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

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CARNEGIE SCHOOL OF SPORT

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



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@brainercise





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Yorkshire & lumber Physical Activity Knowledge Exchange

285+ members representing 50+ organisations^{tota}



Please note the membership is at the individual level not at the organisation level

40 in

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

Idea generation

Conference delegates



summary



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.





Figure 1 Ecological model of four domains of active living.



Figure 1. Conceptual framework for CSPAP research and practice based on a social ecological perspective. Dotted lines represent the bidirectional influence of levels. Facilitator level *resources* relate to personnel, financial, political, time, space, access, built environment, and transportation support, and *safety* relates to physical, social, and emotional well-being. CSPAP, comprehensive school physical activity program: FA, physical activity.



Research



Figure 3. Hypothetical Example Illustrating a Networked Model of Ecological Systems







PHASE 1 PHASE 2 General problem/question Specific problem/question conversence divergence T1: 'Learning to drive' identify T2: draw a whole-school the components of the Wholephysical activity diagram school PA system S Μ M DEFINE DISCOVER





Stakeholder type: Researcher, teacher etc		Group number: Model design team (e.g. team 3)		
1.	2.		3.	
Why do you like this diagram?	Why do you like this dia	agram?	Why do you like this diagram?	
Does anything need adding?	Does anything need ad	lding?	Does anything need adding?	
4.	5.		6.	
Why do you like this diagram?	Why do you like this dia	agram?	Why do you like this diagram?	
Does anything need adding?	Does anything need ad	lding?	Does anything need adding?	
Any further comments:	1			

3 **★**stickers

Max 2 on any one model.

• Hand your form to Lauri or Luke

15:15 to 15:35

• Grab a drink



Phase 5: Task 7



15:35 to 16:05

- 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



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)



Validity

Overview of the Youth Activity Profile (YAP)

- Developed for use in school physical/health education and classrooms
- Designed for both assessment <u>and</u> promotion of activity
- Developed to be easy and quick (online)

r logo h	ere	The Touch Activity Profile provides a summary of your Involvement formula as well as an indicator of your automative provide the two on physical activity that you get at chancel (Remer A) but you can try when you are those there is an output of the physical state to the chance the amount and act some activity to your and the an indice of the amount and act some activity to your any the an indice of the amount and act some activity to your any the any indice of the physical some one more important the results.	It is physical activity (both at activity ty not be able to control the amount of to be more active during your heat to be to its strong being secretary (the activity) because int your yours (both you did had week.
A. Ac	tivity Levels at School		
1. Ac	tivity to School		1
2. Ac	tivity during Physical Education Cla		
3. Ac	tivity During Recess		
4. Ac	tivity During Lunch		
5. Ac	tivity From School	the second second second second	
B. Ac	tivity Levels at Home		
6.	Activity before School		
7.	Activity after School		
8.	Activity on Weeknights		
9.	Activity on Saturday		
10.	Activity on Sunday		
neighborn ievelotac You	ood on in parks. The scores show your levels of p swith. If your score is new try to find ways to se r <u>average</u> activity score at home last	have a schulp after action, in the element and in the nearest nore active at home. It week was 2.2 out of a possible score of 5.	A high access indication in higher
C. Se	dentary Habits		
11.	TV Time		
12.	Video Gome Time		\sim
13.	Computer Time		
1.4.	Phone / Text Time		
15.	Overall Sedentary Habita		
It is impo involveme spend in t Your	nan to be active every day but it is also import on in substany activities. A high score indicates here activities. It <u>evenage</u> sedentary score last week	as to minimum the answer of the spin span away sectors, it is a to of the insectory activity. There are no high by to the wes 3 out of a possible score of 5.	le schrei shor your nierel Leega to rebuce the time you
Develo	ping and maintaining a physic Tour Activity Podia - Copyram S	cally active lifestyle is important for you 2020eenment of lineboog, love Date University & I repts	r health and wellness

Calibration of the Youth Activity Profile



% Body Fat

In the last 7 days, during your physical education (PE) classes, how often were you very active (playing hard, running, jumping, throwing)? (Check one only.)

I don't do PE	O
Hardly ever	
Sometimes	
Quite often	
Always	

3. In the last 7 days, what did you do most of the time at recess? (Check one only.)

Sat down (alking, reading, doing schoolwork)Q
Stood arou	nd or walked aroundQ
Ran or play	ved a little bit
Ran around	and played quite a bit
Ran and pl	aved hard most of the time

4. In the last 7 days, what did you normally do at lunch (besides eating lunch)? (Check one only.)

Sat down (talking, reading, doing schoolwork)Q
Stood around or walked around
Ran or played a little bit
Ran around and played quite a bit
Ran and played hard most of the time

5. In the last 7 days, on how many days *right after school*, did you do sports, dance, or play games in which you were very active? (Check one only.)

None	O
1 time last week	Q
2 or 3 times last week	o
4 times last week	Ö
5 times last week	• • • • •



Minutes of MVPA

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: <u>YAP scores</u>

- 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





Student Interface



Student Report

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



HOME ABOUT DEMO



A. Activity Levels at School



There are many opportunities to be active while at school. Physical education provides a structured time to be active but you can also be active on the way to school, during breaks and at lunch. The scores show your level of activity at different periods in the school day - a high score indicates a higher level of activity. If your score is low, you can try to be more active at school (and also at home).

Your average activity score at school last week was 4.4 out of a possible score of 5.

B. Activity Levels at Home



There are many opportunities to be active while at home. You might be in sports or clubs that involve activity or you might be active outside in your neighborhood or in parks. The scores show your levels of physical activity after school, in the evenings and on the weekend. A high score indicates a higher level of activity. If your score is low try to find ways to be more active at home.

Your average activity score at home last week was 4.4 out of a possible score of 5.



It is important to be active every day but it is also important to minimize the amount of time you spend being sedentary. The scores show your overall involvement in sedentary activities. A high score indicates a lot of time in sedentary activity. If your score is high try to find ways to reduce the time you spend in these activities.

Your average sedentary last week was 3.2 out of a possible score of 5.



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

Youth Activity Profile

Youth Activity Profile Implementation Guide

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 adminstering 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

YOUTH ACTIVITY PROFILE

May 2019

- YAP report given to schools involved in SWITCH
 - Shows Pre- and Post-SWITCH scores
 - Allows schools to meet USDA final rule mandate
 - Data coaching \rightarrow goal setting for upcoming year



The YAP is scored on a 0-5 scale, with 5 representing better behaviors, expect with Sedentary Time 1 representing better behaviors

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Youth Activity Profile - Physical Activity in School

Pre Overall PA in School

Pre Walk/Bike to School

Pre Walk/Bike Home

The YAP is scored on a 0-5 scale, with 5 b

Physical Activit



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

Pre PA Afte

Pre PA on We

The YAP is scored or

Physical

If you have any questions, plea: SWITCH is an Iowa State Unive

Pre PA on S

Pre PA on

Wellness C(Youth Activity Profile - Physical Activity Outside of School

Pc

PA Outside of School

Pre PA during PE
Pre PA during Recess
Pre PA during Lunch
Pre PA during Lunch
Pre PA during Lunch

Some strategies for helping students to be active outside of the school day include providing communities with access to school activity spaces outside of school hours & partnering with community organizations to activity opportunities for youth at no cost.

Schools can also encourage students to be active at home by continuously promoting & educating students on the benefits of being active, & by providing ideas & resources for fun activities.



Pre PA Before Youth Activity Profile - Sedentary Behaviors



The YAP is scored on a 0-5 scale, with 1 being the best school can score.

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



The YAP is scored on a 0-5 scale, with 5 representing better behaviors, expect with Sedentary Time 1 representing better behaviors.

- 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 contextspecific 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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