

Individual, contextual, and internet use factors as determinants of Flemish teens' digital skill levels and their well-being

Makara Human Behaviour Studies in Asia
“Young People and Media Conference”

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Research context

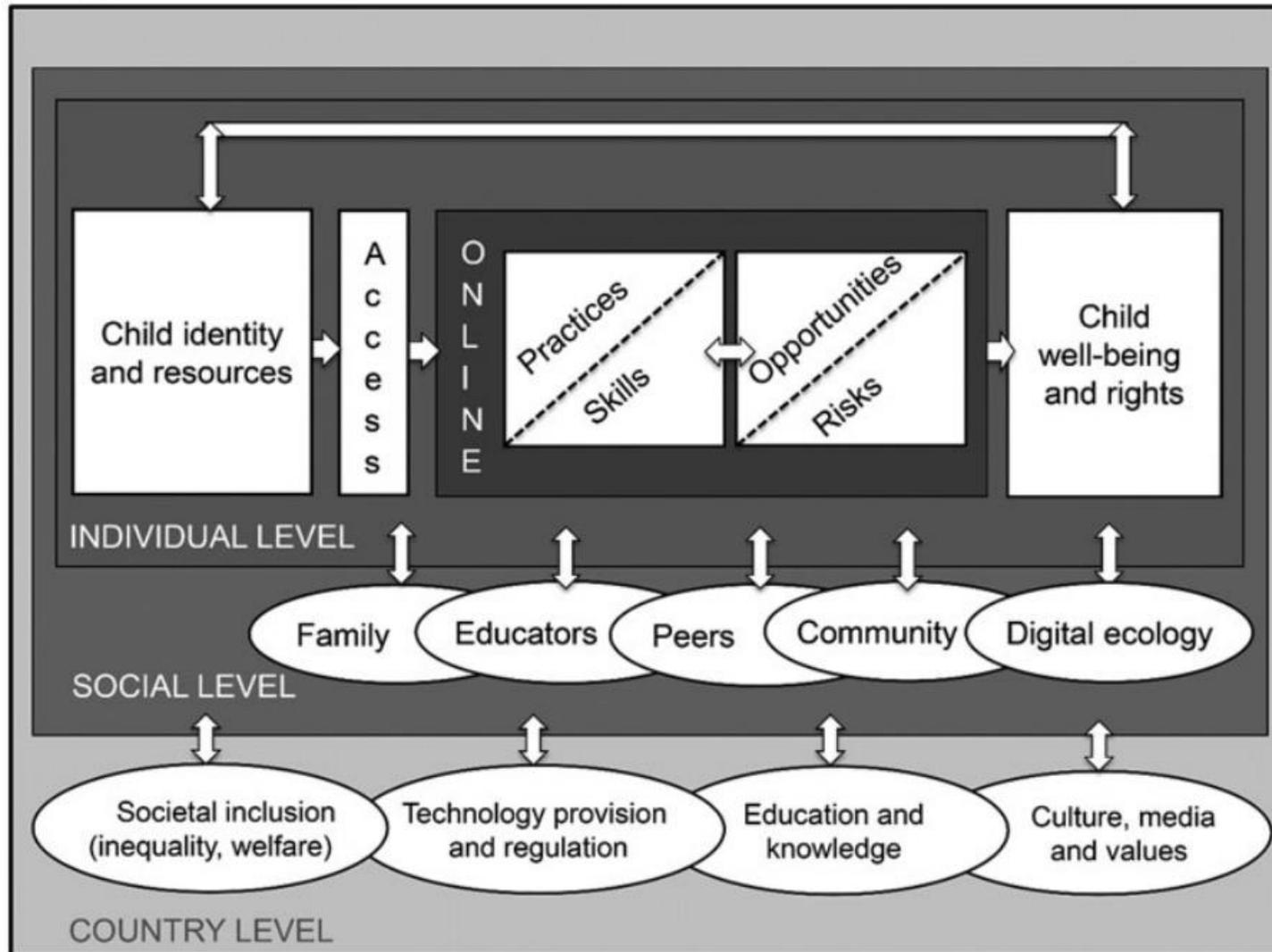


About EU Kids Online

- Multinational research network (25 European countries)
- Wants to increase the knowledge about the online opportunities, risks and safety of European children



The EU Kids conceptual model



Livingstone, Mascheroni,
& Staksrud, 2018

Why it is important to study children's and teens' digital skills

- Digital literacy skills are needed to be able to cope with risk and harm experienced online (Vandoninck, d'Haenens & Roe, 2013).
 - Digital skills have a positive influence on the online opportunities that are taken up (Livingstone & Helsper, 2010; Rodriguez-de-Dios, van Oosten, & Iguarta, 2018).
- Insight into individual and contextual determinants of digital skills is essential to identify children's and teens' needs concerning these skills.

Socio-demographic factors and digital skills: mixed findings

- Age
 - Age positively predicts the level of internet use skills (Livingstone & Helsper, 2010).
 - ↔ Young people have better ICT skills than older users (Dodel & Mesch, 2018).
- Gender
 - Boys have better ICT skills than girls (Dodel & Mesch, 2018; Hargittai, 2010).
 - ↔ Boys have lower levels of ICT competencies than girls (Tondeur et al., 2011).
- Residential area
 - Internet access and use: urban-rural digital divide (Hale et al., 2010, Philip et al, 2017).

Internet access, use, and digital skills

- Internet access
 - Having a good quality of internet access positively predicts internet use skills (Livingstone & Helsper, 2010).
 - Devices:
 - Owning a computer is positively related to ICT competences (Tondeur et al., 2011).
 - The number of different devices that are used positively predict the level of ICT skills (Dodel & Mesch, 2018).
- Internet use
 - Having experience with the internet positively predicts the level of ICT skills (Dodel & Mesch, 2018).
 - ICT use positively predicts the level of ICT competencies (Tondeur et al., 2011).

4 strategies of parental mediation (Livingstone & Helsper, 2008)

1. Active mediation

- Associated with higher levels of digital skills (Livingstone et al., 2017).

Restrictive mediation

2. Content restrictions & 3. technical restrictions

- Belgian parents prefer restrictive mediation (Helsper et al., 2013).
- Associated with decreases in internet use (Lee, 2012) and lower levels of digital literacy (Rodriguez-de-Dios, van Oosten, & Iguarta, 2018), and digital skills (Livingstone et al., 2017).



4 strategies of parental mediation (Livingstone & Helsper, 2008)

4. Monitoring

- Associated with exposure to more online risks (Duerager & Livingstone, 2012).
 - ↔ No association with exposure to online risks (Livingstone & Helsper, 2008).
- Provides guidance about internet use (Mesch, 2009).



Teens' digital skills and their well-being

- Physical well-being
 - Physical impairments positively predict exposure to high risk online experiences (El Asam & Katz, 2018).
- Mental well-being
 - Mental health difficulties and special educational needs are positively associated with exposure to high risk online experiences (El Asam & Katz, 2018).
 - Lower internet literacy is associated with internet addiction, and a higher level of internet addiction is associated with depression (Chang et al., 2015).



Research questions

- RQ1: How do age, gender, and area predict Flemish teens' digital skill levels?
- RQ2: To which extent do internet access and use play a role in Flemish teens' digital skill levels?
 - *H1: Internet access is positively associated with Flemish teens' digital skill levels.*
 - *H2: Internet use is positively associated with Flemish teens' digital skill level*
- RQ3: Are different types of parental mediation associated with differences in Flemish teens' digital skill levels?

Research questions

- RQ4: What are the risk actors and factors, resilience factors, and enhancing factors influencing Flemish teens' physical and mental wellbeing?
- RQ4.1: How are Flemish teens' digital skill levels associated with their physical and mental well-being?
- RQ4.2: Does exposure to online risks mediate or moderate the association between digital skill level and well-being?

Methodology



Belgian survey

- School survey
 - ± 45 minutes
- 14 schools
- 1,436 participants
- March – November 2018

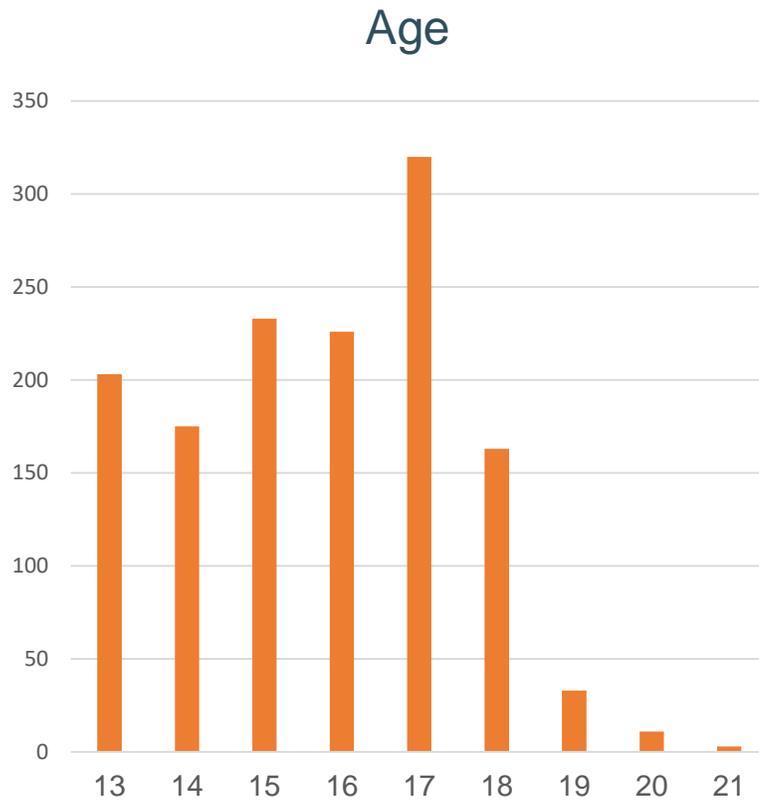


Results

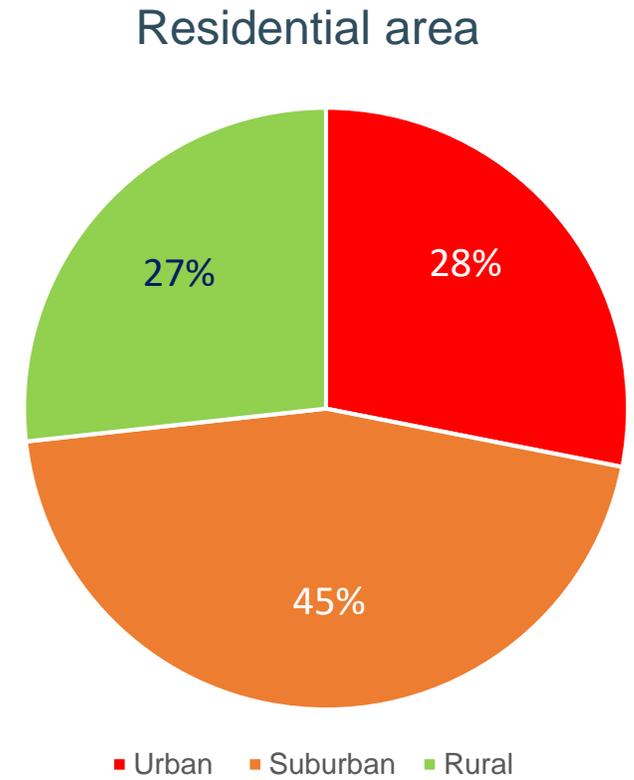
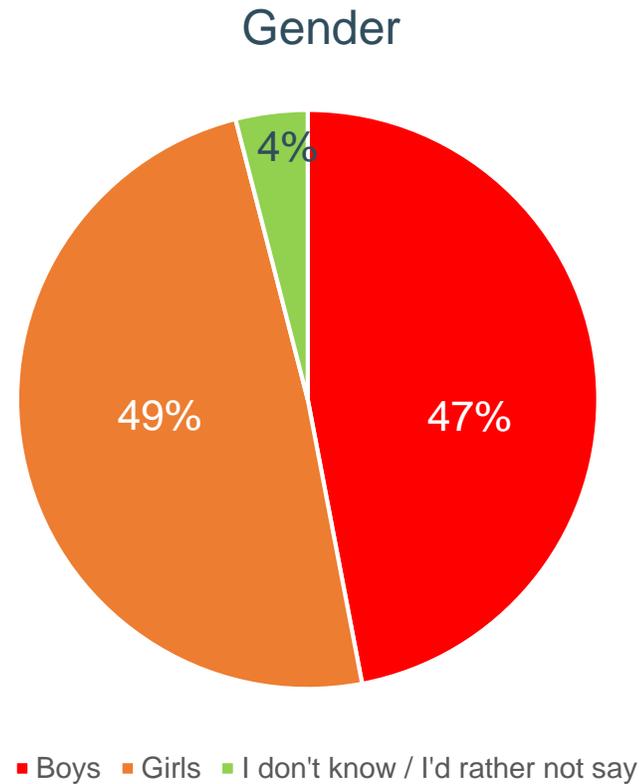
Descriptive statistics



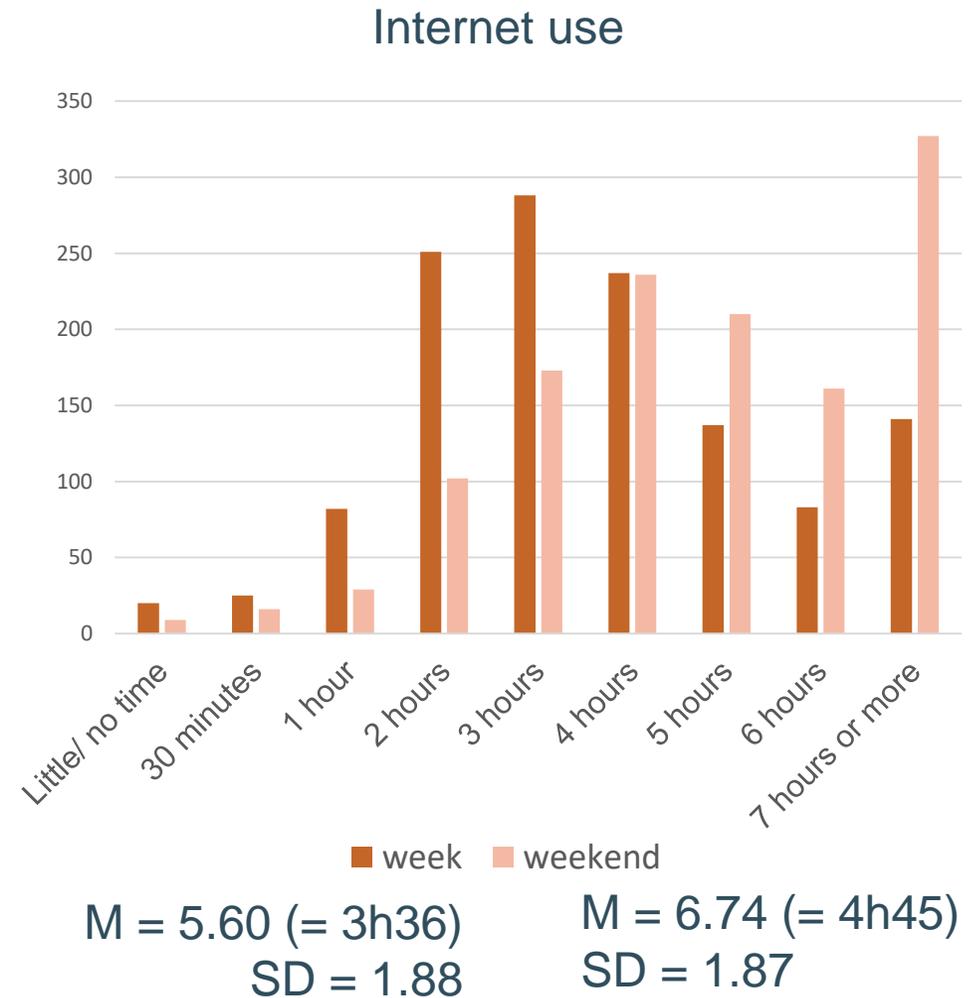
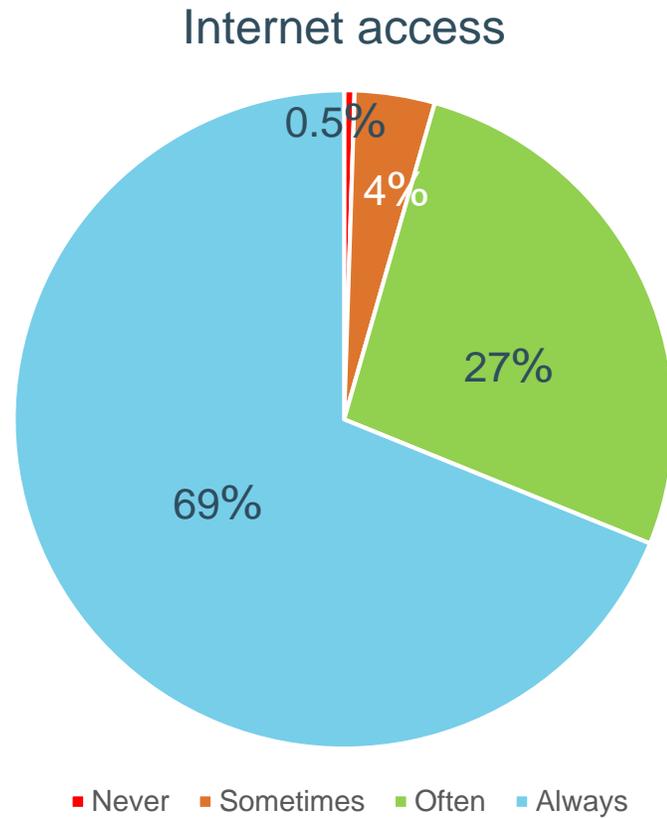
Demographics



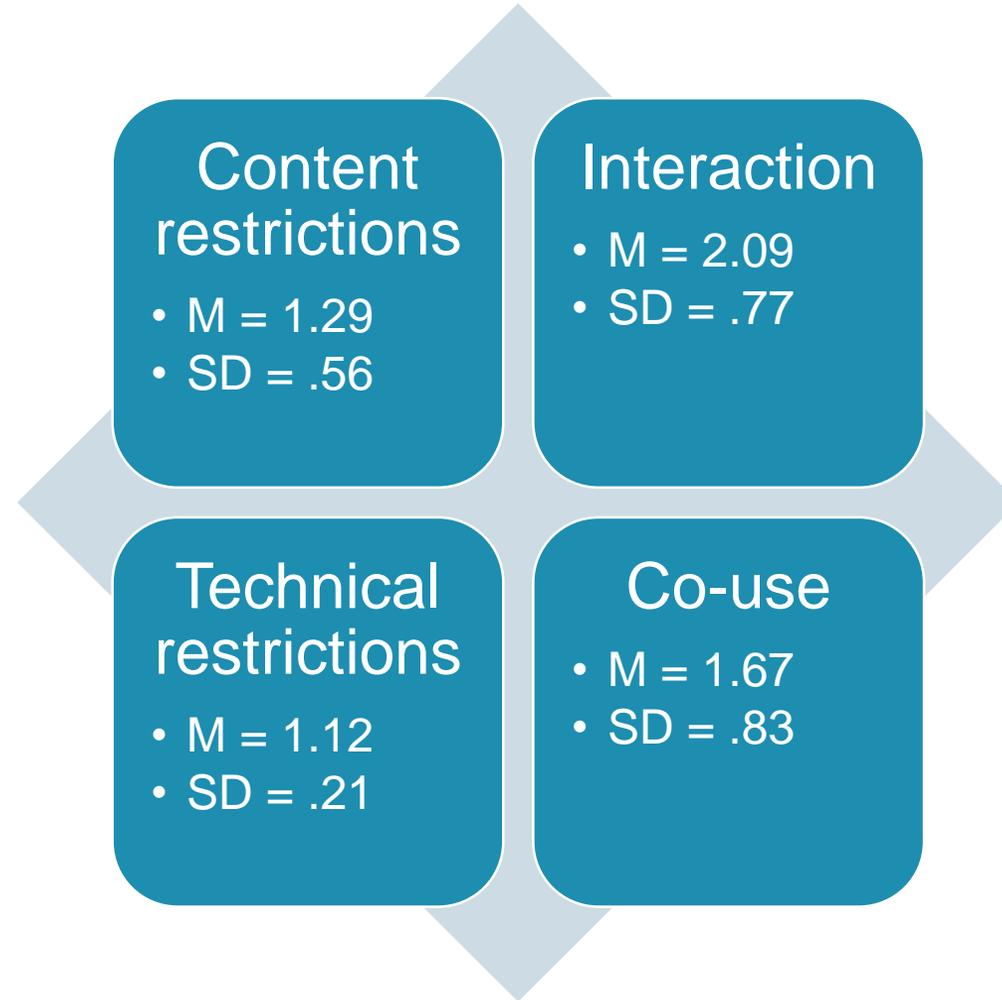
M = 16.11
SD = 1.79



Internet use



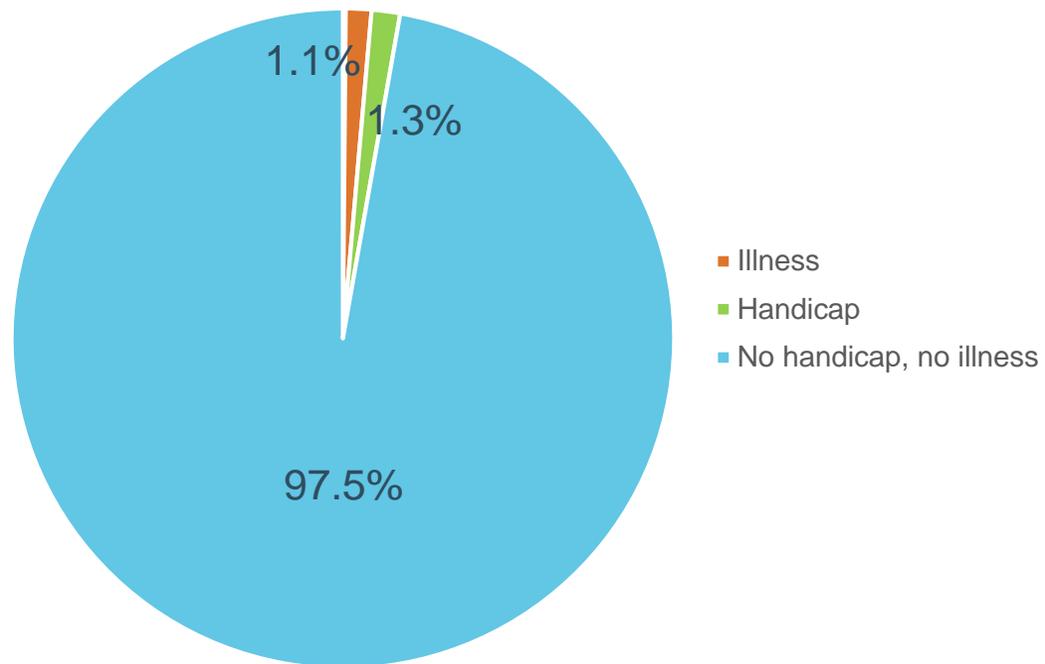
Parental mediation strategies



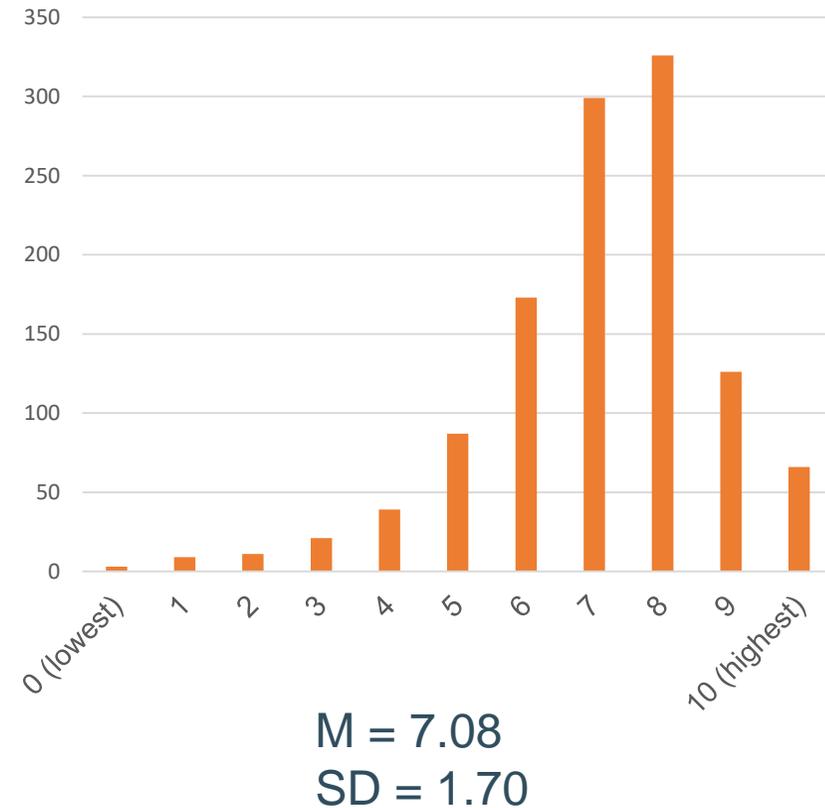
1= Never, 5= Always

Well-being

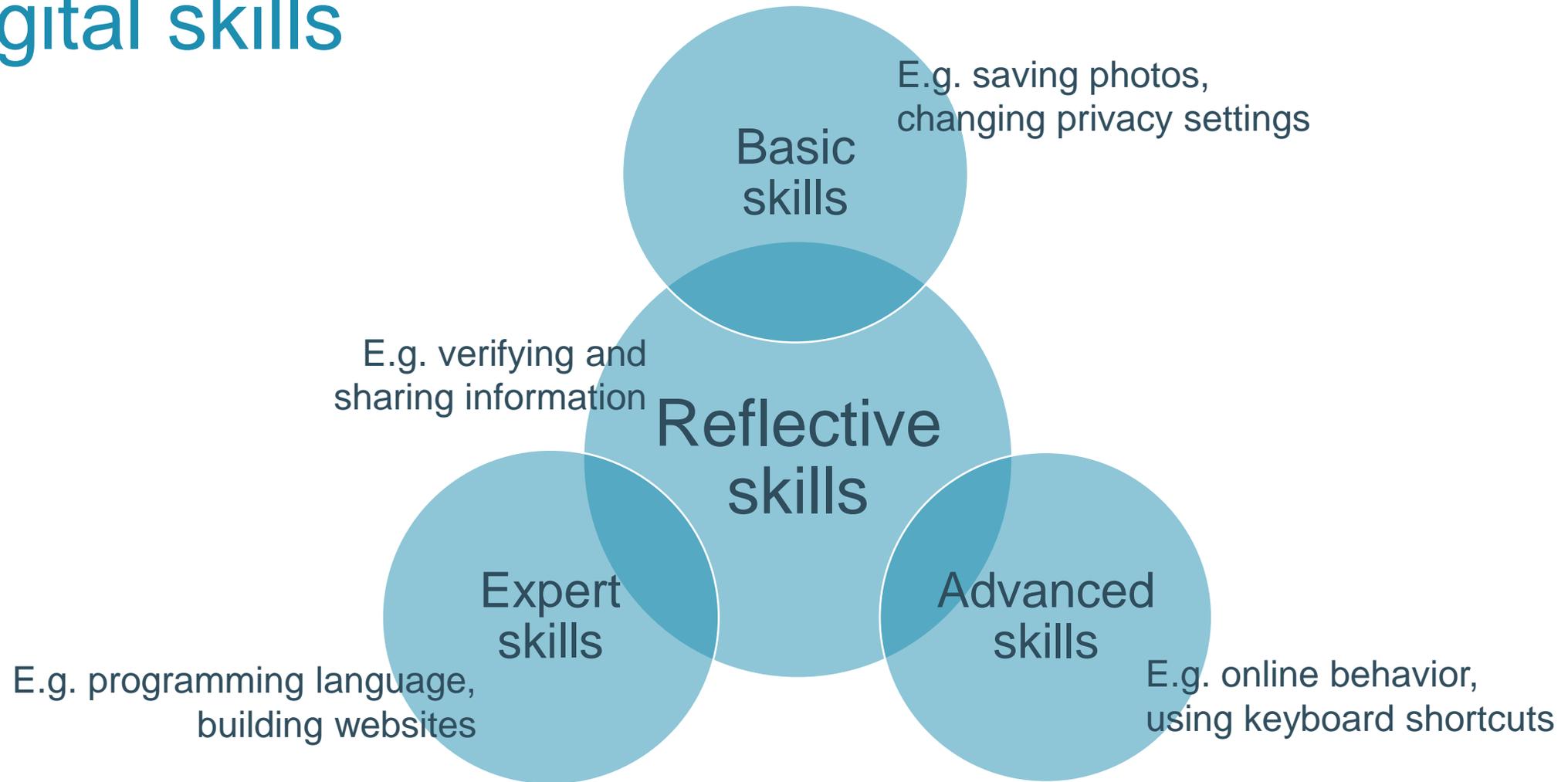
Physical well-being



Mental well-being



Digital skills



Results

Multivariate regression analysis



RQ1: How do age, gender and residential area predict Flemish teens' digital skill levels?

- Age
 - Positive association with basic skills ($\beta = .096$, $p < .01$).
 - Negative association with expert skills ($\beta = -.096$, $p < .01$).
- Gender (0 = boy; 1 = girl)
 - Negative associations with basic skills ($\beta = -.129$, $p < .001$), expert skills ($\beta = -.193$, $p < .001$) and reflective skills ($\beta = -.097$, $p < .01$).
- Residential area
 - No significant associations with digital skill levels.

RQ2: To which extent do internet access and use play a role in Flemish teens' digital skill levels?

- H1: Internet access is positively associated with Flemish teens' digital skill levels.
 - Partially supported
 - Positive associations with basic skills ($\beta = .138, p < .001$) and reflective skills ($\beta = .120, p < .01$).
 - No association with advanced and expert skills.

RQ2: To which extent do internet access and use play a role in Flemish teens' digital skill levels?

- H2: Frequency of internet use is positively associated with Flemish teens' digital skill level.
 - Partially supported
 - Positive associations with basic skills ($\beta = .122, p < .001$), advanced skills ($\beta = .072, p < .05$), and expert skills ($\beta = .188, p < .001$).
 - No association with reflective skills.

RQ3: Are different types of parental mediation associated with differences in Flemish teens' digital skill levels?

- No significant associations between any type of parental mediation and any type of teens' digital skills.

RQ4: What are the risk actors and factors, resilience factors and enhancing factors influencing Flemish teens' physical and mental well-being?

- Mental well-being
 - Negative associations with age ($\beta = -.097, p < .05$), gender ($\beta = -.152, p < .001$), and internet use ($\beta = -.170, p < .001$).
 - Positive associations with the interactive parental mediation strategy ($\beta = .168, p < .01$).
- No significant predictors for physical well-being.

RQ4.1: How are Flemish teens' digital skill levels associated with their physical and mental well-being?

- Physical well-being
 - No significant associations with teens' digital skill levels.
- Mental well-being
 - No significant associations with teens' digital skill levels.

RQ4.2: Does exposure to online risks mediate or moderate the association between digital skill level and well-being?

- Hayes' Process macro for SPSS
- Mediation analyses
 - Exposure to online risks is not a significant mediator.
 - Direct positive associations between mental well-being and basic ($\beta = .084, p < .05$), expert ($\beta = .086, p < .05$), and reflective skills ($\beta = .079, p < .05$) become significant.
- Moderation analyses
 - Exposure to online risks is not a significant moderator.

Conclusion

- Flemish teens view their digital skills in terms of their difficulty
- These skills are predicted by their age, gender, internet access and internet use.
- Parental mediation was not related to teens' digital skill levels.
- The association between digital skill levels and mental well-being becomes significant when exposure to online risks is included as a mediator.

Whither teens' research in Asia?

Global Kids Online

Focus on multi-stakeholder perspective

Trust, confidence in one's skill sets

Focus on SES, gender, area of residence, vulnerable groups

Influence of parents, peers, teachers

Skills for the 21st Century (e.g. problem solving, creative thinking, recognizing right from wrong news...)

Focus on skills needed for the labour market