Overweight and lifestyle among 13-15 year olds: A cross-sectional study in northern Sweden

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Obesity is a serious public health problem of today which is increasing in prevalence worldwide.

Lifestyle characteristics such as eating habits and physical activity play an important role in the development of overweight and obesity.

There are regional differences in the prevalence of overweight and obesity in different ages with varying lifestyle indicators.
The purpose of the study

To increase knowledge about self-rated health and lifestyle in relation to overweight and obesity among 13-15 year olds in northern Sweden.
Study area

number of children aged 13-15 in Västerbotten = 10432
number of children aged 13-15 in the study area = 6768
Methods


✓ Participation rate: 82%.

✓ Reliable responses: 74%.

✓ 2517 boys and 2470 girls aged 13-15 years.

✓ Questions included: self-rated health, BMI, and lifestyle; dietary habits, tooth brushing, sleeping pattern, TV watching, physical activity, tobacco, alcohol, and drug use.
Results

Overweight/obesity (ISOBMI ≥25)

p-value <0.001

%
Results

Self-rated health
p-value <0.001

- Participation rate was 82% out of 6768 adolescents
- Reliable responses 74% (2517 boys and 2470 girls)
- The questionnaire addressed demography, self-rated health, BMI, and lifestyle
Results

Breakfast during schooldays

p-value <0.001

% 100 90 80 70 60 50 40 30 20 10 0

≥4 times/week <4 times/week

Boys

Girls

≥4 times/week <4 times/week

Participation rate was 82% out of 6768 adolescents. Reliable responses were 74% (2517 boys and 2470 girls). The questionnaire addressed demography, self-rated health, BMI, and lifestyle.
Results

**Fruits**

- p-value <0.001

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥1 time/day</td>
<td>40%</td>
<td>50%</td>
</tr>
<tr>
<td>3-6 times/week</td>
<td>30%</td>
<td>40%</td>
</tr>
<tr>
<td>≤2 times/week</td>
<td>20%</td>
<td>30%</td>
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</table>

**Vegetables**

- p-value <0.001

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<tr>
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<td>30%</td>
<td>40%</td>
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</table>
Results

**Sweets**

- Boys: [Bar Graph]
- Girls: [Bar Graph]

*P-value* <0.001

**Snacks**

- Boys: [Bar Graph]
- Girls: [Bar Graph]

*P-value* <0.001
Results

Tooth brushing

- **p-value < 0.001**

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
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<tbody>
<tr>
<td>≥2 times/day</td>
<td>80</td>
<td>30</td>
</tr>
<tr>
<td>&lt;2 times/day</td>
<td>20</td>
<td>70</td>
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Sleep duration

- **p-value < 0.001**

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<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>≥9 h/night</td>
<td>80</td>
<td>30</td>
</tr>
<tr>
<td>&lt;9 h/night</td>
<td>20</td>
<td>70</td>
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</table>
Results

**TV watching**
- Boys and Girls do not show a significant difference in the amount of time spent watching TV (p-value >0.05).

**Physical activity**
- Boys and Girls show a significant difference in the amount of physical activity they engage in (p-value <0.001).

- Boys are more active than Girls, with a higher percentage of Boys participating in physical activity more than once a week.
Results

**Smoking**
- p-value = 0.011

**Snuffing**
- p-value > 0.05
Results

Alcohol use

- **p-value >0.05**

<table>
<thead>
<tr>
<th>No</th>
<th>Yes</th>
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<tbody>
<tr>
<td>50</td>
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<table>
<thead>
<tr>
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Drug use

- **p-value >0.05**

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<th>No</th>
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<tr>
<td>90</td>
<td>10</td>
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<table>
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Factors associated with overweight/obesity

Boys
✓ skipping breakfast
✓ insufficient tooth brushing
✓ using snuff

Girls
✓ living with one parent
✓ long hours of TV watching

Both sexes
✓ physical inactivity
**Strengths and limitations of the study**

**Strengths**

- A majority of children 13-15 years in Västerbotten was involved (65 %).
- A satisfied response rate (82 %).
- Sex stratification and adjusting for other variables by using multiple logistic regression models was used.

**Limitations**

- Bias in self-reported data, especially for calculation of BMI.
- Few of the adolescents were born outside Sweden (less than 5%).
Summary and conclusion

✓ A fifth of the boys were overweight or obese.
✓ A fifth of the girls reported fair or bad health.
✓ Girls living with a single parent and boys and girls with unhealthy lifestyle were more likely to be overweight.

Our findings emphasise the need for developing and implementing effective health promotion strategies for school-aged children.
“Children are one-third of our population and all of our future”

Selected panel of the promotion of childhood health, 1981.

Thanks!