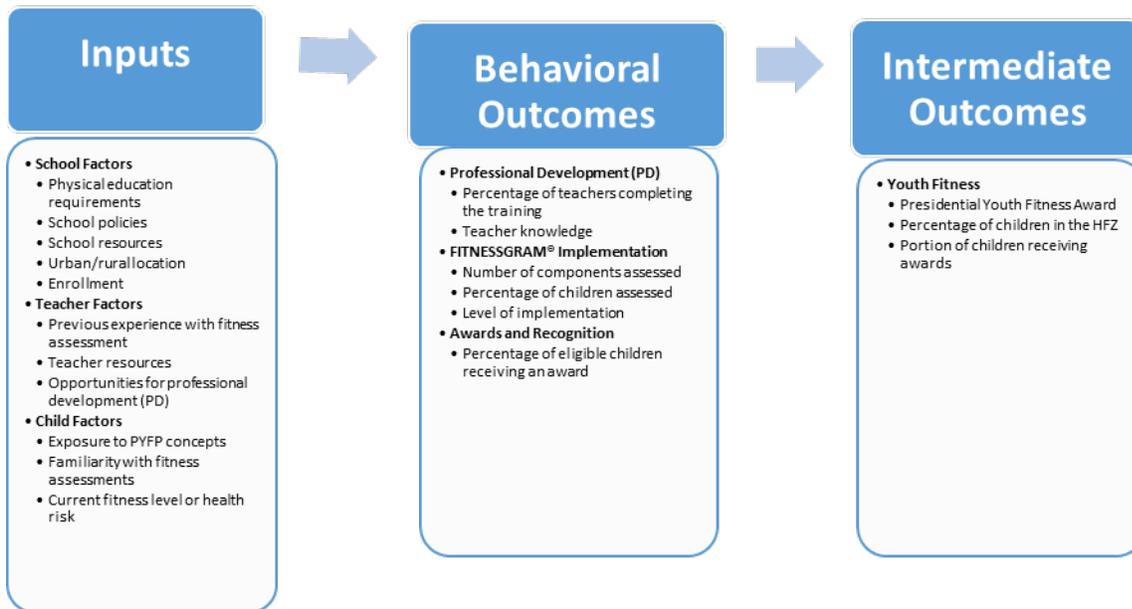


Figure 1. Logic Model: Inputs, Behaviors, and Intermediate Outcomes

Table 1. PYFP School Level Implementation

	PYFP Index	Teacher Knowledge Checks	FitnessGram® Assessment (Yes/No)	PYFA (Yes/No)	Total # of Schools
Full-	142	183	196	198	118 (17%)
Partial-	195	332	247	25	314 (45.2%)
Non- Implementer	169	2	13	74	149 (21.4%)
Non- compliant	189	178	239	398	114 (16.4%)
Total	695	695	695	695	695

Note: Only schools that provided the full set of each data source were included in this analysis.

Abbreviations: PYFP, Presidential Youth Fitness Program

Table 2: Dissemination of the PYFP Process Evaluation Findings

Manuscript Title/Target Journal	Data Sources	Status (6-30-16)	Authors Proposed
Process Evaluation of the Presidential Youth Fitness Program: 2013 -2016 Journal of Physical Activity & Health	PYFP funding application, PYFP Index, Teacher Knowledge checks, PYFA	Paper under internal review 11/5/2016	Darla M. Castelli ¹ , Seraphine Pitt Barnes ² , Jane Wargo ³ , Jessica Duncan Cance ¹ , Jeanne M. Barcelona ¹ , Yen T. Chen ¹ , Hannah Calvert ¹ and Jungyun Hwang ¹
Development of the Presidential Youth Fitness Program Index: A Scale of Organizational Level Capacity Measurement in Physical Education and Exercise Science	PYFP Index	Clearinghouse 10/28/2016	Jessica Duncan Cance ¹ , Hannah G. Calvert ¹ , Yen T. Chen ¹ , Jeanne M. Barcelona ¹ , Seraphine Pitt Barnes ² , Jane Wargo ³ , & Darla M. Castelli ¹
Factors and Strategies Related to the Implementation of the Presidential Youth Fitness Program Journal of Teaching in Physical Education	PYFP Index Year-end survey Teacher Interviews Site Visits	Clearinghouse 10/28/2016	Lynne Bryant ¹ , Jeanne M. Barcelona ¹ , Yen T. Chen ¹ , Jessica Duncan Cance ¹ , Seraphine Pitt Barnes ² , Jane Wargo ³ , & Darla M. Castelli ¹
School Context and the Implementation of the Presidential Youth Fitness Program Research Quarterly for Exercise and Sport	PYFP Index Year-end survey	Submitted to journal for review	Jungyun Hwang ¹ , Yen T. Chen ¹ , Jeanne M. Barcelona ¹ , Hannah G. Calvert ¹ , Jonathan Cosgrove ¹ , Seraphine Pitt Barnes ² , Jane Wargo ³ , & Darla M. Castelli ¹
Presidential Youth Fitness Program Implementation: An Antecedent to Organizational Change Journal of Physical Activity & Health	Teacher interviews Site Visits	Submitted to journal for review	Jeanne M. Barcelona ¹ , Darla M. Castelli ¹ , Seraphine Pitt Barnes ² , Jane Wargo ³ , Jessica Duncan Cance ¹

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