Stress Analytics in Education
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The impact of stress

WHO: By 2020 the top five diseases will be stress related
USA: health care expenditures are 50% greater for workers with high levels of stress
NL: In Delft University of Technology, 53% of surveyed students indicated that they experienced huge stress during their studies.
It’s better to prevent than to cure!

Our goal

Measure: device to measure physiological signs of stress
Understand: stress pattern discovery, predictive modeling
Visualize: communicate stress levels and empower users

Common stressors for students

• Unique for students: long study hours, work overload, time pressure, demanding, complex tasks, lack of training, ...
• Relations: with teachers, parents, colleagues
• Poor physical conditions: limited space, inconvenient temperature, limited or inappropriate lighting conditions
• Organizational structure/climate: participation in decision-making, communication patterns...

Our approach

What, When, Where, with Whom

Physiological signs

Pattern Mining

What

When

Where

with Whom

OLAP cube

Stress analytics

1) Overview of stressors
2) Exploration of relations
3) Access to evidence, i.e. annotated, measured stress

Ongoing work

1) Infrastructure for stress-related data management
2) Case studies for collecting subjective and measuring objective stress

PHILIPS
sense and simplicity

Human Capital Care

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Technische Universiteit Eindhoven
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