COSI- WHO European Childhood Obesity Surveillance Initiative

2008-2016

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Establishing the Childhood Obesity Surveillance initiative – COSI/WHO Europe

- Only 13 (25%) of 53 WHO member states had nationally representative and validated data on obesity in children aged 6-10 years.
- Several limitations in comparing data between countries:
  - different sample sizes,
  - different methodological approaches;
  - different response rates across age groups,
  - different definitions of overweight and obesity
- Lack of trend data
- Huge variation within and between member states in data collection and analysis

2005
COSI- Childhood Obesity Surveillance Initiative- was set up as a response to the WHO European Ministerial Conference on Counteracting Obesity. (Istanbul, Turkey, 15-17 November 2006).
2.1. The obesity epidemic is reversible

2.2 - Curbing the epidemic and reversing the trend is the ultimate goal of action in the Region

- Visible progress in children in the next 4-5 years;
- Contribute to the reversion of the epidemic growth until 2015
WHO Europe COSI - Aims and objectives

- To implement a harmonized nutritional surveillance system across the WHO European Region - collection, analysis, interpretation and dissemination of descriptive information for monitoring excess body weight

- To measure trends in overweight and obesity in primary school children - to fill the current gap in available cross national comparable data on primary-school children aged 6-9 year-olds & to have a correct understanding of the progress of the epidemic

- To stimulate and monitor the policy response to the emerging obesity epidemic
9th Meeting 2016
St Petersburg
WHO Europe COSI – 2008/2016

**2007/2008**
Belgium (Flemish Region)
Bulgaria
Cyprus
Czech Republic
Ireland
Italy
Latvia
Lithuania
Malta
Norway
Portugal
Slovenia
Sweden.

**2009/2010**
**Greece**
**Hungary**
Spain
FYR Macedonia

**2012/2013**
Albania
Republic of Moldova
Romania
Turkey
San Marino
-(Hungary/Sweden/Cyprus)

4th ROUND: Denmark, Austria, Estonia, Tajikistan, Montenegro, Poland, Croatia, Kazakhstan, San Marino, Russian Federation, Serbia, Hungary, Sweden, Cyprus, Slovakia, Turkmenistan, Ukraine

School year 2007/2008: 13
School year 2009/2010: 17
School year 2012/2013: 19
School year 2015/2016: 36
Process COSI Rounds

School year 2007/2008
National Meetings
Surveillance Initiatives
(planning procedures)
January - December
Trainning
Planning procedures with Schools
January - April
Data Collection
4-10 weeks
May - June - December
International Meetings
Surveillance Initiatives
(discussion of protocol)
1-2 semester
prior to scholar year

School year 2009/2010
Data processing
and analysis
January - December
follow year
(Jan-dec)

School year 2012/2013

School year 2015/2016
Data reporting
Prevalence - Trends

Year 1

Year 2

Year 3
Several Coordinating Meetings with RCC

COSI Protocol discussion

Regional Coordinators (RC) Manual

Chronogram with specific tasks

ETHICAL CONSIDERATIONS

MANUAL DATA COLLECTION PROCEDURES

WHO EUROPEAN CHILDHOOD OBESITY SURVEILLANCE INITIATIVE (COSI)

MANUAL OF DATA COLLECTION PROCEDURES

Version October 2015
1) Sampling procedures – number of schools

- 21 schools, 616 children
- 18 schools, 682 children
- 51 schools, 2255 children

**TOTAL**

7 regions

**234 schools**

**8544 children**
Collection Procedures - Standardized

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement</td>
<td>Same instruments across a country in accordance with the requirements</td>
</tr>
<tr>
<td>Calibration</td>
<td>Calibrated anthropometric instruments</td>
</tr>
<tr>
<td>Training-standardization</td>
<td>All examiners trained and standardized</td>
</tr>
</tbody>
</table>

WHO EUROPEAN CHILDHOOD OBESITY SURVEILLANCE INITIATIVE (COSI)

MANUAL OF DATA COLLECTION PROCEDURES
Version October 2012

Guia de Avaliação do Estado Nutricional Infantil e Juvenil
COSI Portugal 2016 – Questionnaires
(Paper Format)

FAMILY: Socio economic characteristics of the families inc child’s lifestyle characteristics (food consup;on and PA)

CHILD: Anthropometric measurements
The prevalence of overweight (including obesity) ranged from 19% to 49% among boys and 18% to 43% among girls.

The prevalence of obesity ranged from 6% to 27% among boys and from 5% to 17% among girls (based on the 2007 WHO growth reference).

Multi-country comparisons suggested the presence of a north-south gradient with the highest level of overweight found in southern European countries.
Prevalence of overweight - COSI
Round 2009/2010, based on WHO definitions
Countries grouped by geographical subregions of the WHO European Region

Wijnhoven et al., BMC Public Health, 14, 806, 2014
Prevalence of Overweight (including obesity) in Boys -7 year

COSI/WHO Europe 2010
Countries with higher prevalence of overweight in round 1 (e.g. Italy and Portugal) showed a decrease in prevalence from round 1 to round 2 (but still had among the highest estimates in round 2),

Countries with lower prevalence in round 1 (e.g. Latvia and Norway) showed an increase in prevalence (but still had a lower estimate than the countries that showed the highest decrease from round 1 to round 2).
Prevalence of overweight among boys in COSI round 1 and 2

% overweight

Italy  Portugal  Slovenia  Ireland  Belgium  Lithuania  Latvia  Norway  Czech Republic

2007/2008  2009/2010

0  10  20  30  40  50  60
### Absolute change in prevalence of overweight (including obesity) and obesity in boys and girls aged 6–9 years from COSI Round 1 (2007/2008) to COSI Round 2 (2009/2010), by age and country

<table>
<thead>
<tr>
<th>Age group and country</th>
<th>Overweight (including obesity) (%)</th>
<th>Obesity (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>6-year-olds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BEL</td>
<td>-1.3</td>
<td>-0.2</td>
</tr>
<tr>
<td>SVN</td>
<td>-4.6</td>
<td>-1.9</td>
</tr>
<tr>
<td>7-year-olds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BEL</td>
<td>-0.4</td>
<td>-0.1</td>
</tr>
<tr>
<td>CZE</td>
<td>+2.9</td>
<td>+3.5</td>
</tr>
<tr>
<td>IRL</td>
<td>-1.9</td>
<td>-1.0</td>
</tr>
<tr>
<td>LVA</td>
<td>+0.4</td>
<td>+3.2</td>
</tr>
<tr>
<td>LTU</td>
<td>-0.4</td>
<td>0</td>
</tr>
<tr>
<td>PRT</td>
<td>-9.0</td>
<td>+0.7</td>
</tr>
<tr>
<td>SVN</td>
<td>-3.0</td>
<td>-3.2</td>
</tr>
<tr>
<td>8-year-olds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BEL</td>
<td>-0.2</td>
<td>-0.3</td>
</tr>
<tr>
<td>ITA</td>
<td>-4.2</td>
<td>-2.2</td>
</tr>
<tr>
<td>NOR</td>
<td>+6.2</td>
<td>+3.1</td>
</tr>
<tr>
<td>SVN</td>
<td>+0.2</td>
<td>+0.3</td>
</tr>
<tr>
<td>9-year-olds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BEL</td>
<td>-0.1</td>
<td>-0.6</td>
</tr>
</tbody>
</table>

*Wijnhoven et al., BMC Public Health, 14, 806, 2014*
COSI/WHO Europe 2013
Prevalence of overweight (including obesity) in BOYS - 7 YEARS

Prevalence of overweight (including obesity) in BOYS - 7 YEARS

Unpublished data. WHO/COSI Europe
PORTUGAL 1st, 2nd and 3rd ROUND

NUTRITIONAL STATUS DEFINED BY DIFFERENT CRITERIA

PORTUGUESE CHILDREN’S NUTRITIONAL STATUS
Is maternal education associated with childhood overweight risk? 
*Trends between 2010 and 2013*

**Main results**

<table>
<thead>
<tr>
<th>Mother’s education level</th>
<th>2010</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low education</td>
<td>79,1</td>
<td>74,6</td>
</tr>
<tr>
<td>Primary or below</td>
<td>10,8</td>
<td>5,5</td>
</tr>
<tr>
<td>Middle school</td>
<td>28,1</td>
<td>22,1</td>
</tr>
<tr>
<td>High school</td>
<td>40,2</td>
<td>47,1</td>
</tr>
<tr>
<td>High education</td>
<td>20,9</td>
<td>24,4</td>
</tr>
<tr>
<td>University</td>
<td>19,1</td>
<td>22,4</td>
</tr>
<tr>
<td>Post-graduate</td>
<td>1,8</td>
<td>3,0</td>
</tr>
</tbody>
</table>

More than 70% of the mothers in the two COSI– Portugal rounds had low education.

Maternal’s low education showed a positive association with childhood overweight (including obesity) (OR=1,32; IC: 1,14-1,153)
Trends in breakfast patterns in Portuguese children.
2010-2013

Main results

- **Qualitative and complete** (bread/cereal + dairy product + fruit)
  - 2010: 1.3%
  - 2013: 1.6%

- **Presence of fruit**
  - 2010: 6.0%
  - 2013: 8.0%

- **Presence of ready to eat cereals**
  - 2010: 75.4%
  - 2013: 80.8%

![Image of breakfast items]
COSI Portugal 2016 – Supporting material for entering data

GUIDE

OpenClinica
Community Edition

Guia Prático Open Clinica
(Exemplo para a introdução do do Formulário Escola)

1. Abrir um navegador de internet (Google Chrome, Firefox, Internet Explorer, etc).
2. Digitar link: http://videos.com
3. Inserir o username e a password e clicar em Login

YouTube VIDEO

Demonstração para utilização da Plataforma Open Clinica

Questionário Escola

https://www.youtube.com/watch?v=0sizr65rt2M
WHO European Childhood Obesity Surveillance Initiative 2008: weight, height and body mass index in 6–9-year-old children

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https://www.researchgate.net/profile/Ana_Rito
International Conference on Childhood Obesity
5th to 8th July 2017
Website will be available soon