

HHS Public Access

Author manuscript *Eval Program Plann.* Author manuscript; available in PMC 2023 September 12.

Published in final edited form as:

Eval Program Plann. 2021 June ; 86: 101919. doi:10.1016/j.evalprogplan.2021.101919.

Presidential youth fitness program implementation: An antecedent to organizational change

Jeanne M. Barcelona^{a,*}, Darla M. Castelli^b, Jessica Duncan Cance^c, Seraphine Pitt Barnes^d, Sarah Lee^d

^aWayne State University, Kinesiology, Health and Sport Studies, United States

^bThe University of Texas at Austin, Department of Kinesiology and Health Education, United States

^cRTI International, Center for Behavioral Health Epidemiology, Implementation, and Evaluation Research, United States

^dCenters for Disease Control and Prevention, Division of Population Health, United States

Abstract

Introduction: Grounded in organizational change theory, the purpose of this study was to investigate the efficacy of the Presidential Youth Fitness Program (PYFP) and its association with healthy cultures within schools.

Methods: Using a qualitative approach, data were collected through interviews, site visits and artifacts across 374 schools. An explanatory collective case study approach was used to identify key events related to implementation.

Results: Pivotal antecedents to organizational change included prolonged, continual PD, direct support of PYFP implementation, and recognition. Further, three key themes of leveling of the playing field, strategically overcoming barriers, and recruiting teacher fitness champions were identified.

Conclusions: Creating a healthy school culture was an unexpected, but feasible outcome stemming from the implementation of the PYFP. A collective effort, led by physical education teachers and fitness champions and embraced by the administration, faculty, and community, is necessary for the school culture to unfreeze from its present status.

Keywords

Program evaluation; Public health; Physical fitness; Adolescent

^{*}Corresponding author at: Kinesiology, Health and Sport Studies, Wayne State University, 656 West Kirby, Detroit, MI, 48202, United States. Jeanne.barcelona@wayne.edu (J.M. Barcelona).

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

1. Introduction

Despite the prevalence of childhood obesity, many physical education programs continue to emphasize team sport participation rather than educating and modeling healthy lifestyle qualities (Centeio & Castelli, 2012; Institute of Medicine of the National Academies [IOM], 2013). Given our societal interest in sport, it should have its place within the physical education programming; however, due to the increased rates of overweight and obesity and related chronic disease risks (e.g., type II Diabetes) among students, physical education places a strong emphasis on student health and physical fitness, not just performance. In 2012, the reorganized Presidential Youth Fitness Program (PYFP) was launched to promote health-related fitness through school-based physical education programs. The program provides a model for fitness education that includes the use of a health-related fitness assessment, as well as educational and motivational tools to support teachers and empower students to adopt an active lifestyle. The PYFP provides teachers with tools to promote fit and active youth. Sustained positive messaging from programs like PYFP arguably has the potential to contribute to the development of healthy school culture. Based on this mission, the PYFP has used ongoing, content-based professional development (PD) as a medium to transform teacher knowledge by sharing strategies for providing quality physical education in schools. As part of a large-scale evaluation, this paper investigates the efficacy of utilizing key components of the PYFP as a tactic for implementing fitness education into physical education classes as a means of creating a health-oriented culture within schools. Grounded in the theory of organizational change, this study utilizes qualitative methods to 1) identify key antecedents related to a school's readiness to adopt fitness education, and 2) identify the school level changes resulting from its implementation.

2. Perspective/theoretical framework

The study of organizational change and the processes that drive its success date back to the early 1900s when all organizations, regardless of structure and type, were labeled as closed or open systems (Hertz & Livingston, 1950). As a result, it was not until the late 20th century that school organizations considered the influence of external forces like PD as learning processes within given classroom ecologies. Further, feedback loops influence systemic change. Today, the contemporary organizational change theory investigates various key factors such as environment, individual motivation, and circumstance and structural relationships, and how they relate to an organization's ability to succeed, adapt, and change (Fig. 1). Armenakis and colleagues suggest that individual and collective readiness among educators (i.e., teachers and administrators) is an essential first step in the process of change (Armenakis, Harris, & Mossholder, 1993). When a critical mass of educators exhibit readiness, it prompts a comprehensive call to reflect on the current social environment and culture. Gaining an awareness of shared values and beliefs provides a framework by which one can gain *universal* buy-in, resulting in sustainable change.

Individual readiness begins with awareness and, when necessary, the transformation of individual beliefs and perceptions toward change. It is the cognitive precursor that primes behavioral actions (Armenakis et al., 1993). Identification of the antecedents that prompt educators to support or resist a given change, such as implementing fitness education into

physical education, is essential. Connolly and Dolan (2012) posit that structural relationships are not dichotomous; instead, individuals, organizations, and society are all interdependent. As such, the dynamics between structures influence the successful adoption of change.

The organizational change theory posits that all establishments have both closed and open characteristics and therefore, we must consider equally the infrastructure as well as the individual needs of educators when attempting to quantify program effects. Considerations of social systems within a given environment have long been in existence. Dunning and Sheard argued that the goals an organization ultimately adopts are formed at the individual level (1976). Despite the probable influence of individual beliefs within the workplace, organizational success and setback are determined by the human capital and relationships within the organization (Bechtel & O'Sullivan, 2007; Connolly & Dolan, 2012). Accordingly, when looking to establish successful change within an organization, one must consider all constituents, their interactions with one another, and the current discourse.

Once individual buy-in is initiated, as the unfreezing period, the organizations must be willing to undergo strategic planning, which includes taking inventory of influential inputs that influence a stagnant and ineffective practice. The Fitness Education Index is one way that physical education teachers can take inventory of their current practice (Chen et al., 2020). The unfreezing period should be considered in three distinct parts: disconfirmation, induction of guilt, and the creation of psychological safety, where unfreezing is prompted by a feeling of disequilibrium and frustration about an ineffective practice (Schein, 1996). The documented reality promotes strategic planning that communicates the shortfall and its consequences with the larger organization while offering a sense of hope and satisfaction in changing ineffective methods (Schein, 1996). Sustainable change can only occur through deliberate action plans directed at first gaining buy-in from organizational members and then providing individuals with opportunities to learn new strategies and take continued steps toward seeing the plan through. Organizational change is a useful framework for educational leaders seeking to reform current school practice because it provides an overview of attainable outcomes.

2.1. Physical education programs and organizational change

In the fall of 2012, the PYFP was relaunched as a mechanism to promote health-related fitness within school-based physical education programs nationwide. The PYFP is a comprehensive fitness education program that focuses on three key areas: (a) PD for physical educators, (b) health-related fitness assessment, and (c) recognition of schools and students. The program adopted FitnessGram[®] to place greater emphasis on the identification of health risk and revised the long-standing student recognition component associated with youth fitness testing in the U.S. to promote the achievement of healthy levels of fitness. To initiate the PYFP implementation, a funding opportunity was made available to public and private schools nationwide. The funding provided schools with supplemental resources to address the three key areas of PD, assessment, and recognition. Accordingly, this study examined the key events of the PYFP implementation, as an indicator of the fitness education program's feasibility to initiate school change.

Barcelona et al.

Based on the theory of organizational change, the research team constructed a logic model to articulate and justify the stated evaluation strategy procedure (Fig. 2). The model outlines the variables of interest and stages in which each was investigated from Inputs to Behavioral Outcomes and Intermediate Outcomes. In accordance with the theory of organizational change, the inputs mirror factors aligned with the unfreezing phase; behaviors align with the changing phase, and intermediate outcomes can be assimilated to refreezing as sustainable change. As such, the Inputs are comprised of the main events intended to create awareness of the PYFP and generate a sense of fulfillment and security in the changes it promotes for teachers, students, and schools. Further, the Behavioral Outcomes are defined by the participants' level of action (i.e. the percent of virtual courses completed or the use of awards) based on Input factors. Finally, the Intermediate Outcomes capture student progress that results from changes implemented by the completion of the inputs and behavioral factors and indicate outcomes associated with increased fitness (i.e., the percentage of students who are in the Healthy Fitness Zone[®] (HFZ), which are criterionreferenced standards of fitness that represent good health by age and gender). This basis of organizational change, identifying Inputs to first prompt Behavioral Outcomes, and then Intermediate Outcomes exemplifies the underlying assumption of the PYFP. That is, teachers who gain an awareness of the need for enhanced physical education through the PYFP and the received supports, such as PD or access to resources, will be more likely to accurately administer the FitnessGram[®] assessments and use these evaluations to recognize their students and to drive their instructional practice. It is hypothesized that the use of the PYFP is an effective strategy to increase student fitness and reduce the risk for preventable disease as it provides the viable resources of student exposure to health-centered curriculum and teacher access to PD on effective, evidence-based instruction.

The study of fitness has an extensive history of change and progression, such as the creation of youth-based fitness assessment, adoption of student recognition, and ultimately the provisions for family inclusion (see https://www.hhs.gov/fitness/about-pcsfn/our-history/ index.html). However, rising rates of overweight and obesity, lack of physical activity, and concerns over associated health risks warrant continued research and investigation of viable fitness education interventions. Further, the need for national surveillance has emerged, which begins with school-level implementation of fitness assessment (Institute of Medicine of the National Academies, 2012). Finally, because little is known about the motivational aspects of increasing studen s health, further investigation of the organizational effects of using student recognition is necessary.

3. Methods

Once IRB approval was secured, this study utilized qualitative methods, as a means for evaluation of the PYFP across varied school contexts. There is a need for physical education research to employ rigorous methods that can uncover complex interactions among schools' contextual variables and how they ultimately influence school culture and readiness for change (Castelli, Carson, & Kulinna, 2014). As such, the current study employed an explanatory collective case study approach as a way to assess key variables related to a school's feasibility to adopt and implement the PYFP. Data collection transpired over one academic year.

3.1. Participants

Through the PYFP funding opportunity, 374 schools received materials including the FitnessGram[®] software, student recognition items, *Physical Best* texts, and virtual training courses. A physical education teacher at each school was required to complete all of the offered training. Sixty percent of the schools were elementary, 35% secondary, and 5% K-12 schools. Student enrollment ranged from 62 to 2900, with the number of certified physical education teachers in each school's correspondingly extending from one (n = 180) to 28 (n = 1). The number of minutes per week of physical education ranged from one time per week for 25 min, at the elementary level, up to 400 min per week with daily, blocked scheduled physical education on the secondary level. Eighty-two percent of the schools reported the administration of some form of student fitness assessment prior to this investigation. Schools represented 48 states.

3.2. Data sources

The primary instruments used in this study included site visits and interviews. Artifacts, including the PYFP funding application and the Fitness Education Index, were also collected.

3.2.1. Site visit instrument—A subsample of schools (N = 7) were selected for site visits to observe and identify student, teacher, and school-level barriers and facilitators of PYFP implementation. *The CDC Program Evaluation Site Visit Checklist* was used to assess program impact, innovativeness, feasibility of implementation and adoption, and generalizability (Centers for Disease Control & Prevention, Program Performance & Evaluation Office, 2017; Castelli, Cance et al., 2014; Castelli, Carson et al., 2014). Additionally, on-site interviews were conducted with physical educators, administrators, and stakeholders to gain expansive details regarding a school's history of involvement with PYFP as well as personal experiences with its implementation. Artifacts specific to site visits (i.e., lesson plans, student and parent handouts, pictures of bulletin boards and facilities, etc.) were gathered, and SOPARC was used to systematically observe and record the intensity and duration of students' physical activity (McKenzie, Cohen, Sehgal, Williamson, & Golinelli, 2006). All data were recorded, transcribed, and member checked and then reduced through coding and compared with phone interview data.

3.2.2. Phone interviews—Semi-structured interviews were administered via the phone to gain expansive details regarding a school's history of involvement with PYFP as well as personal experiences with its implementation. An interview guide was developed collaboratively across the research team to include questions that provided further insight into processes of organizational change (inputs, transformation, and outputs). Each interview lasted 20–30 min and consisted of 10 semi-structured questions such as "What facilitated the implementation of the PYFP program in your school" (transformation). All data were recorded, transcribed, and member checked and then reduced through coding and compared with site visit data.

3.2.3. Artifacts—Two formal artifacts were intentionally collected and utilized to conceptualize key inputs related to PYFP implementation, but additional artifacts were

Barcelona et al.

also included and coded if offered by a teacher. The *PYF Funding Application* was collected from all participating schools. This online survey provided information on institutionalized contextual factors including, school demographics, physical education and fitness assessment practices, and opportunities for physical education specific PD. Participating teachers also completed the *Fitness Education Index*. This online survey required teachers to self-assess their degree of implementation (full, partial, under development, not in place) of specified criteria (e.g., Teachers use student FitnessGram[®] scores to develop lessons targeting student needs).

3.2.4. Data reduction & analysis procedures—The study was conducted in two phases, as a means of appropriately capturing rich contextual data in alignment with the sequencing of programming delivery. First, the participant application and the Fitness Education Index were collected online, followed by an interview and site visit data. In phase one of the study, the research team focused on the analysis of the school program and teacher demographic data obtained from the PYFP funding applications. Through this review process, the research team was able to determine "unmalleable" inputs (i.e., school type, enrollment, teacher years of service, familiarity with PE assessment, and past participation in PD). Participating teachers were also asked to complete the Fitness Education Index to self-assess their current capacity to implement the PYFP based on necessary inputs (i.e., access to facilities, provision of resources, allocations for PA and PE minutes, administrative support). Participant Fitness Education Index results and their corresponding demographic and program data were used to assess the school's readiness to implement the PYFP fully. This step involved identifying behavioral outcomes by classifying school programs as full-, partial-, and non-implementing. Broadly the classifications suggested that a *full-implementer* completed their PD, administered the FitnessGram[®] to all students in all grades (as developmentally appropriate), and utilized awards to recognize student fitness. A partial implementer was able to fulfill some of the program requirements (i.e., PD) but was still working toward completion of other elements (i.e., FitnessGram[®] assessments of students). Generally a *non-implementer* was inhibited by a contextual barrier (i.e., issues with the technology, a change in physical education teachers at the school) and therefore failed to carry out all of the steps involved in the implementation process.

In the third and final phase, the reduced and categorized artifacts were used to select a subgroup of participants for site visits and interviews. Twenty teachers participated in semistructured formal interviews used to gain further understanding of the role of PD, support, and student recognition. Thirteen teachers completed phone interviews. The remaining seven were selected for one-day site visits based on their school classification of full, partial, or non-implementing. When visiting the seven schools, all teachers at that site, even though they had not previously been identified through the Fitness Education Index, typically were involved in the one-day data collection. Interviews were transcribed verbatim and coded. Patterns were placed on a matrix that included all data to identify emergent themes (Webb & Glesne, 1992).

All data were stored in a password protected database and deidentified by one delegated research assistant to ensure the integrity of the data was maintained. To establish

trustworthiness among these data weekly research team debriefs, member checking (transcribed interviews were provided to participants to confirm accuracy), and data audits were conducted. Data sources were triangulated with coded patterns emerging as themes (Webb & Glesne, 1992).

4. Results

Results gathered from the baseline application, coupled with the Fitness Education Index results were used to identify key contextual variables related to a school's readiness to adopt and implement the PYFP. Specifically, the baseline application data indicated that of the 353 selected schools, forty-four percent (n = 156) of the participating schools had at least one policy in place at the district level. Further, 64% (n = 226) of schools noted that there was a stated requirement for the number of minutes of physical education, yet from those schools, 72% self-reported that they do not meet recommended guidelines for the number of minutes of physical education each week (i.e., elementary = 135; secondary = 225). Through the Fitness Education Index, teachers indicated that across influential inputs, standards-based physical education curriculum (n =68 %), adequate facilities (n = 59 %), and assessment of the physical education standards (n = 57 %) were commonly reported practices. The least occurring inputs were nutrition education (n = 9%), classroom physical activity (n =23 %), and family access to physical activity facilities (n = 22 %). Despite the school-level awareness and written intention to abide by policies about physical education (64%) and fitness education (48%), adherence to these guidelines was a challenge. Informed by the results of the merged inputs artifacts, transformational factors of PD, administrative support, and student recognition emerged as essential action items or influencers of a school's readiness to adopt and implement the PYFP. These results structured and informed interview and site visit inquiries.

Phone interviews and site visits findings converged into three overarching themes of (a) leveling of the playing field with academics, (b) strategically overcoming barriers, and (c) recruiting teacher fitness champions. Through these themes (as described in detail to follow), a more thorough understanding of pivotal antecedents emerged (Table 1).

4.1. Leveling of the playing field with academics

Teachers learn through the virtual PD and via the PYFP website that student recognition is an essential piece to encouraging lifelong fitness among students. Teacher interviews with fully implementing teachers brought to light an unexpected finding. The use of the PYFP awards for student recognition extended beyond the influence of individual student awareness to collectively shape the perceptions of the school. As explained by teachers, including the PYFP recognition component for student performance brought unexpected notoriety and acceptance of physical education throughout the school.

One teacher said, "Our kids have an awards day at the end of the year, and they and the teachers dress nice. Their parents show up. The teachers get to stand up and call up their students to receive the awards" (Teacher 12, site visit). This was the first time the subject matter of physical education was acknowledged at the academic awards ceremony. Another teacher commented about how she used the fitness assessment as an incentive and as a way

for students to set goals, "Of course the awards helped. They liked getting those certificates. It gave them something to work for. They set goals. So, that is how we trained in class, by the components we were taught in the FitnessGram[®] training [virtual courses]." She added later in the day, "Oh, it was so cool. The awards were on the web for everyone to see. Just like the academic awards." For the first time, student performance within physical education was publicly acknowledged. Finally, when another teacher was asked how they disseminate their PYFP awards, they explained that they are given out in an assembly with all other academic awards. One teacher commented that by giving awards for all scholastic accomplishments, they intentionally set out to "show the balance and equity in physical education awards to things like the math awards and most improved student awards" and went on to state, "We try and put it (PYFP) on an equal plane with other things we recognize kids for" (Teacher 16, site visit).

4.2. Strategically overcoming barriers

As a component of the virtual PD, the Fitness Education Index prompted teachers to reflect on their current pedagogical strategies as well as the resources they utilized in conjunction with those strategies. Through this reflection, it was identified that teachers increased their self-awareness of best practices and therefore, it helped teachers identify ways to enhance their current pedagogy by adopting those practices. Further, based on this newly acquired knowledge, teachers set forth as advocates for resources (e.g., assistance with the imputation of student data) necessary to providing quality fitness assessment and education in their schools. One identified barrier was the lack of physical education, activity, and fitness.

The resources, such as Physical Best books and student awards were made available through this funding opportunity. As stated in the Fitness Education Index by one teacher, "Our district has no funding for PE PD, yet all of our PE staff can participate in this training." Further, teachers reported that the virtual courses were "relevant PD for physical education teachers" (Teacher 2, interview) and courses were "user-friendly. I could go back and review and was able to start and stop. Because my incorrect answers were shown, I was able to learn from them" (Teacher 3, virtual course evaluations). Another teacher commented, "I really liked them (the courses) because they got really into depth and detail regarding the FitnessGram[®] testing... I actually learned more things within the courses...I actually had clarification (on assessment), and I really enjoyed the feedback at the end of the courses" (Teacher 15, site visit). The virtual training and Physical Best resources empowered teachers to request team time or release time from teaching responsibilities so all of the physical education teachers, could work together to input data from the administration of the FitnessGram[®] assessments, print FitnessGram[®] reports, or plan recognition ceremonies.

Additionally, PD increased teacher buy-in through unfreezing the status quo. As stated by one teacher in regards to the outcomes of receiving PD, "I feel very comfortable delivering the PYFP content after all the training from PYFP and the training I have gotten from my district...it has prepared me for testing the students...and now as a department we all help one another...now if we see a fellow teacher not doing something correctly we talk to them about it...we want them on board so that we are all conducting the assessments consistently" (Teacher 18, site visit). As indicated by this teacher, PYFP and the PD it provided gave

teachers the efficacy to deliver quality fitness education within their own classroom, and also ensure that their team of fellow PE teachers offer the same. One educator noted another way in which PYFP facilitated change in the status quo, explaining that the PD not only helped them discover the depth of their role, but it also brought credibility school-wide. "We are not gym teachers, we are physical educators, so there are elements of physical fitness, elements of nutrition and health, there's an element of the team and an individual sport, and they all fit together...now I can tell a math teacher that physical education is just as important...this (PYFP) is about physical education and how it is important" (Teacher 13, site visit).

4.3. Recruiting teacher fitness champions

All twenty teachers interviewed suggested they were willing and ready to serve as champions to advocate for physical activity opportunities, more physical education, and achievement of the fitness standards as a means of minimizing health risk. One teacher stated that PYFP "gives me validity, it is why we are here. We love team sports; we love the activity, but really our purpose is this (PYFP).... it sets it up; tha s why i s (PYFP) awesome" (Teacher 7, interview). As this teacher noted, the PYFP gave teachers the opportunity to become fitness experts equipped with knowledge about how to enhance curriculum beyond sports by incorporating fitness content and assessment into daily lessons (Teacher 19, site visit).

Teachers were eager to recruit peers not only from physical education but other disciplines to become involved. "The key is other specialist teachers," commented Teacher 6, during an interview, thus confirming that art, music, and special education teachers may be most aware of the need for physical activity in schools. Because physical education, art, music, theater, and dance are often block scheduled in the same class period, which rotates every 4–6 weeks, if needed, additional time for physical education could be secured by rearranging the schedule. One teacher explained that it's about negotiations among specials teachers. "Specials will clump together to help each other…kids get pulled out all the time, sometimes (during assessments) especially this week we (PE) will ask them (the kids) to go tell the (music) teacher that we'll have you go first, and then we'll send you to band…so they miss a little music but its ok, because we negotiate so its ok" (Teacher 16, site visit).

Classroom generalist teachers can also serve as facilitators of the PYFP. Teacher 5 stated, "all teachers need this kind of PD, not just PE teachers." Utilizing general classroom teachers and other school specialists as resources is a strategic way to develop a health-related fitness culture that begins with physical education but then supported and strengthened by the whole school community.

5. Conclusions

In summary, this study facilitated investigation into the efficacy of the PYFP as a source of organizational change. The process evaluation team first identified key contextual variables through artifact analysis that are essential to the adoption and implementation of the PYFP. Guided by the process of inquiry, the process evaluation team then identified emergent themes that provided a broader understanding of how these variables facilitated and/or hindered the PYFP adoption.

Barcelona et al.

As recommended by the IOM, school-based PD is a feasible way to help teachers integrate fitness testing and recognition into the curriculum (Institute of Medicine of the National Academies, 2012). In this present study, data indicated content-based PD matters, and without it, schools are not primed to initiate programmatic and organizational change. As one teacher highlighted, the PYFP virtual PD is ideal because it provides teachers who lack funding resources an opportunity to enhance their knowledge about fitness - it was not just another unfunded mandate. Further, because the content is provided in an online format, there is an opportunity for teachers to note personal progress, revisit the material, and gain knowledge at their pace. In the current economic climate where school and district funding is minimal, virtual PD may be a prime opportunity to provide teachers with continual access to the educational resources they need.

It is important to note that only schools identified as full and partial implementers were able to provide evidence that they used the knowledge obtained from the virtual PD to enhance communications with parents and to increase parental involvement and interest in the topic. There were only two confirmed instances where teachers used the results of the fitness assessment to modify their lessons, change the physical education curriculum, or restructure their physical education schedule. Teacher 10, site visit interview, "It [the PYFP] caused me to change this year. Three days per week, I do physical education content, and one day per week I do health and physical activity that goes along with the coordinated school health [as part of a Comprehensive School Physical Activity Program]. On the fifth day in the classroom, I have incorporated a [health-related] fitness day." Based on this awareness, further consideration for ways to provide support for teachers as they translate content knowledge gained online into practice may be warranted.

As stated, physical education teachers are committed to being physical fitness leaders. Yet to create cultural change at the school level, further support among administration, faculty, and community is needed (Weber, 1964). Teachers identified as full and partial implementers shared a common component of a supportive administration. Support from administration translated into the allocation of resources and more importantly, the shared value that fitness education as an essential component of a thriving curriculum. Conversely, non-implementers identified the lack of administrative support, including crucial resources and time to engage in PD opportunities. These results parallel the idea that without a shared mission and vision, a school cannot overcome barriers that get in the way of instituting change. In addition to support on an individual basis, the collective perception of support throughout a school is vital to the change process. One future direction for the PYFP might include training for school administrators and decision-makers.

Finally, data interpretation and follow-up analysis did not reveal that student recognition directly contributed to school-level change, despite the teachers highlighting its importance in creating a healthy school climate. Physical education teachers noted a shift in school climate after the dissemination of the PYFP awards. Specifically, they observed how recognition ignited a newfound appreciation and awareness among classroom teachers, parents, and students of the role physical education has in the school community. Although participants in the current study are provided student recognition, certificates are available online at a minimal cost. Therefore, the inclusion of fitness-based awards may be a viable

and cost-effective way for all schools regardless of financial limitations to make small strides towards creating a school culture that values physical activity and fitness.

5.1. Lessons learned

This study provided insight into the efficacy of PYFP implementation uncovering the vital role of school and teacher readiness to unfreeze the status quo as it relates to transformation and moving toward a shared culture of health. Without school and teacher level readiness to promote and recognize student fitness, organizational change within schools cannot occur. This may present far reaching implications given the introduction of accountability standards in Canada and the UK in 1997 as well as nationally driven school reform initiatives as of 2001 such as the No Child Left Behind and Race to the Top that have placed school leaders, administrators and teachers under pressure to significantly improve student academic achivement (Darby, 2008). Given that these initiatives have prioritized core curriculum, reform efforts have given little consideration for how we maximize physical and health education, despite the known importance of health regarding a student's readiness to learn (Basch, 2011). Taken collectively, the lesson we can take from the findings presented in this study coupled with the known challenges of academically driven reform initiatives, is that we may need to reconceptualize what effective school reform looks like, and as we do so, we need to include teachers in the process so that they are active players in the transformation. This is especially relevant for physical educators as reform efforts to date have lacked consideration for physical education. Physical educators must be willing to advocate for their inclusion in the process, navigating their way among the existing tensions between core and specials content, and perhaps the only way to facilitate this is by evaluating factors related to quality programming.

Another important lesson learned from the current study is that evaluation has the capacity to shed light on the disparate funding within the school setting. Our findings support literature suggesting a lack of funding globally for physical education (Hardman, 2008) despite its potential to create a more holistic school culture (Storey et al., 2016). However, we also learned that programs such as PYFP are a feasible and cost-effective way for schools to invest in physical education programming, providing virtual PD and curriculum resources for teachers as well as student recognition through awards. This small investment in physical education may reap high rewards given that the PYFP holds the potential to deliver quality programming that is not only accepted in the gym but also across the larger school community (Lawson, 2005).

Perhaps the greatest lesson learned from the current study is that evaluation should not be siloed. The work of the current study evaluated the capcity of PYFP to prompt organizational change utilizing qualitative methods to understand the contextual factors influencing PYFP implementation and its impact on the school culture. In doing so, we learned that evaluation approaches must be comprehensive. That is, it is not enough to evaluate one aspect of school curriculum or culture. Future evaluations need to explore the synergy between all inputs and consider how their interactions may prompt organizational change in schools. This is important because comprehensive evaluation approaches may provide a better understanding of how programming beyond core content such as physical

education contributes to overall student performance. In an era where reform initiatives are academically driven, evidencing the intersections between core and specials curriculum may facilitate a reprioritization of physical education and programs such as the PYFP.

5.2. Significance

By definition evaluation typically seeks to "form an idea of the amount, number, or value of" (Webster, 1999). That is, evaluation typically seeks to quantitatively measure strengths and weaknesses of a given phenomenon. That stated, perhaps one of the most significant strengths of this study is that we sought to go beyond surveillance and quantification of program adoption and implementation. Instead, we prioritized the teacher voice seeking to better understand through the school-based experiences how the PYFP was being implemented and what that meant to physical educators, students and the larger school community.

Our investigation into the antecedents of organizational change also shed light on current practice and the triumphs and trials related to refocusing physical education and other programs to be more health-related within the school context. As determined by these findings, there were some valuable outcomes from the provision of PD and other resources (i.e., student awards, FitnessGram[®]). The affect of student recognition was far-reaching. Expectedly, some schools continue to struggle to change as a lack of technological and administrative support inhibited progress. Additionally, we are still working to identify those things that must be considered before administering a school-based fitness assessment, so that it will foster desired outcomes among the school community. Furthermore, the PYFP resources and one academic year were not enough to overcome local and state barriers. Perhaps in the second year of the implementation process, the present supports will evolve and facilitate more considerable change, thereby evidencing the full potential of the PYFP.

Identification of the antecedents of organizational change should permit educators and scholars alike to target schools and teachers who exhibit the highest readiness for a structural and personal modification that focus on student health as a valued learning outcome.

Acknowledgements

This research and the larger program evaluation could not have occurred without the participating sponsors and program partners of Human Kinetics, The Cooper Institute, SHAPE America (formerly called the American Alliance for Health, Physical Education, Recreation, and Dance; AAHPERD), the UT Austin student researchers, and the school representatives who facilitated data collection and the implementation of the Presidential Youth Fitness Program. The research team would also like to thank all of the teachers and school administrators who agreed to share their educational experiences with us.

Funding source

This work was supported by a grant from the General Mills Foundation, which was facilitated by the Centers for Disease Control and Prevention and health specialist Seraphine Pitt Barnes, PhD, MPH, CHES in the Division of Population Research.

Biographies

Jeanne M. Barcelona is an assistant professor at Wayne State University. Dr. Barcelona's research evaluates the efficacy of comprehensive school health approaches.

Darla M. Castelli is a professor at The University of Texas at Austin. She has spent her career researching the relationship between fitness and cognitive performance in youth.

Jessica Duncan Cance holds dual positions serving as a professor at The University of Texas at Austin and as a Research Public Health Analyst at RTI International.

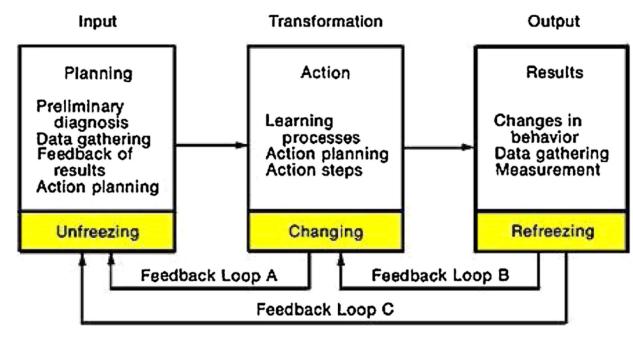
Seraphine Pitt Barnes is a General Health Scientist at the Centers for Disease Control and Prevention where she examine school health policy and practice.

Sarah Lee is a team lead at the Centers for Disease Control and Prevention researching outcomes of comprehensive school physical activity programming.

References

- Armenakis AA, Harris SG, & Mossholder KW (1993). Creating readiness for organizational change. Human Relations, 46(6), 681–703.
- Basch CE (2011). Healthier students are better learners: High-quality, strategically planned, and effectively coordinated school health programs must be a fundamenta mission of schools to help close the achievement gap. The Journal of School Health, 81 (10), 650–662. [PubMed: 21923878]
- Bechtel PA, & O'Sullivan M (2007). Enhancers and inhibitors of teacher change among secondary physical educators. Journal of Teaching in Physical Education, 26(3), 221–235.
- Castelli DM, Cance JD, Barnes SP, Wargo J, Bartholomew JB, Barcelona JM, ... Hwang J (2014). Presiden s youth fitness program evaluation report: Year 1. Atlanta, GA: Centers for Disease Control and Prevention.
- Castelli DM, Carson RL, & Kulinna PH (2014). Special issue: Comprehensive school physical activity programs. Journal of Teaching in Physical Education, 33(4), 435–439.
- Centeio EE, & Castelli DM (2012). Reaching the tipping point: Incidences of support and resistance to curricular change among secondary physical education teachers. Proceedings of the American educational research association conference.
- Centers for Disease Control and Prevention, Program Performance and Evaluation Office. (2017). The CDC program evaluation site visit checklist. Centers for Disease Control and Prevention. https://www.cdc.gov/eval/steps/step3/index.htm.
- Chen YT, Barcelona JM, Cance JD, Calvert HG, Barnes SP, Wargo J, & Castelli DM (2020). Development of the Fitness Education Index: A Scale of Organizational Level Capacity. Research Quarterly for Exercise and Sport, 91(1), 172–178. [PubMed: 31617835]
- Connolly J, & Dolan P (2012). Re-theorizing the "structure-agency" relationship: Figurational theory, organizational change and the Gaelic athletic association. Organization, 20(4), 491–511.
- Darby A (2008). Teachers' emotions in the reconstruction of professional self-understanding. Teaching and Teacher Education, 24(5), 1160–1172.
- Dunning E, & Sheard K (1976). The bifurcation of rugby union and rugby league: A case study of organizational conflict and change. The International Review for the Sociology of Sport, 11(2), 31–72.
- Hardman K (2008). Physical education in schools: A global perspective. Kinesiology: International Journal of Fundamental and Applied Kinesiology, 40(1), 5–28.
- Hertz DB, & Livingston RT (1950). Contemporary organizational theory a review of current concepts and methods. Human Relations, 3(4), 373–394.
- Institute of Medicine of the National Academies. (2012). Fitness measures and health outcomes in youth. Washington, DC: The National Academic Press.
- Institute of Medicine of the National Academies [IOM]. (2013). Educating the student body: Taking physical activity and physical education to school. Washington, DC: The National Academic Press.

- Lawson HA (2005). Empowering people, facilitating community development, and contributing to sustainable development: The social work of sport, exercise, and physical education programs. Sport, Education and Society, 10(1), 135–160.
- Lewin K (1947). Group decision and social change. Readings Soc Psychol, 3(1), 197–211.
- McKenzie TL, Cohen DA, Sehgal A, Williamson S, & Golinelli D (2006). System for observing play and recreation in communities (SOPARC): Reliability and feasibility measures. Journal of Physical Activity and Health, 3(s1), S208–222.
- Schein EH (1996). Kurt Lewin's change theory in the field and in the classroom: notes toward a model of managed learning. Systemic Practice, 9(1), 27–47.
- Storey KE, Montemurro G, Flynn J, Schwartz M, Wright E, Osler J, ... Roberts E (2016). Essential conditions for the implementation of comprehensive school health to achieve changes in school culture and improvements in health behaviours of students. BMC Public Health, 16(1), 1–11. [PubMed: 26728978]
- Webb RB, & Glesne C (1992). Teaching qualitative research. The handbook of qualitative research in education. San Diego, CA: Academic Press.
- Weber M (1964). The theory of social and economic organizations. New York, NY.
- Webster. (1999). Webster's II new college dictionary. Harcourt: Houghton Mifflin.





Systems Model of Organizational Development. Note: Lewin (1947) Stage Model of Organizational Change.

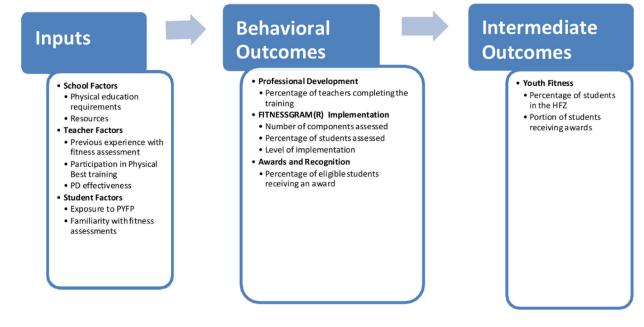


Fig. 2. PYFP Evaluation Logic Model.

Table 1

Antecedents to Organizational Change.

Changing	Refreezing
Use of Awards and Recognition	Utilization of FITNESSGRAM [®] data to drive curriculum change
Self-awareness of current pedagogical practices	Obtaining Teacher Fitness Champions
Self-reflection on movement toward best pedagogical practice	Engagement of School Community
Utilizing Resources	Student obtainment of Healthy Fitness Zone
Scheduling common planning time	
FITNESSGRAM [®] Assessment	
FITNESSGRAM [®] Reporting	
Adding Nutrition Education & PA Tracking	Continued use of physical activity tracking within the curriculum
	Use of Awards and Recognition Self-awareness of current pedagogical practices Self-reflection on movement toward best pedagogical practice Utilizing Resources Scheduling common planning time FITNESSGRAM [®] Assessment FITNESSGRAM [®] Reporting

Classroom Physical Activity Family Access to Facilities