Sleeping patterns and association with health and school-related outcomes and behaviours among adolescents

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Context

- Sleep is essential to physical and mental health
- Biological and social factors → changes in adolescent sleep patterns

- Objectives:

→ To describe sleeping patterns

→ To address relationships of morning tiredness with adolescents' characteristics and health and school behaviours

Materials & Methods

→ Health Behaviour in School-aged Children survey (HBSC)

- To describe **well-being, health behaviours and outcomes** of adolescents & sociodemographic determinants

- >40 countries in Europe and North-America, every 4 years

- HBSC 2014 in **French-speaking Belgium**: 14,000 students
  - From 5th of primary to last year of secondary school

    - Sampling: Schools >Classes >Students

    - Standardised questionnaires**:** self-administrated in class

→ Modeling sleep indicator 'Morning tiredness' (≥once/week)

- Univariable logistic regression: associations with **sociodemographic characteristics, health and school-related outcomes and health behaviours**

- Multivariable logistic regression: associations with **health behaviours adjusting for sociodemographic** variables

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- Multivariable logistic regression: associations with **health behaviours adjusting for sociodemographic** variables
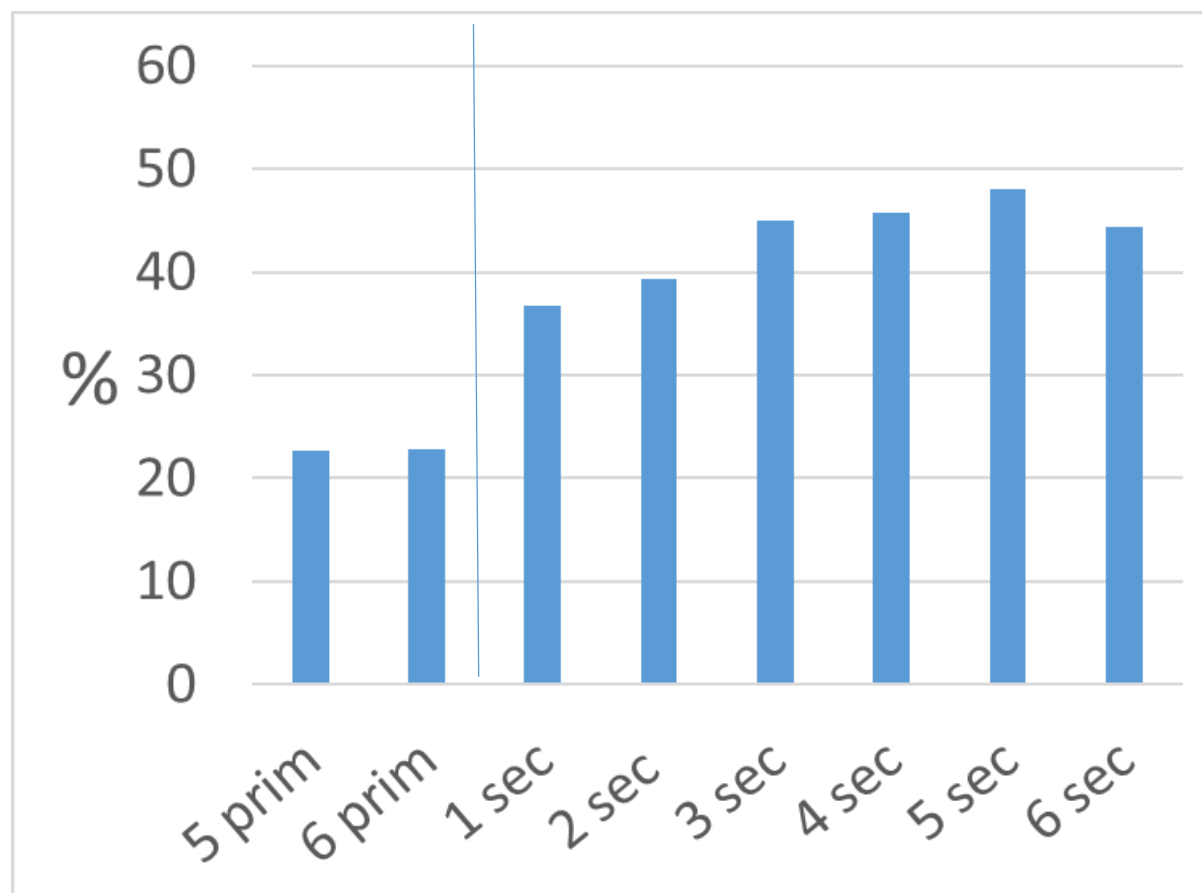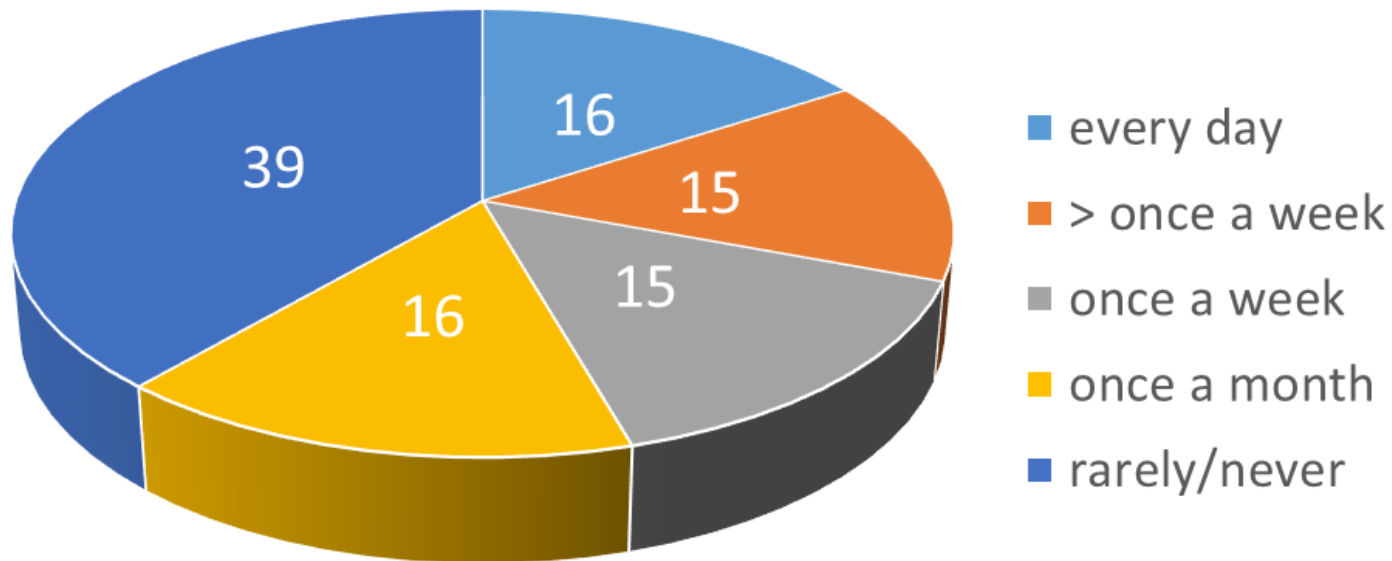
School day sleep duration* (%)
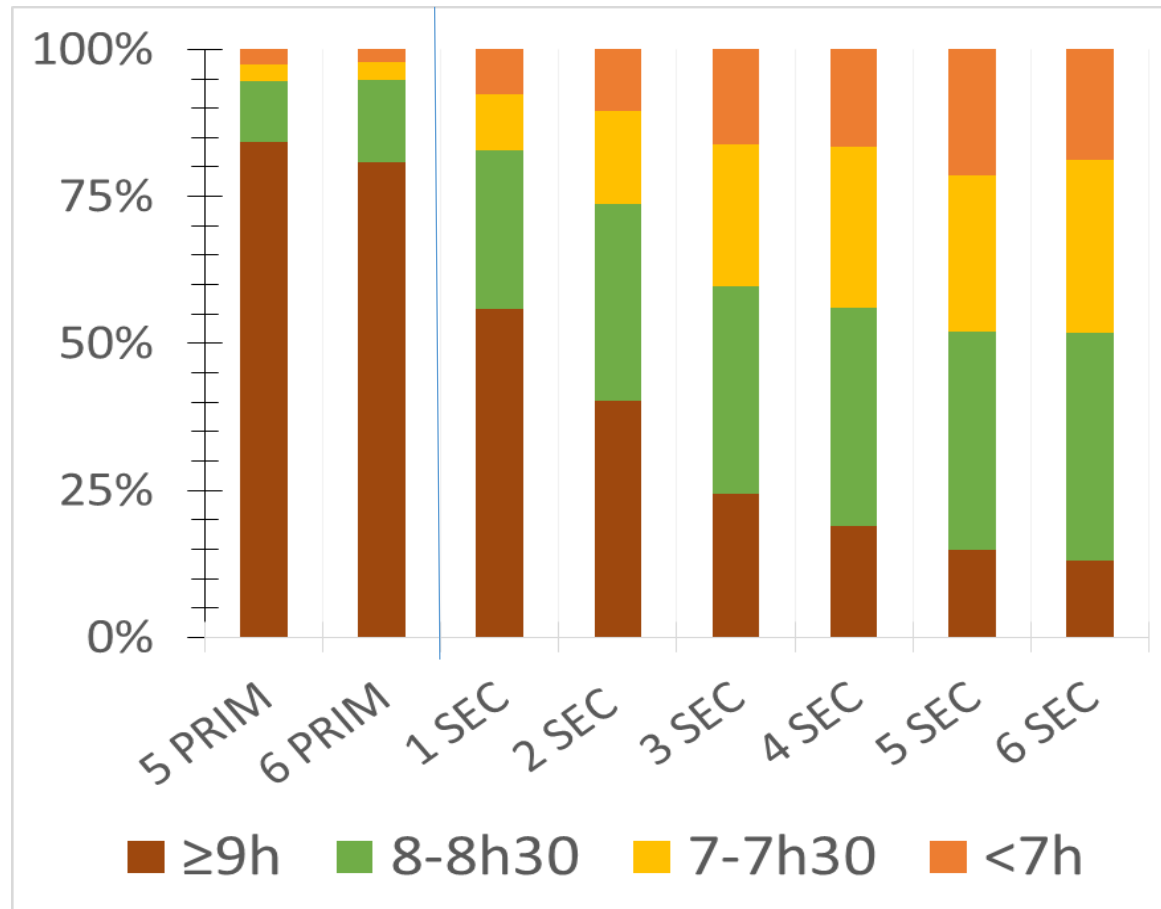
* On shool days, at what time do you usually go to bed?..wake-up in the morning?

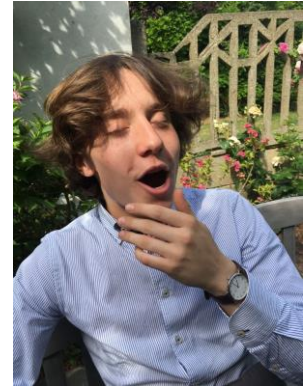# Sleeping in for an extra 2h or more on the weekends* (%)... **39%**

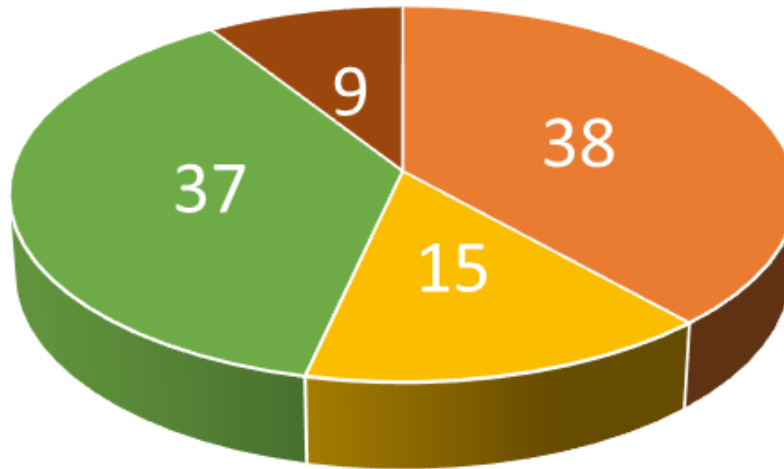* Weekend sleep duration – School day sleep duration

Sleep difficulties* (%)

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- every day (16)
- > once a week (15)
- once a week (15)
- once a month (16)
- rarely/never (39)

* During the last 6 months, how of often did you have trouble sleeping at night?
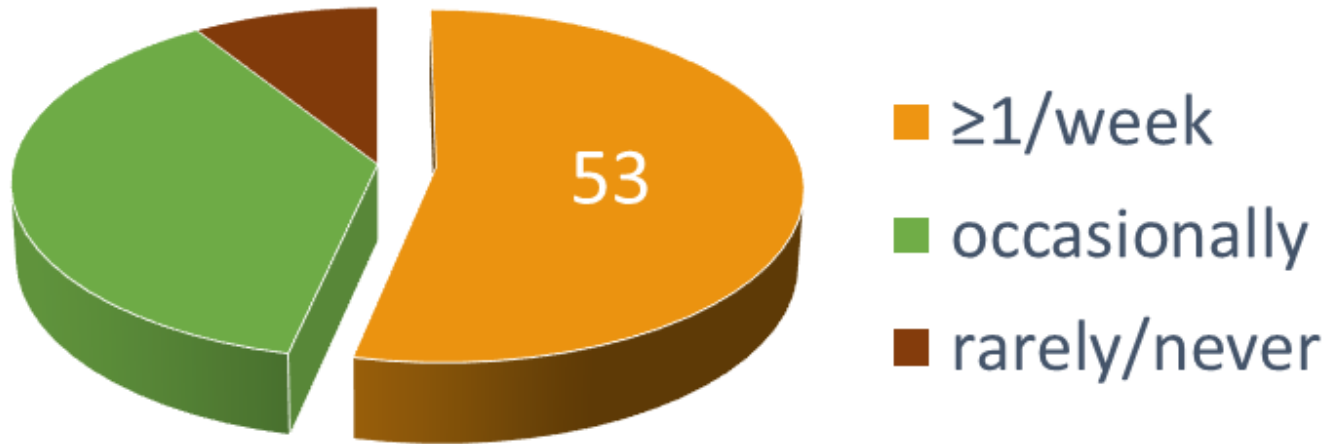
Morning tiredness* (%)

Pie chart:
- 38 — ≥ 4/week
- 15 — 1-3/week
- 37 — occasionally
- 9 — rarely/never

* How often do you feel tired as you wake up on school days?

Morning tiredness* (%)

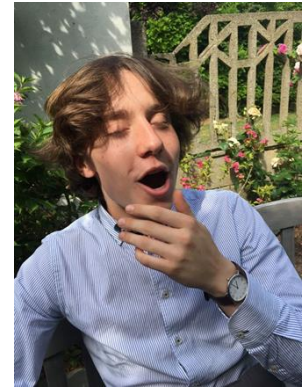53 ≥1/week

occasionally

rarely/never

* How often do you feel tired as you wake up on school days?

Morning tiredness associated (univariable) with….

R
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T
S

- ### Health outcomes
Self-rated health and Multiple recurrent symptoms
…but not with overweight status

- ### School-related outcomes
School appreciation and Self-perceived performance at school
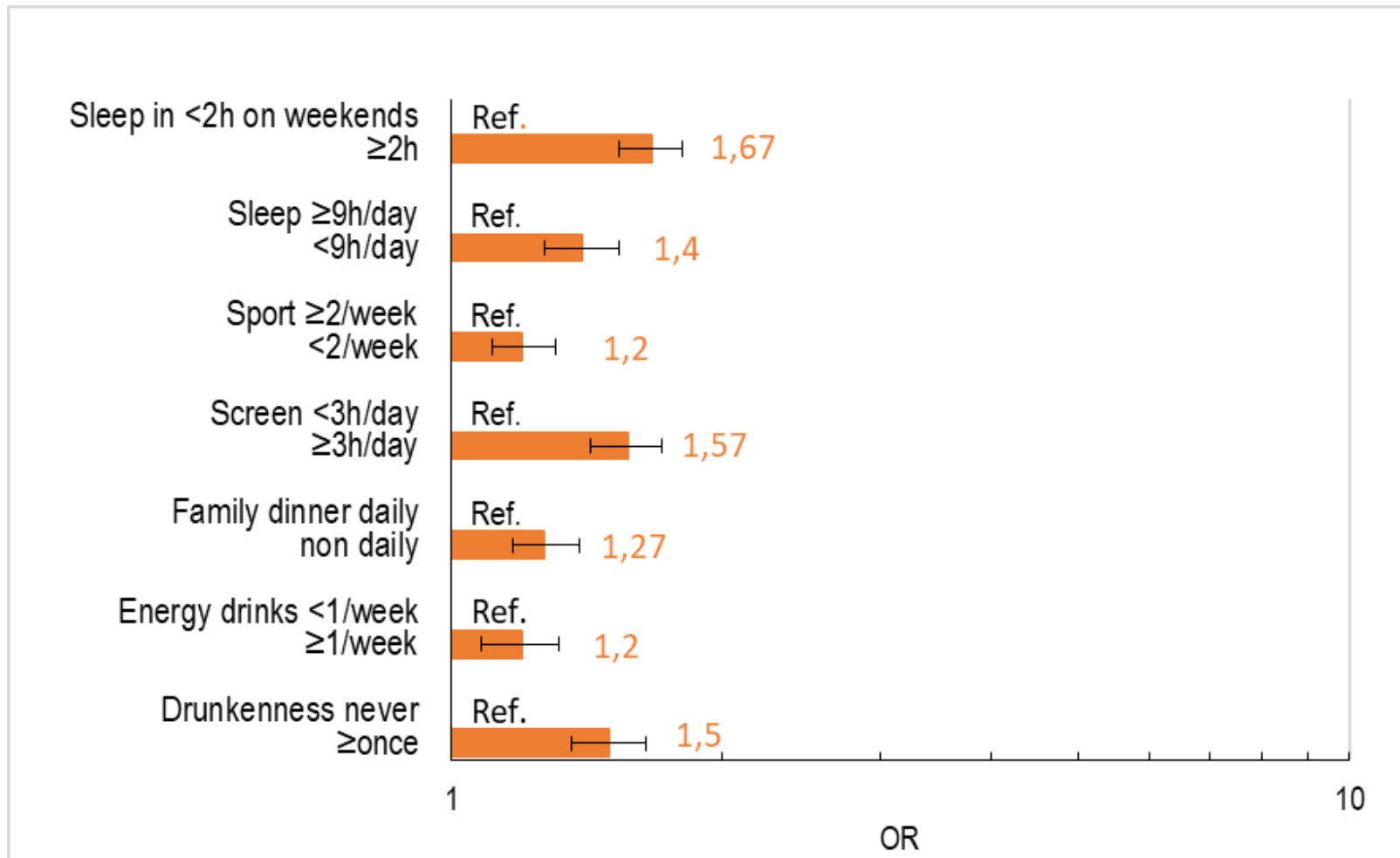
- ### Sociodemographic characteristics
School grade, family structure, immigrant status
…but not with family affluence nor with gender

- ### Health behaviours
Sleep duration, sleeping in on weekends, Sport, Family dinner, Screen time, Energy drink and Drunkenness experience

Morning tiredness and Health behaviours (multivariable)

To conclude…

- Inadequate sleeping patterns (insufficient, irregular, bad quality) frequent among teenagers
- Health and school-related repercussions
- Role of sociodemographic factors and health behaviours
- Direction of associations between morning tiredness and right-hand variables?
- Contributing factors are numerous (individual variations, cultural context, parenting style…)

> ➢ Possible measures: inform students and families on possible health repercussions, educate on modifiable risk factors, adapt school schedules, promote physical activity at school…

Thank you!