

Stress and resilience in deaf and hard of hearing adolescents



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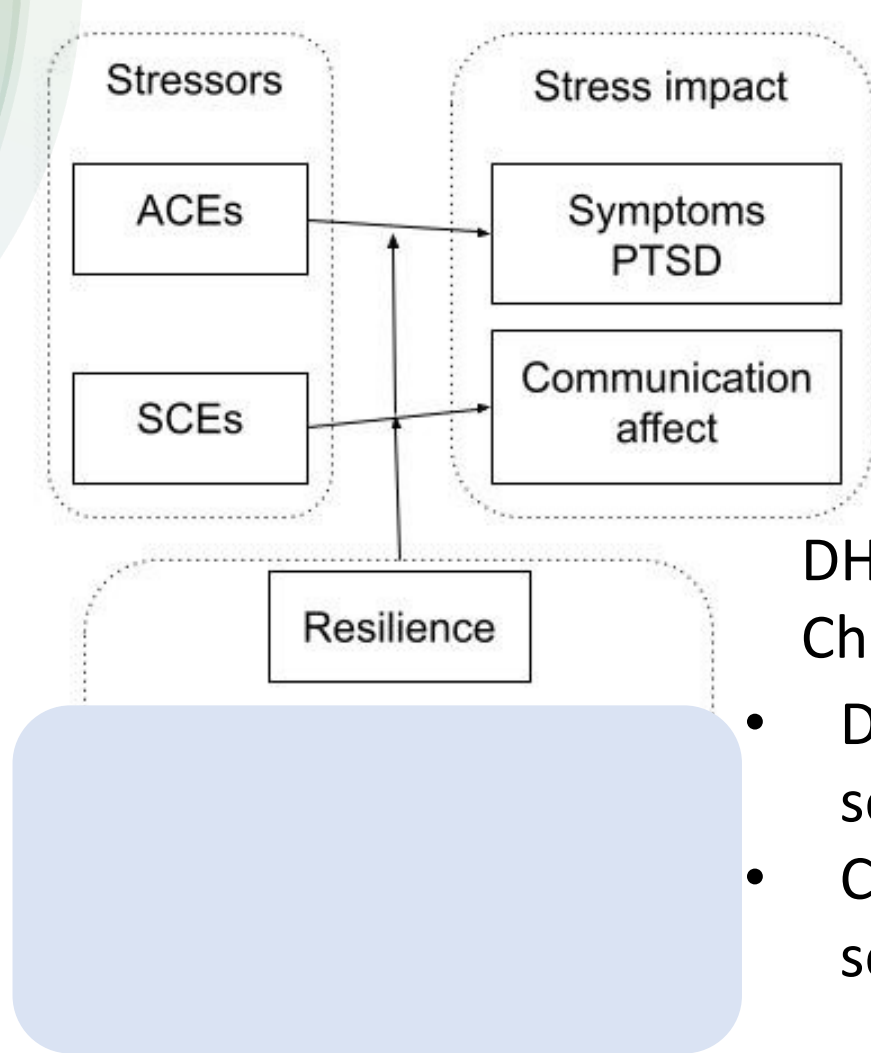
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The invisible load



Today, cognitive model stress and resilience in deaf and hard of hearing (DHH) adolescents



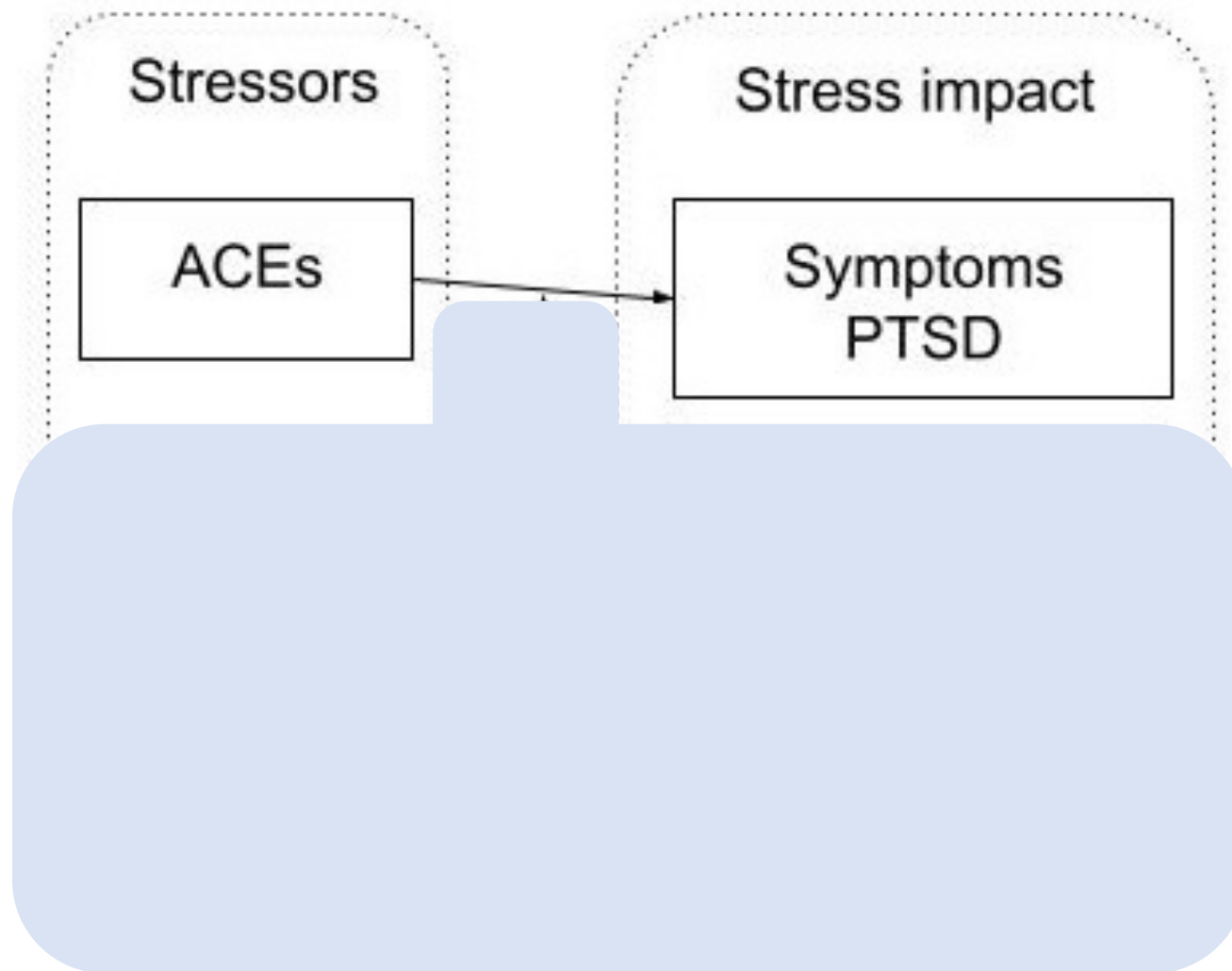
Why this model?



DHH adolescents are at risk of gaining more Adverse Childhood Experiences (ACEs)*.

- DHH adolescents in special education secondary schools n = 32
- Control group adolescents in mainstream secondary schools n = 86

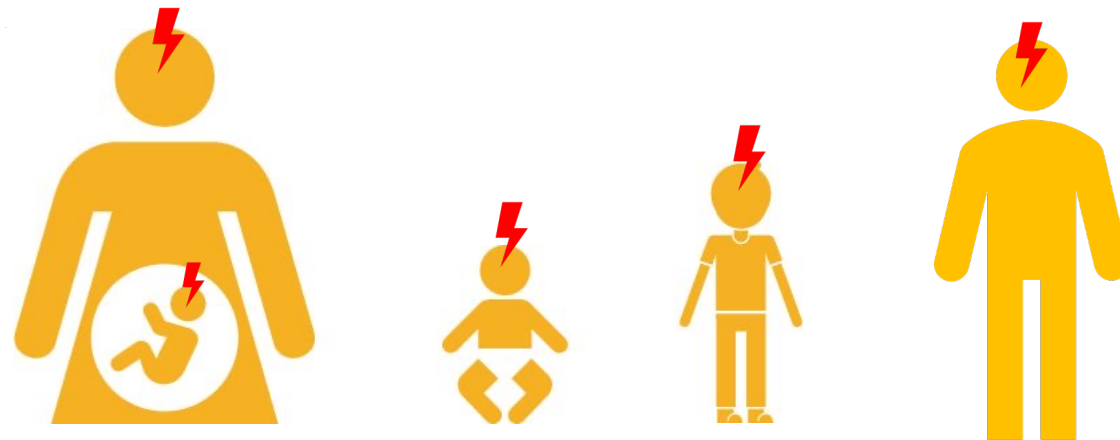
Adverse Childhood Experiences, ACEs → stress impact



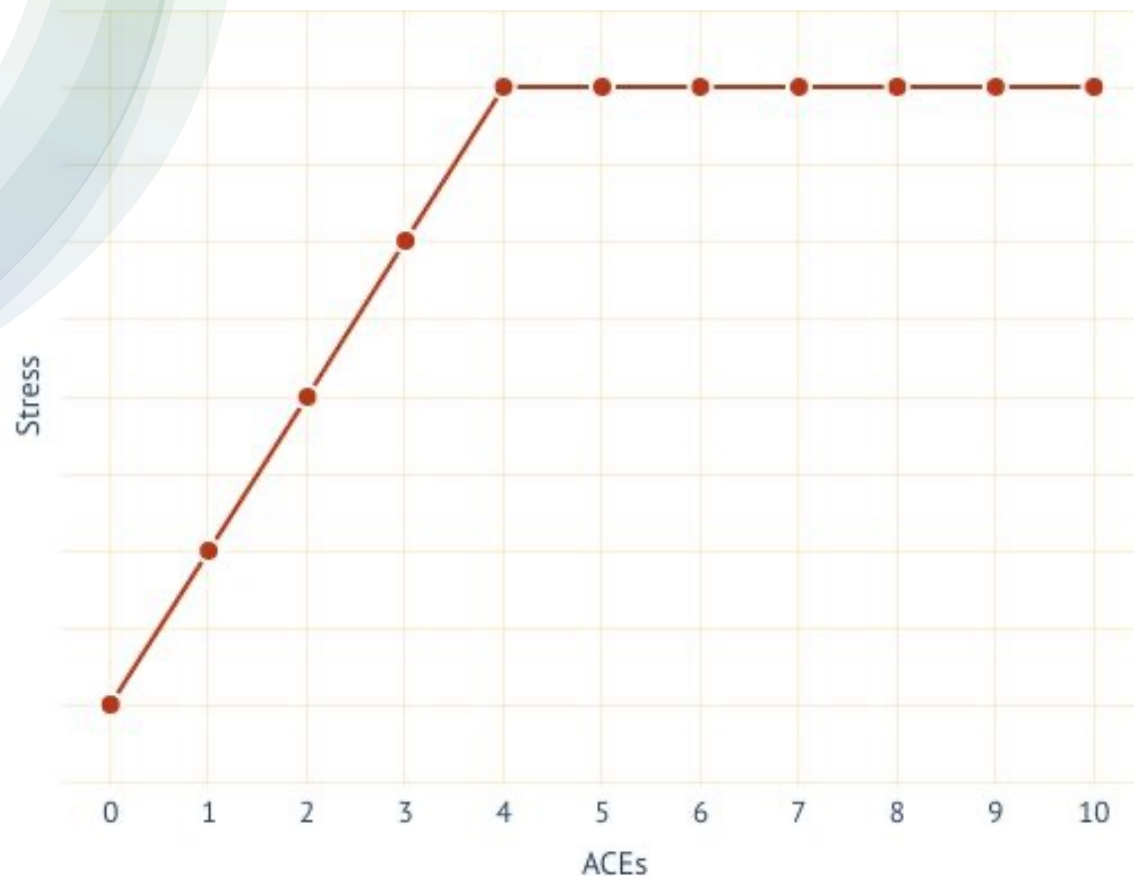
Traumatic or adverse events and stress

Post-traumatic stress disorder PTSD*

- Exposure to death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence, ((in)direct exposure, witnessing, learning that a relative or close friend was exposed)
- Multiple, long-lasting, repeated, or continuous trauma (Complex PTSD or C-PTSD)
- However ...



Accumulated childhood trauma – dose-response relationship adverse experiences & stress impact



Hughes et al. (2017)* meta-analysis

≥ 4 adverse childhood experiences:

- increased risk of all assessed health outcomes

Bucci et al. (2016)**

≥ 4 adverse childhood experiences odds:

- 2.4 stroke
- 3.9 lung disease
- 10.3 ever injected drugs
- 12.2 attempted suicide

**Bucci, M., Marques, S. S., Oh, D., & Burke Harris, N. (2016). Toxic stress in children and adolescents. *Advances in Pediatrics*, 63, 403-428. <http://dx.doi.org/10.1016/j.yapd.2016.04.002>

Harris, N. B. (2020). Screening for adverse childhood experiences. *JAMA*, 324(17), 1788-1789.

*Hughes, K., Bellis, M. A., Hardcastle, K. A., Sethi, D., Butchart, A., Mikton, C., Jones, L., & Dunne, M. P. (2017). The effect of multiple adverse childhood experiences on health: A systematic review and meta-analysis. *The Lancet Public Health*, 8(2), 356-366. [https://doi.org/10.1016/S2468-2667\(17\)30118-4](https://doi.org/10.1016/S2468-2667(17)30118-4)

Adverse Childhood Experiences, ACEs



Abuse

- physical
- emotional
- sexual



Neglect

- physical
- emotional

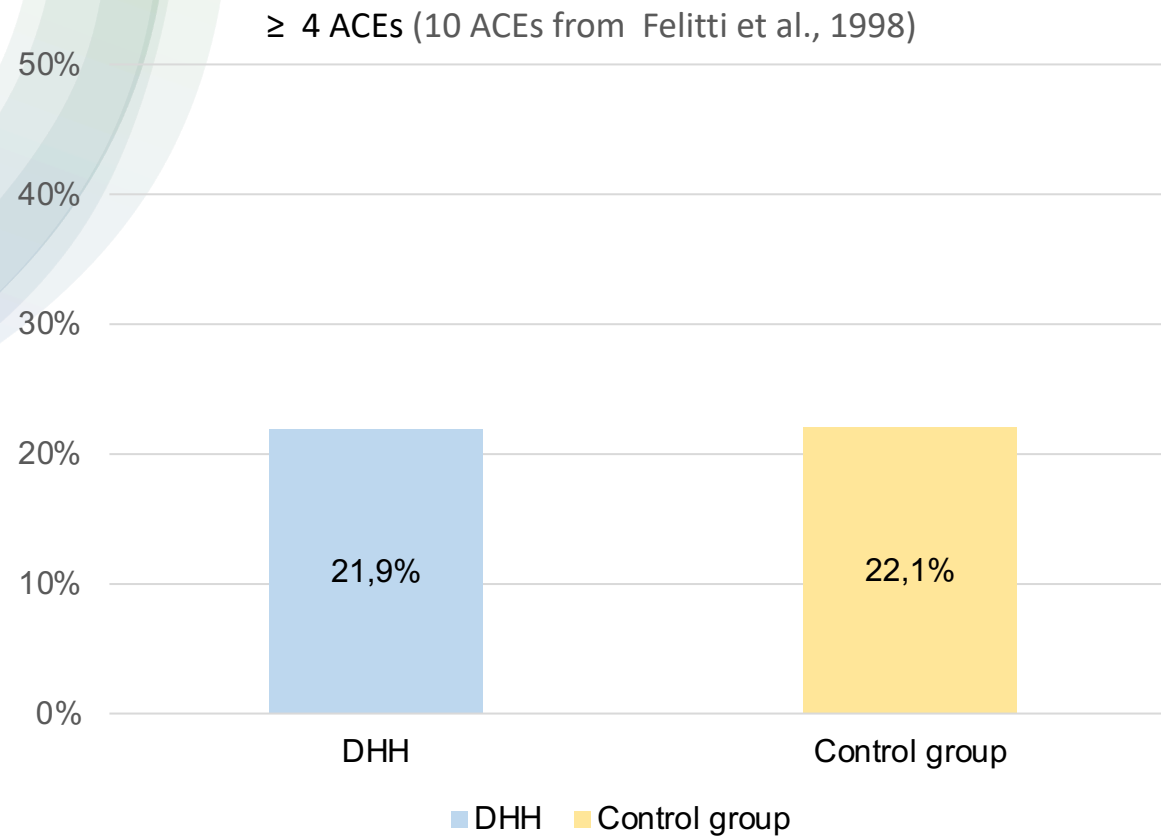


Household dysfunction

- domestic violence
- parents divorce
- parent(s) mental health problem(s)
- parent(s) addiction problem(s)
- parent(s) arrested/incarcerated

This Felitti ACE screener mainly concerns the (nuclear) family*.

10 Felitti ACEs – ≥ 4 ACEs



Abuse



Neglect



Household dysfunction

Current research

- 22% DHH adolescents experienced ≥ 4 ACEs, no difference compared to control group

ACEs-extra – added



bullying



severe sickness of a loved one
death of a loved one



discrimination



poverty

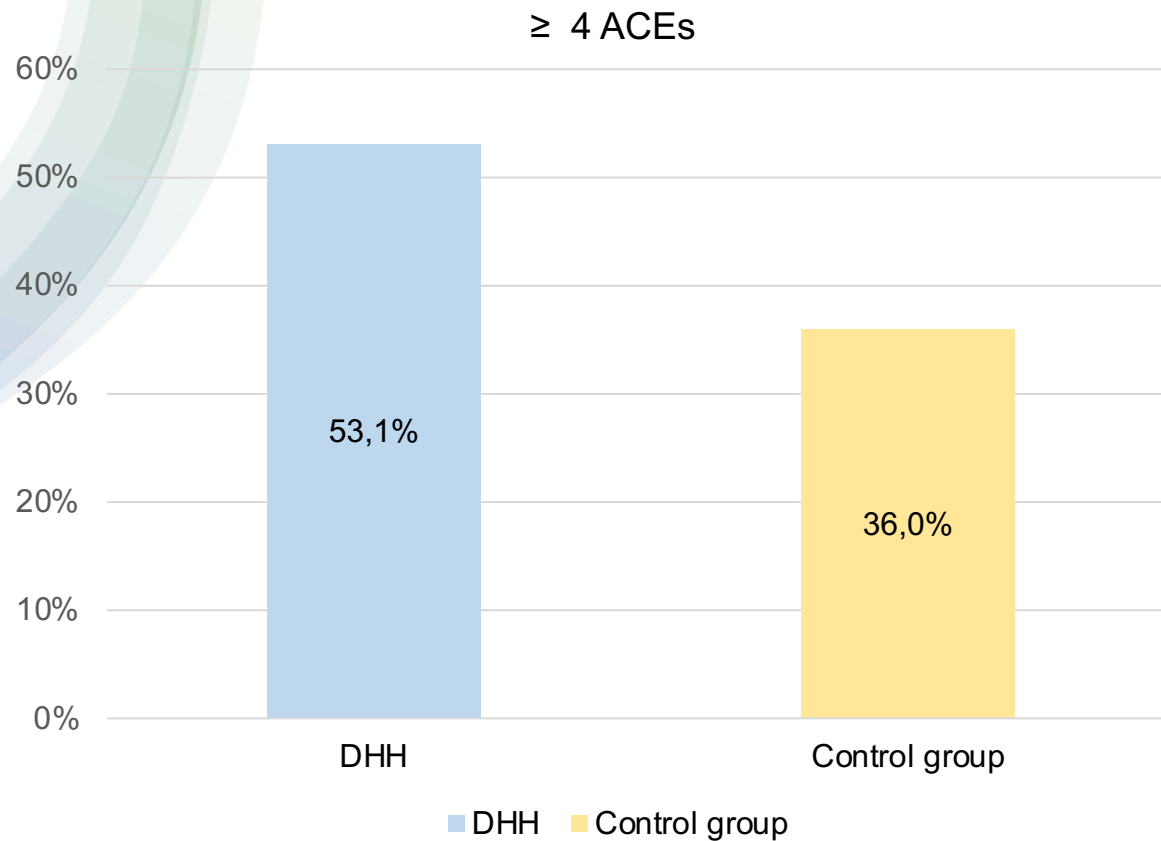


accident
or disaster

Recommendation to expand the 10-item Felitti ACE screener *
Additions from different screeners

*SmithBattle, L., Loman, D. G., Yoo, J. H., Cibulka, N., & Rariden, C. (2021). Evidence for revising the adverse childhood experiences screening tool: a scoping review. *Journal of Child & Adolescent Trauma*, 15(1), 89–103. <https://doi.org/10.1007/s40653-021-00358-w>

10 Felitti ACES + ACEs-extra – ≥ 4 ACEs



Abuse



Neglect



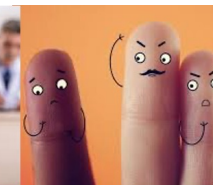
Household dysfunction



bullying



severe sickness of a loved one
death of a loved one



discrimination



poverty



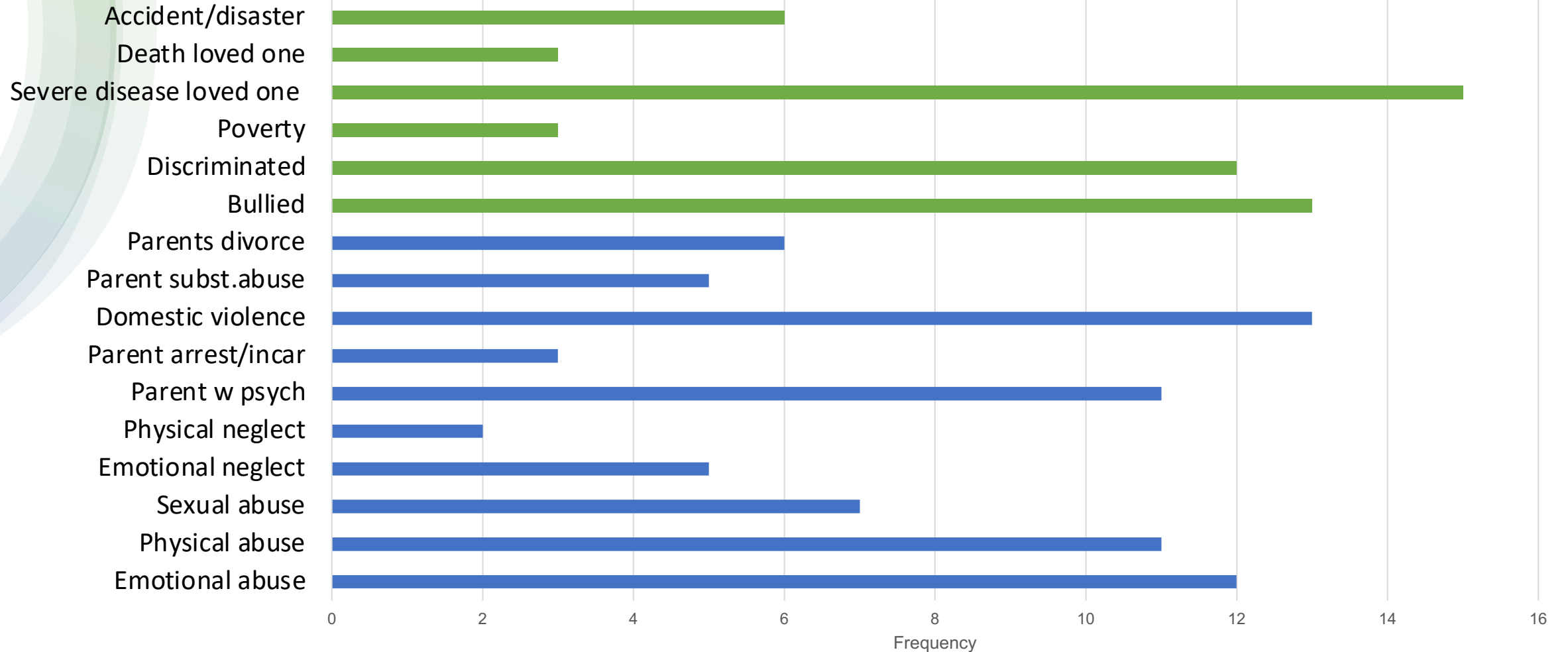
experiencing an accident
or a disaster

The group DHH adolescents experiencing ≥ 4 ACEs increased with: 31.3%

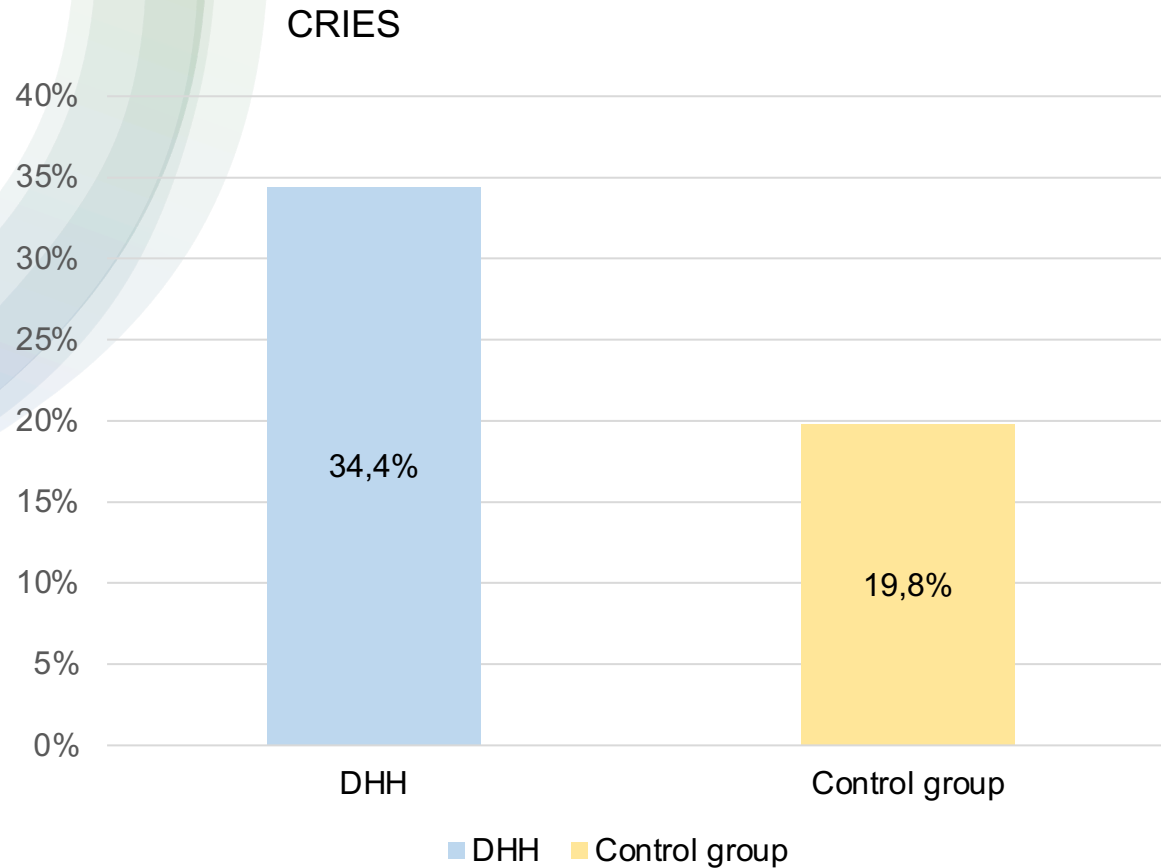
Increase ≥ 4 ACEs control group: 14%

Prevalence ACES in DHH adolescents

ACEs blue - ACEs-extra green



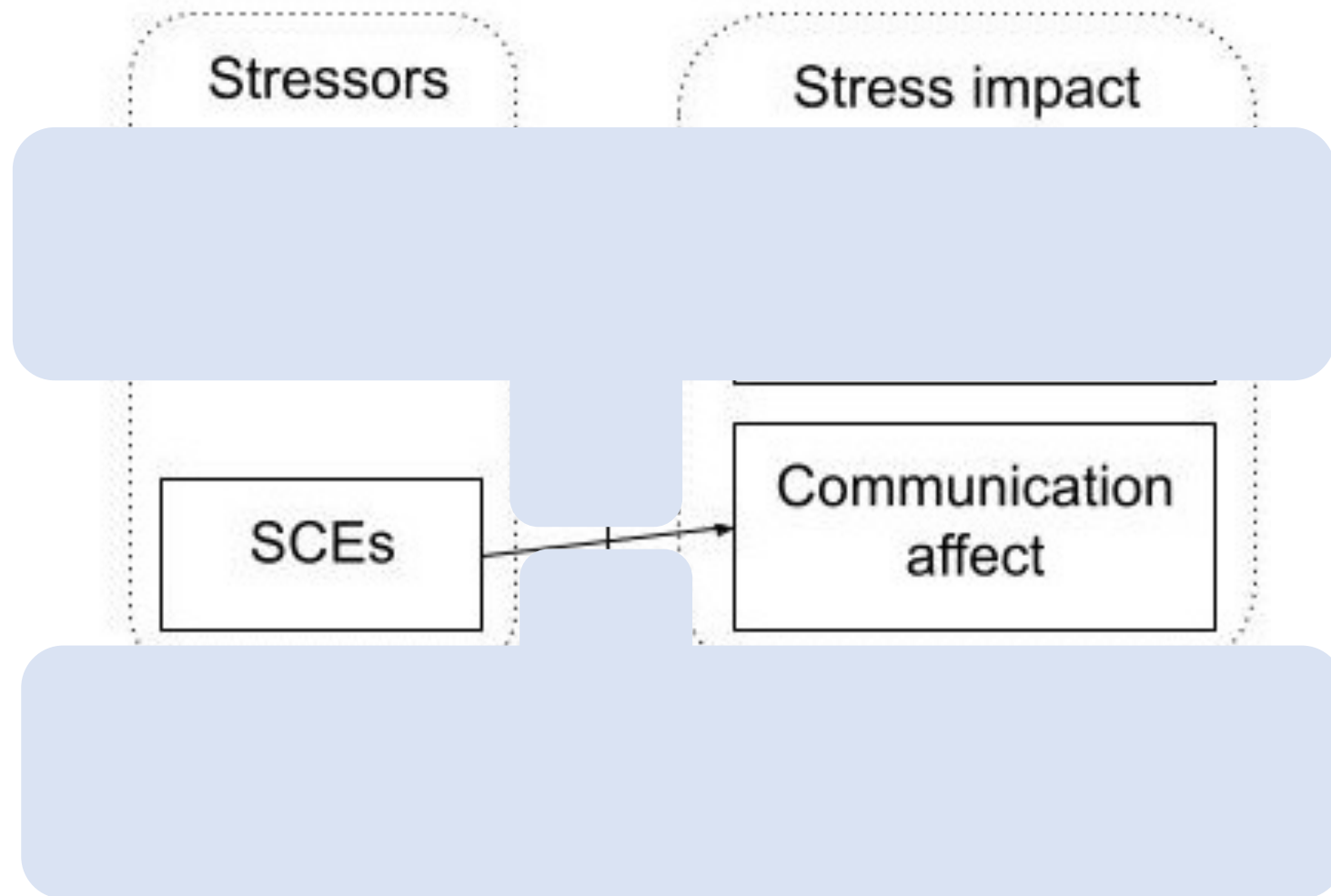
ACEs → symptoms of PTSD



Comparing continuous scores shows a significant difference

What does this graph tell us?

Stressful Communication Experiences, SCEs → affect



Stressful Communication Experiences, SCEs



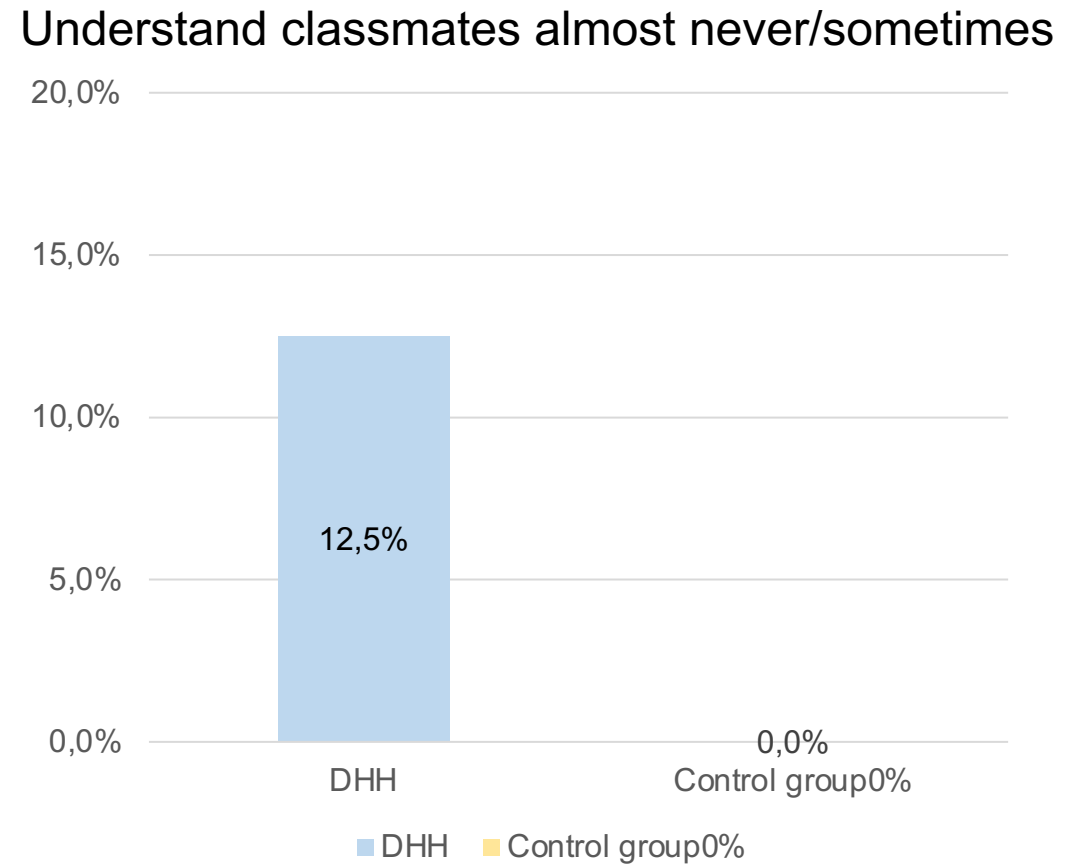
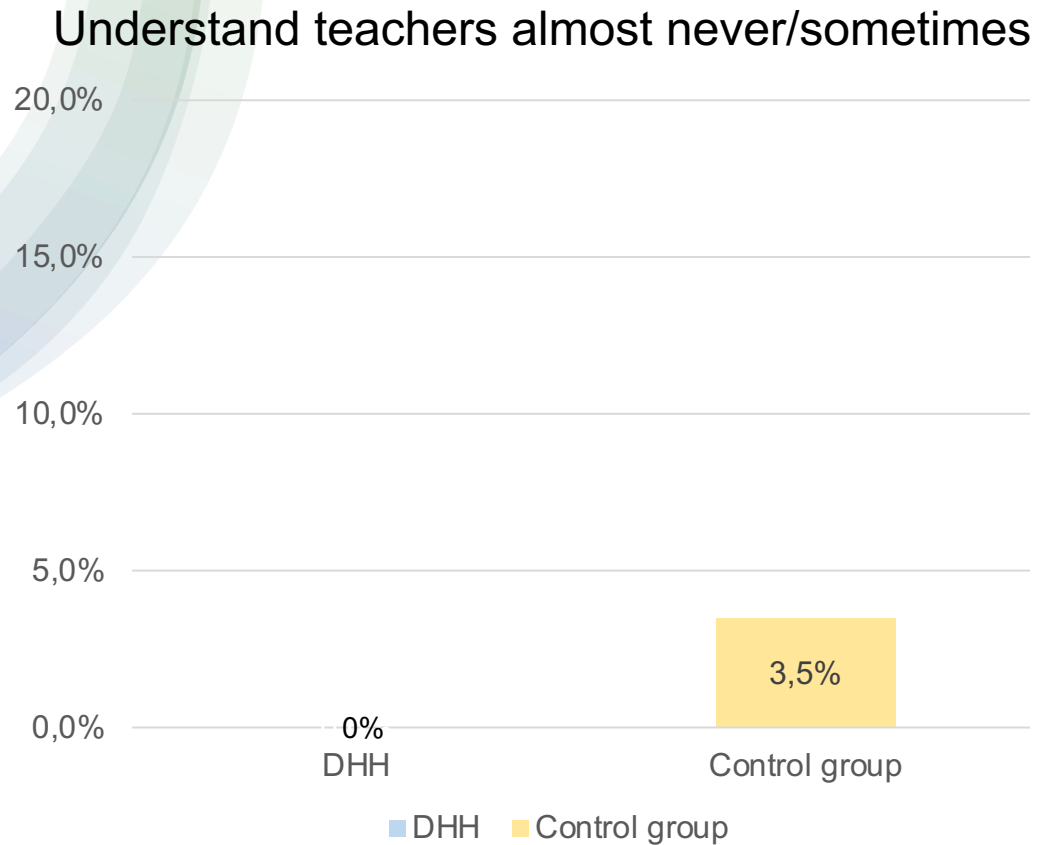
Understanding teachers



Understanding classmates

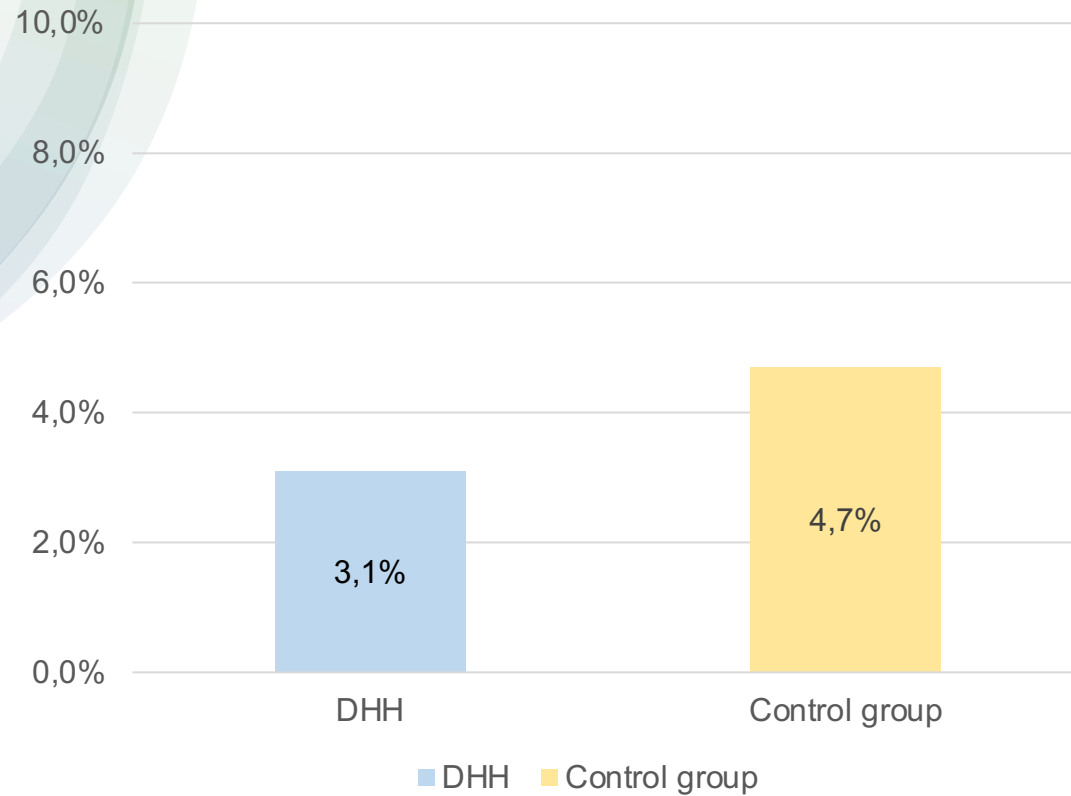
The focus of this questionnaire is classroom communication, other SCEs are conceivable

SCEs – understanding teachers / classmates



SCEs → negative communication affect

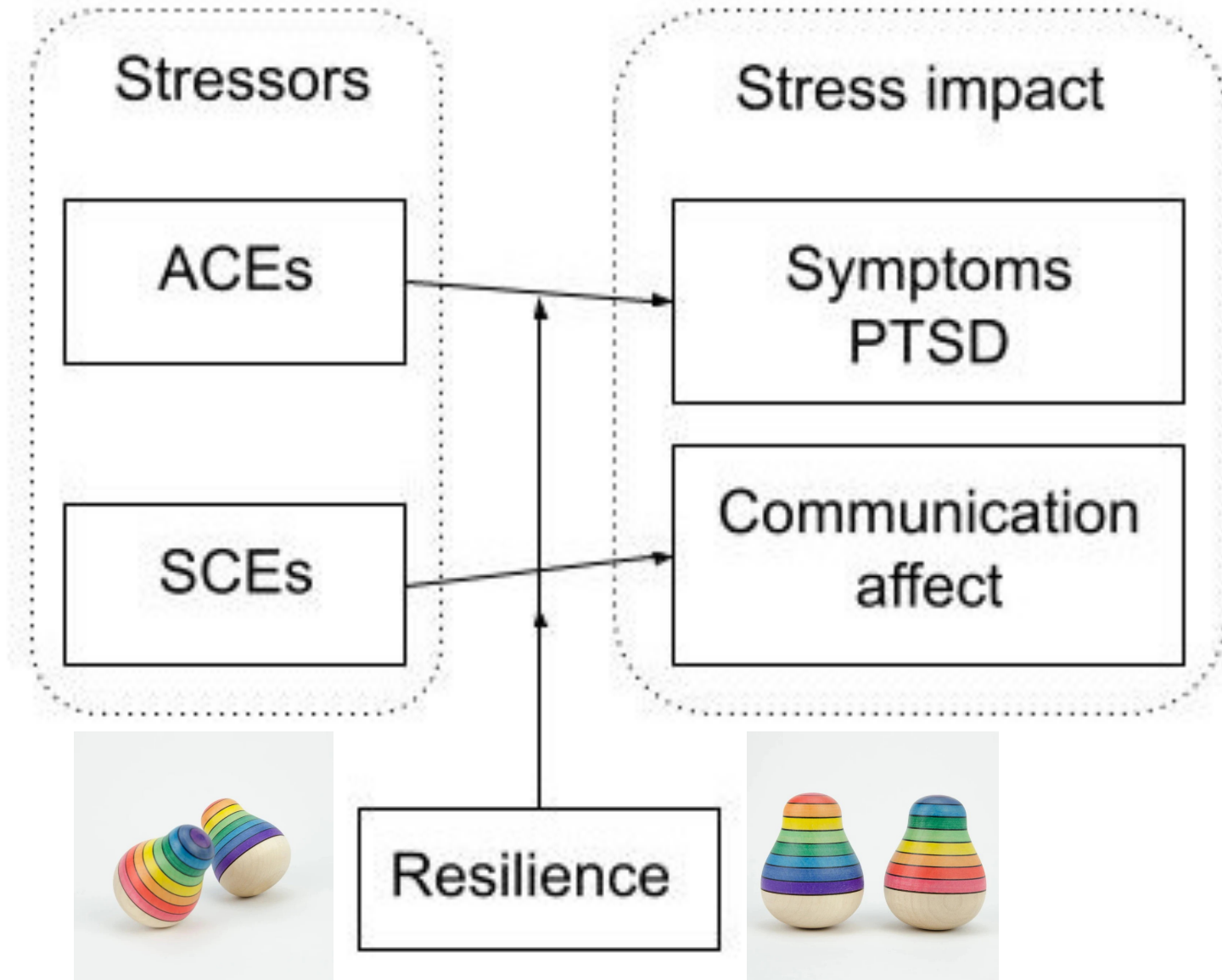
Often/almost always negative affect
about classroom communication



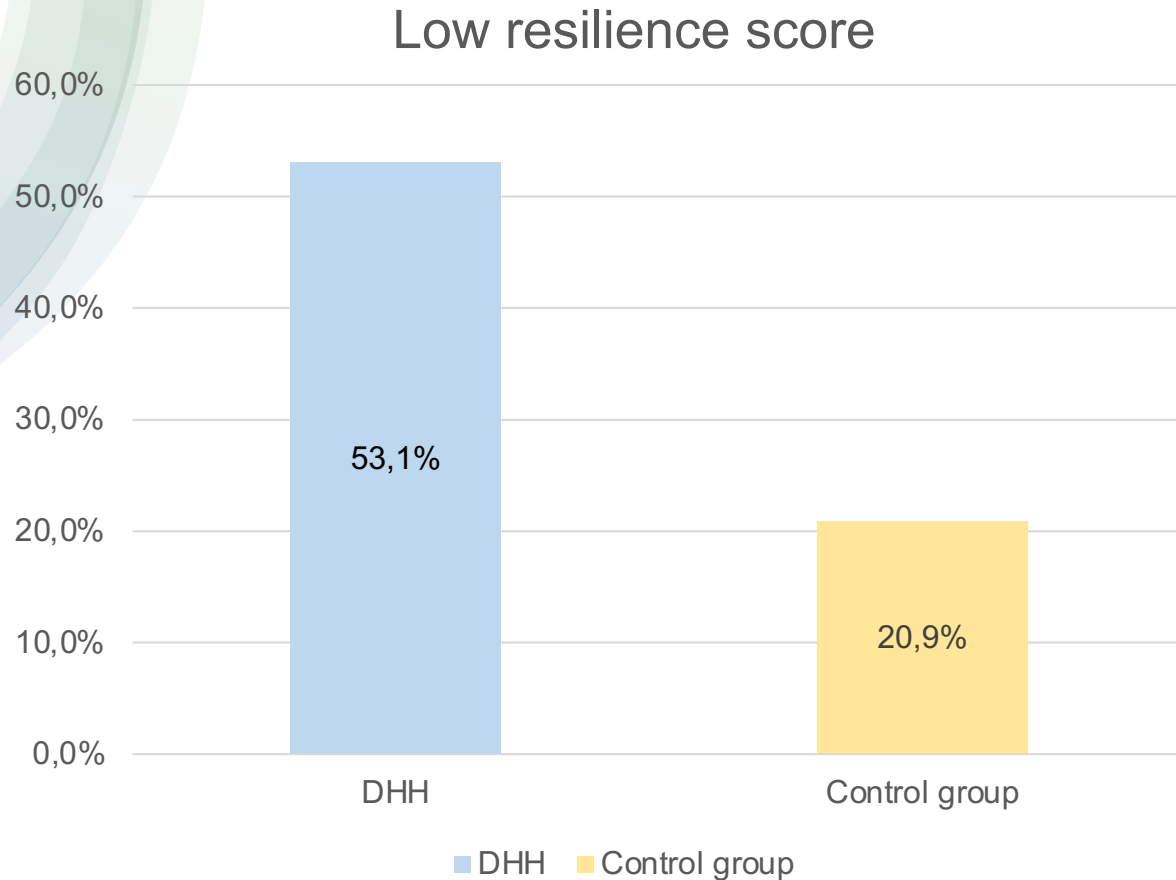
This seems good news!

Is it?

Protector against stress

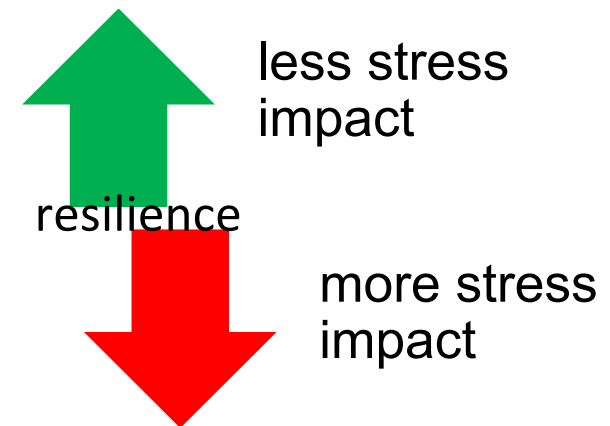


Resilience



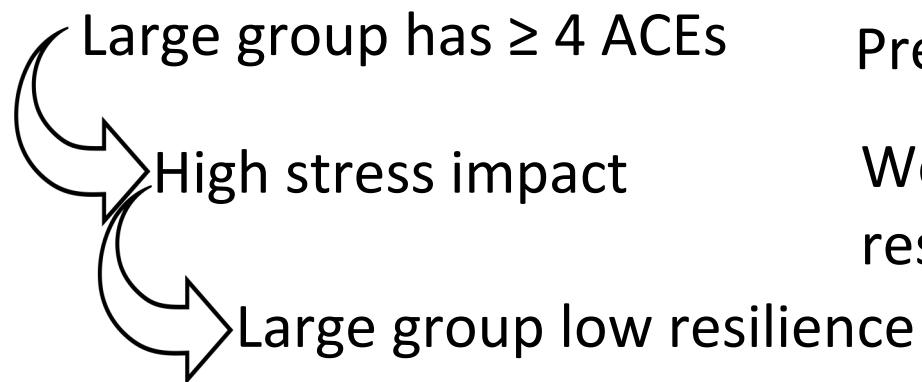
DHH adolescents have significantly less resilience than the control group

Significant correlations between stress impact and resilience



Current research – what to do?

DHH adolescents



Prevention + awareness

We can reduce by working on resilience



Take home message:

Be aware of an invisible load. Worried?



behavior

Consult a psychologist or general remedial educationalist
Resilience & feeling connected; adolescents' inclusion in the classroom
and with **peers**

