Health Behaviour in School-aged Children survey in French-speaking Belgium

What is changing between primary and secondary school?

E. Méroc, T. Lebacq, N. Moreau, M. Dujeu, C. Pedroni, I. Godin, K. Castetbon

Université libre de Bruxelles, Ecole de Santé Publique
Context and objective

The transition from primary to secondary school is related to multiple changes:

• At school level: teacher relationships, educational demands, school size, ...

• But also physical, psychological, emotional, relational

• Changes in health behaviours

→ Objective = to identify health behaviours and health outcomes undergoing significant changes between primary and secondary school

→ Help to develop effective and targeted actions to improve health and well-being, and promote smooth transitions
The HBSC survey

The **Health Behaviour in School-aged Children (HBSC) survey** is an international study:

- Conducted in > 40 regions/countries in Europe and North-America (WHO regional office for Europe)
- Repeated every four years
- Objective = to describe well-being, health behaviours and outcomes of adolescents and to investigate their sociodemographic determinants
  → up-to-date information to develop and improve health promotion programmes

→ **2014 HBSC survey in French-speaking Belgium**
Methodology

In French-speaking Belgium (Wallonia and Brussels):

• Data collected among adolescents from the 5th of primary to the last year of secondary school

• Two-stage cluster **sampling method**
  • Schools as primary sample units → stratification per province
  • Classes as secondary sample units → all grades were sampled
  • All students of selected classes were included in the sample

• Standardised **questionnaires**
  • Self-administrated by the students in the classroom
  • Treated as confidential
Sample characteristics

**Total sample**
14,046 adolescents
Mean age: 14.5 y (10-22 y)

- **5th-6th grade**
  - n=3,071
  - Mean age: 11.1 y (10-13 y)

- **1st-2nd grade**
  - n=4,064
  - Mean age: 13.3 y (12-18 y)

- **3rd-7th grade**
  - n=6,911
  - Mean age: 16.7 y (14-22 y)

Primary school  Secondary school
Analyses

**Multivariable logistic regressions** were used to identify indicators with significant changes between 5\(^{th}\)-6\(^{th}\) primary and 1\(^{st}\)-2\(^{nd}\) secondary

- Dependent variable: health indicators
- Independent variable: school level (5\(^{th}\)-6\(^{th}\) vs 1\(^{st}\)-2\(^{nd}\))
- Adjustment variables:
  - Gender
  - Family structure: two parents, blended, lone-parent, other
  - Family Affluence Scale (FAS): high, medium, low

**Interactions** *Gender* *School level* were also tested
Expliquer à l'oral que c'est un indicateur du niveau socioéconomique qui se base sur les possessions matérielles de la famille (ordinateur, voiture, salle de bain, vacances à l'étranger, chambre pour soi, lave-vaisselle). Construit à partir d'une échelle et division en trois catégories : low, medium, high.

Thomas; 8/06/2017
Three types of indicators were studied

- **Health behaviours**: Food habits, physical activity, screen time, alcohol consumption, violence
- **Health outcomes**: Self-rated health, mental health, obesity
- **Social context**: Relationships with family, peers, school

HBSC Survey in French-speaking Belgium
Health behaviours deteriorated between end-primary and secondary school...

Compared with end-primary school, adolescents of 1\textsuperscript{st} and 2\textsuperscript{nd} secondary school were:

<table>
<thead>
<tr>
<th>Less likely</th>
<th>More likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>To eat \textit{fruits} daily</td>
<td>To consume \textit{soft drinks} daily</td>
</tr>
<tr>
<td>To take a \textit{breakfast} daily (weekdays)</td>
<td>To consume \textit{alcohol} weekly</td>
</tr>
<tr>
<td>To practice (\geq 1\text{h/day} ) of \textit{physical activity}</td>
<td>To watch \textit{TV} (\geq 2\text{h/day} )</td>
</tr>
</tbody>
</table>

*Adjusted OR*

\(\sigma\) OR: 0.77 [0.67-0.88]  
\(\varphi\) OR: 0.62 [0.53-0.71]

\(\sigma\) OR: 0.70 [0.60-0.82]  
\(\varphi\) OR: 0.50 [0.44-0.58]

OR: 0.65 [0.58-0.74]

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\(\sigma\) OR: 0.70 [0.60-0.82]  
\(\varphi\) OR: 0.50 [0.44-0.58]

OR: 0.65 [0.58-0.74]

\(\sigma\) OR: 2.20 [1.34-3.62]  
\(\varphi\) OR: 8.48 [2.59-27.78]

OR: 1.53 [1.32-1.76]  
\(\varphi\) OR: 1.98 [1.72-2.29]
Pour les filles, large IC car très peu de cas (4 en 5-6 prim et 35 en 1-2 sec)

Thomas; 8/06/2017
...excepted the indicators related to violence

E.g. the likelihood of being victim of bullying:

- Remains stable between the end of primary and the beginning of secondary school
Three types of indicators were studied

- **Health behaviours**: Food habits, physical activity, screen time, alcohol consumption, violence
- **Health outcomes**: Self-rated health, mental health, obesity
- **Social context**: Relationships with family, peers, school
## Well-being indicators

<table>
<thead>
<tr>
<th></th>
<th><strong>Boys</strong></th>
<th></th>
<th><strong>Girls</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prevalence</td>
<td>OR* [CI 95%]</td>
<td>Prevalence</td>
<td>OR* [CI 95%]</td>
</tr>
<tr>
<td><strong>Low health-related quality of life</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5th-6th primary (n=2,977)</td>
<td>7.5%</td>
<td>Ref.</td>
<td>10.5%</td>
<td>Ref.</td>
</tr>
<tr>
<td>1st-2nd secondary (n=3,937)</td>
<td>12.0%</td>
<td><strong>1.58</strong>* [1.23-2.02]</td>
<td>22.4%</td>
<td><strong>2.31</strong>* [1.87-2.84]</td>
</tr>
<tr>
<td><strong>High self-confidence (often/always)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5th-6th primary (n=3,042)</td>
<td>73.2%</td>
<td>Ref.</td>
<td>54.3%</td>
<td>Ref.</td>
</tr>
<tr>
<td>1st-2nd secondary (n=4,027)</td>
<td>70.7%</td>
<td>0.91 [0.78-1.06]</td>
<td>45.2%</td>
<td><strong>0.70</strong>* [0.60-0.80]</td>
</tr>
<tr>
<td><strong>Negative body image (a bit/much too fat)</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>5th-6th primary (n=3,029)</td>
<td>25.5%</td>
<td>Ref.</td>
<td>35.2%</td>
<td>Ref.</td>
</tr>
<tr>
<td>1st-2nd secondary (n=4,031)</td>
<td>30.8%</td>
<td><strong>1.30</strong> [1.11-1.52]</td>
<td>47.1%</td>
<td><strong>1.61</strong>* [1.39-1.86]</td>
</tr>
</tbody>
</table>

*Adjusted OR*
Overweight and obesity

Logistic regressions confirmed that:

- In **boys**, adolescents of 1st-2nd secondary school are more likely than end-primary students to be overweight or obese (AOR: 1.83*** [1.41-2.39])
- This difference is not observed in **girls** (AOR: 0.97 [0.74-1.27])

Methodology

- Self-reported height/weight
- IOTF age- and sex-specific cut-offs
Three types of indicators were studied

**Health behaviours**
- Food habits, physical activity, screen time, alcohol consumption, violence

**Health outcomes**
- Self-rated health, mental health, obesity

**Social context**
- Relationships with family, peers, school
The perception of the **school context** deteriorates during this transition

These trends were confirmed after adjustment, using logistic regressions.
Les interactions sex*school level ne sont pas significatives pour ces indicateurs --> j’ai simplifié le graphique en mettant les prévalences pour les deux sexes ensemble.

Thomas; 8/06/2017
In conclusion

These analyses showed that:

• A lot of health indicators (behaviours, outcomes and social context) deteriorates between end-primary and secondary school

• A few indicators remain stable (e.g. victim of bullying, perceived family support) or improve (e.g. physical fighting)

• Evolution patterns may differ between boys and girls

→ Sensitive period during which multi-dimensional (behaviours, mental health, ...) and interdisciplinary (school, family, health actors) approaches are needed