Comprehensive School-Based Physical Activity Models: Addressing Promotion and Assessment Issues through Collaborative Research

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A multi-stakeholder co-development of a UK-based whole-school physical framework.

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285+ members representing 50+ organisations:

Please note the membership is at the individual level not at the organisation level.
Enhancing Academic Performance, Health and Well-being: The Crucial Role of Physical Activity

A conference for school leaders and governors
Tuesday 4 June 2019
Leeds Beckett University
Creating a whole-school physical activity model

Aim: to support every child to increase their physical activity levels, working towards achieving 30/60 minutes per day.
PHASE 1

General problem/question

T1: ‘Learning to drive’ identify the components of the Whole-school PA system

M Mixed Stakeholder Groups

PHASE 2

Specific problem/question

T2: draw a whole-school physical activity diagram

S Same Stakeholder Groups

M Mixed Stakeholder Groups

PHASE 3

Specific solution/design

T3: Present and discuss

S Same Stakeholder Groups

M Mixed Stakeholder Groups

T4: Review original model based on discussion

PHASE 4

T5: Refine model and draw final version

M Mixed Stakeholder Groups

I Independent

T6: Voting, narrowing down to two final diagrams

PHASE 5 - T7: review model, key principles, next steps

M Mixed Stakeholder Groups

Design Council
PHASE 1
General problem/question

T1: ‘Learning to drive’ identify the components of the Whole-school PA system

PHASE 2
Specific problem/question

T2: draw a whole-school physical activity diagram

DISCOVER

DEFINE
### Task 6: Voting

**Stakeholder type:** Researcher, teacher etc.

**Group number:** Model design team (e.g. team 3)

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**3 ★stickers**

Max 2 on any one model.

- Hand your form to Lauri or Luke
- Grab a drink

15:15 to 15:35
Phase 5: Task 7

- Review final model (good, needs improving)
- Key principles (how can this model be used)
- Next steps (what do we need to do now with the final model)
#CreatingActiveSchools

Evidence of the effects of physical activity

How and why?

National organisations and policies: education, health & sport

Motivation

Capability

Opportunity

In service training (CPD)

Initial teacher training

Whole school practice & ethos

Policy and vision

Social environment

School leaders

Teachers & other school staff

Children & young people

Parents

Wider stakeholders

Physical environment

Events

Break / lunch (recess)

Physical education

Curricular lesson (non PE)

Before / after school clubs

Active travel

Family / community

Children and young people physical activity behaviour
Models within the United States: Comprehensive School Physical Activity Programs (CSPAP)
Current Issues with CSPAP Programming

• Who is the right person to lead programs?
• What kinds of institutional supports are in place to implement CSPAP programming?
• How do we assess the effectiveness of these programs?
  • PA assessments not time or cost effective
  • Lack of training on assessment → poor understanding of how programs impact youth
Youth Activity Profile

• Purpose: To assess and promote youth physical activity
• Valid and feasible assessment in school and/or home settings
• Student online self-assessment
• 15 questions; 3 sections
  • In-school physical activity
  • Out-of-school physical activity
  • Sedentary screen time
Physical Activity Assessments (Feasibility vs Validity)

- Diaries
- Self-reports
- Pedometers
- HR monitors
- Accelerometers
- Direct observation
- DLW
- Ind. Cal.

Validation and Calibration of Accelerometers

Calibration of Self Report Against Accelerometers
Overview of the Youth Activity Profile (YAP)

• Developed for use in school physical/health education and classrooms
• Designed for both assessment and promotion of activity
• Developed to be easy and quick (online)
Calibration of the Youth Activity Profile

- % Body Fat
  - 6 mm

- Minutes of MVPA
  - 3.0

2. In the last 7 days, during your physical education (PE), classes, how often were you very active (playing, running, jumping, throwing)? (Check one only)
   - Don’t do PE
   - Nearly none
   - Sometimes
   - Quite often
   - Always

3. In the last 7 days, what did you do most of the time at recess? (Check one only)
   - Sit down (talking, reading, doing schoolwork)
   - Socialized or worked around
   - Played a little bit
   - Played moderately
   - Played hard most of the time

4. In the last 7 days, what did you normally do at lunch? (Check one only)
   - Sit down (talking, reading, doing schoolwork)
   - Socialized or worked around
   - Played a little bit
   - Played moderately
   - Played hard most of the time

5. In the last 7 days, how many days right after school did you do sports, dance, or play games in which you can see your activity? (Check one only)
   - None
   - 1 day last week
   - 2 or 3 days last week
   - Always last week
   - Always last week
Background on the NFL PLAY 60 FITNESSGRAM Partnership

• **Overall Goal:**
  • Help schools/sites take full advantage of Fitnessgram
  • Assist schools in using NFL PLAY 60 programming

• **Approach:**
  • Participatory process
  • Online training, support and evaluation
Raw Data: YAP scores

- Aggregated data (sample from 2013)
- Sample from 195 schools / 18,785 students
Processed Data: MVPA estimates

- Aggregated data (sample from 2013)
- Sample from 195 schools / 18,785 students
Raw Scores on Youth Activity Profile

Calibration

Estimated Minutes of Time Spent in MVPA

YAP Score

MVPA (minutes)
Student Interface

Welcome to the Youth Activity Profile

About Me
Before you begin, it provides your gender.
Gender:
- Male
- Female
Grade:
Select an Answer:
Save and Continue

Welcome to the Youth Activity Profile

Home About Demo

Welcome to the Youth Activity Profile

School

Welcome to the Youth Activity Profile

Sedentary

Sedentary Behavior
Tell us about the time you spend sitting and watching TV or playing games. Answer the questions based on the last 7 days.
Student Report

• Individualized and context-specific
  • In school
  • Out of school
  • Sedentary screen time behavior
Educational Resources

• Coordinators Guide
  • Create schools, classes
  • Add teachers and students
  • Manage users

• Implementation Guide
  • Introductory lessons for ES, MS, HS (standards-based)
  • Brief administration guide
  • Interpreting results
  • Data usage for programmatic decision making

• Administration Guide
  • Guide for student completion of YAP
  • Step-by-step instructions for completion
  • Instructional cues for educators

Physical activity is an important part of a healthy lifestyle for all segments of the population but it is especially important for youth. Schools have increasingly recognized the importance of assessing and promoting physical activity in youth, but there are limited options to evaluate this complex behavior. The Youth Activity Profile (YAP) was designed to address this need.

This document provides valuable resources that will help you to introduce the YAP to your students, prepare students for completing the YAP, gain student interest in self-assessment, use data to help students set personal goals, and assist you in data-driven decision making to enhance pedagogy.

We have designed age-appropriate lessons for elementary, middle, and high school grade levels that encapsulate these processes in a meaningful way and we hope you find our resources useful in administering YAP with your students.

This guide will:
• Provide you with ways to introduce the YAP to your students and gain their interest
• Walk you through a YAP Introductory Lesson that you can use in your class to prepare students for taking the YAP
• Help you and your students to interpret and use data from the YAP results
Application in Practice

- School Wellness Integration Targeting Child Health

- Work with schools to help them create environments that enable students to ‘switch what they do view, and chew.’
Application in Practice

• Schools are guided through a process of evaluating their wellness environment in the fall semester (baseline)
  • School Wellness Environment Profile (SWEP) tool
  • Like School Health Index but specific to CSPAP framework and school food environment

• Students complete the YAP around the same time as the SWEP

• Results/data is summarized and given back to schools to guide planning and goal setting
  • Image at right
Application in Practice

• Schools implement SWITCH practices in the spring semester

• Complete YAP and SWEP again at end of spring to evaluate effectiveness of program / efforts

• Again, provided results/data to use for goal setting and wellness programming
Reporting the YAP

- YAP report given to schools involved in SWITCH
  - Shows Pre- and Post-SWITCH scores
  - Allows schools to meet USDA final rule mandate
  - Data coaching → goal setting for upcoming year
**Physical Activity in School**
The PA in School score indicates how well a school is incorporating PA across the school and across a variety of platforms within the school day.

**PA Outside of School**
The PA Outside of School score indicates how active students are at school. Schools can have positive influences on students PA at home. Some strategies for helping students to be active outside of the school day include providing opportunities to activity opportunities for youth at no cost.

**Sedentary Behaviors**
The Sedentary Behaviors score provides an indicator about the amount of time students spend consuming screen time & performing other activities with limited movement.

Sedentary time is often trumped by the promotion of physical activity. However, it is important to educate students on the fact that sedentary time is different than physical activity, & it is important to limit the amount of time we are sitting.

Strategies for promoting more positive levels of sedentary time include campaigns to reduce students screen time at home & in school, & to insert a section about sedentary time into the health curriculum.
Implications for School Wellness

• YAP evaluates if changes in school wellness practices/policies influence student physical activity behaviors

• YAP can strengthen, be used in conjunction, and / or build upon information collected via tools like the SHI & SWEP

• Using data together (triangulation) can help to tell a more complete story.
Implications and Future Directions

- YAP has potential for school-wide assessment of physical activity
  - Used for assessment and promotion of PA
  - Solution to issues in the school setting (cost, time, capacity)
  - Sensitive to changes in PA programming/policy
- Goal: Integrate YAP into Active Schools evaluation framework
  - Enhance teacher capacity to implement YAP for decision making
  - “normalize” physical activity assessments as a tool for teachers
  - Enhance research infrastructure of Active Schools and capacity of teachers through professional development
Conclusions and Next Steps

• Coordinated approaches necessary for school PA promotion
• Models such as the CSPAP and #creatingactiveschools can drive research designs and implementation science protocols
  • Engaging diverse stakeholder groups can enhance the adoption and utilization of comprehensive models to drive practice
• Youth Activity Profile (YAP) can provide a means of assessing context-specific physical activity (PA) and sedentary behavior (SB)
  • Assess program outcomes (i.e. recess policy, after-school program, etc.)
  • Data-driven decision making
  • School wellness environment/policy change
Thank you! Questions/Discussion

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