Physical activity and sedentary behavior predicting cognitive and academic performance

Results from the ALOUD study
Dr. Jérôme Gijselaers

Earlier findings and mechanisms

Background
Design
Research
Conclusion

Barenberg, Berse, & Dutke, 2011
Lubans et al., 2016

Overview of the ALOUD study

Participants

Background
Design
Research
Conclusion

Participants
Prediction of cognitive performance

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>β</th>
<th>SE</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical activity</td>
<td></td>
<td></td>
<td><strong>.004</strong></td>
</tr>
<tr>
<td>Sedentary behavior</td>
<td></td>
<td></td>
<td><strong>.009</strong></td>
</tr>
<tr>
<td>Shifting (TMT)</td>
<td>-.028</td>
<td>-</td>
<td>.019</td>
</tr>
<tr>
<td>Processing speed (ST)</td>
<td>.064***</td>
<td></td>
<td>.027</td>
</tr>
</tbody>
</table>

Controlled for significant confounders:
- age, computer behavior, nationality, and mother tongue.

Conclusion

- Students who report more sedentary time perform better on:
  - processing speed
  - academic performance

Explanations?

References (DOI's)

- Data paper on the ALOUD study: 10.1111/bjet.12288
- Research papers on this study: 10.1016/j.lindif.2016.06.021
  10.3389/fpsyg.2016.00642

Full references are in the notes (see hand-outs)

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