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

What is changing between primary and secondary school?

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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 5\textsuperscript{th} of primary to the last year of secondary school

- **Two-stage cluster sampling method**
  - Schools as primary sample units $\rightarrow$ stratification per province and educational network
  - Classes as secondary sample units $\rightarrow$ 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 5th-6th primary and 1st-2nd secondary

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

Interactions Gender * School level were also tested
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
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:

**Less likely**
- To eat **fruits** daily
- To take a **breakfast** daily (weekdays)
- To practice ≥1h/day of **physical activity**

**More likely**
- To consume **soft drinks** daily
- To consume **alcohol** weekly
- To watch TV ≥ 2h/day

**Adjusted OR**

- **♂**: OR: 0.77 [0.67-0.88]
- **♀**: OR: 0.62 [0.53-0.71]

- **♂**: OR: 0.70 [0.60-0.82]
- **♀**: OR: 0.50 [0.44-0.58]

- OR: 0.65 [0.58-0.74]

**Adjusted OR**

- **♂**: OR: 2.20 [1.34-3.62]
- **♀**: OR: 8.48 [2.59-27.78]

- **♂**: OR: 1.53 [1.32-1.76]
- **♀**: OR: 1.98 [1.72-2.29]

- OR: 1.40 [1.26-1.55]
...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>
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<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>
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<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>
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<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>
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<tr>
<td><strong>Negative body image (a bit/much too fat)</strong></td>
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<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

• Use of self-reported height/weight
• Use of IOTF age- and sex-specific cut-offs
• High amount of missing data (39.6%)
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
In conclusion

These analyses showed that:

• A lot of health indicators (behaviours, outcomes and social context) **deteriorate** 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