How to determine the place provided to physical activity in a primary school? An attempt to identify objective variables

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Physical (in)activity: Choose the healthy way

Development of fundamental movement skills for foundation of physical activity
Brain Function & Reward Centers
Cardiovascular function links to brain function
Bones get stronger with bone-strengthening activities

A physically active kid is likely to stay that way...

...and so will an inactive one.

Morris (2013)
Designdecomove.org
Kids should reach the 60 minutes of PA per day

An ecologic perspective: school plays a central role

Adapted from Bronfenbrenner (1979); Sallis et al. (2006)
Introduction

Objectives

Methods

Results

Discussion

Conclusion

An ecologic perspective: Schools plays a central role

The Role of Schools in Promoting Physical Activity

Active Living Research

www.activelivingresearch.org

School and PA: What works

What Works to Get Kids Active

Schools and communities can help kids get the 60 minutes of physical activity they need each day

Active Living Research is a national program of the Robert Wood Johnson Foundation

www.activelivingresearch.org
Many « active school » projects are developed worldwide

But few instruments, often based on subjective data, are available to examine PA-related initiatives in schools

1. Identify indicators related to PA in the school context

2. Request the school workers opinion about those indicators

3. Check the relevance of those indicators in real school life settings

Create a reliable tool to assess objective information about PA in schools
5 consecutives research steps

**STEP 1**

**Identify indicators related to PA in the school context**

- Literature review
  (keywords: «école bouge»; «school on the move»; «active school»; «school-based PA program»)
- Interaction between researchers
  
  - Focus on the principal, classroom and PE teachers
  - Data collection by interviews, questionnaires and documents analysis
  - Data should be ascertain by concrete and measurable proof (binary: YES/NO)

\[\text{Snyers et al. (2014); Bradley, & O’Connor (2009); Rickwood et al. (2011)}\]

**STEP 2**

**Development of a provisional tool to assess objective data**

- Literature review and interaction between researchers
  
  - Principal form: (+/-) 85 items + 4 documents + interview
  - PE teacher form: 111 items + 11 documents + interview
  - Class teacher form: 30 items
  - School's official policy analysis: 53 items

*Binary items or triangulation of informations provided by school actors*
**5 consecutives research steps**

**STEP 3**

**Pilot study in a primary school (n=200 pupils)**

- Principal (♂; 45 yrs) form + interview
- PE teacher form (♂; 30 yrs) + interview
- Class teacher form (♀; 55 yrs)
- School’s official policy analysis

**STEP 4**

**Tool validation by a group of experts in the field**

- Focus group (+4 hours)
- 13 experts in primary school

- 1 school principal
- 3 PE teachers
- 1 association supervisor
- 5 school inspectors
- 2 pedagogical advisors
- 1 PA researcher

- Systematic retranscription and point-by-point adaptations
**5 consecutives research steps**

**Real-life experimentation of the audit tool**

- Positive discrimination school (n= 282 pupils)
- Healthy lifestyle projects (PA & nutrition) in the school

1. Introductory meeting with the principal
2. Form completion by the class teachers (n=12)
3. Form completion by the principal
4. Form completion by the PE teachers (n=3)

**Indicators related to PA in the school context**

Cale (1997): "environment"
Pate et al. (2006), OFPSO (2006), King-Quebec (n.d.): "Active recess"
Snyers et al. (2014): "sport facilities"

Cale (1997), King-Quebec (n.d.) & Pate et al. (2006): "PA promotion & interdisciplinarity"
Pate et al. (2006): "active break", "PA homework"
Snyers et al. (2014): "PA promotion & interdisciplinarity"
Development of a provisional tool to assess objective data

<table>
<thead>
<tr>
<th>School policy</th>
<th>PA school projects</th>
<th>Interdiscip. projects</th>
<th>PA&amp;sport facilities</th>
<th>Active commuting</th>
<th>PE classes</th>
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- 335 items to collect
- Measurable items: numbers (75), % (3), budget (5), area (5), duration (6), frequence (4), mean (16), dichotomy (109)
- Verifiable items: observation (62), proof (10), triangulation (7)
- + 50 non-verifiable items (ex.: “did you read the school policy?”)

Pilot study in a primary school (n=+- 200 pupils)

- Principal:
  - growing awareness about school PA
  - 2 items to add (childcare center PA; Affiliation to a school sport federation)

- Class teacher:
  - 1 item to add (duration of the “active breaks”)

- PE teacher:
  - 2 items needed precisions (underlying questions)

  Tool usable in the school field
Tool validation by a group of experts in the field: Main changes

- School policy:
  - Analyse the 4 policy documents of the school (school policy, school regulations, educational project, internal regulations)

- Direction form:
  - Distribution of PE classes (2 hours grouped or splitted; swimming lessons)
  - Place given to PE assessment and PE teachers during the class councils

- Class teacher form:
  - Precise who launched the interdisciplinary initiatives

- PE teacher form:
  - Communicate about PE classes objectives
Real-life experimentation of the audit tool

- Unawareness of class teachers
- Disagreement between the principal & class teachers
- Agreement between PE teacher

- Concrete information about PA provision in all schools from the same city

- No active commuting projects in the school

- Poor understanding of questions by class teachers
- Active breaks in 50% of classes
- Few PA homeworks

- Agreement between information provided by the principal & PE teachers
- No proofs but agreement between PE teachers

School PA

PE classes

All 6 dimensions are essential for PA in children

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<th>Minutes of MVPA Gained Per Day</th>
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<td>23</td>
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1. School policy
2. PE classes
3. Interdisciplinary
4. Commuting
5. PA Facilities
6. PA projects

Basset et al. (2013)
Experts underlined the validity and completeness of the instrument
An audit process contributes to a more relevant reality-perception
(Jones et al., 2010)

The developed tool go beyond the analysis of the PE context
(Huts et al., 2009)

Contribution to the monitoring of HEPA initiatives in the school context
(Naul et al., 2012)

The large number of items to collect (n=337) address some limitations
Some items are still based on self-reported data collection
Include some observations to complete/replace triangulation?
(Webster & Suzuki, 2014)

Data collection is researcher-dependent
Provide an independent an “easy-to-use” coding system to schools

For the practitioners, participating to the data collection is a means to become aware of what the school (should) propose
Go further by providing feedbacks and emerging good practice
Thank you for your attention

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References

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