

Promoting student well-being and resilience Testing a systemic game-based intervention focused on basic psychological needs at our university

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1 THEORETICAL BACKGROUND

University students' mental health is lower compared with non-studying young adults (Brazeau et al., 2014; Stallman, 2010).

Interventions to promote student well-being mainly remain to an individual level (bspw. Akeman et al., 2019; Dawson et al., 2019); **interventions focused on the academic system** scarcer in contrast.

Promising factors within the academic system encompass, amongst others, the **basic psychological needs** (Self-Determination Theory, Deci & Ryan, 1985; Stanton et al., 2016).

The **intervention** aims to promote awareness regarding the basic needs using a game-approach (Figure 1) as well as to adjust and evaluate the course design respectively (Figure 2) to foster student well-being and resilience, in turn.

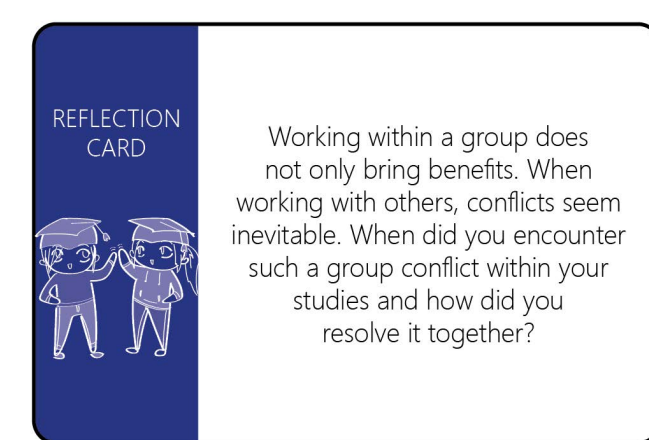


Figure 1. Example card as part of the intervention

Research question:

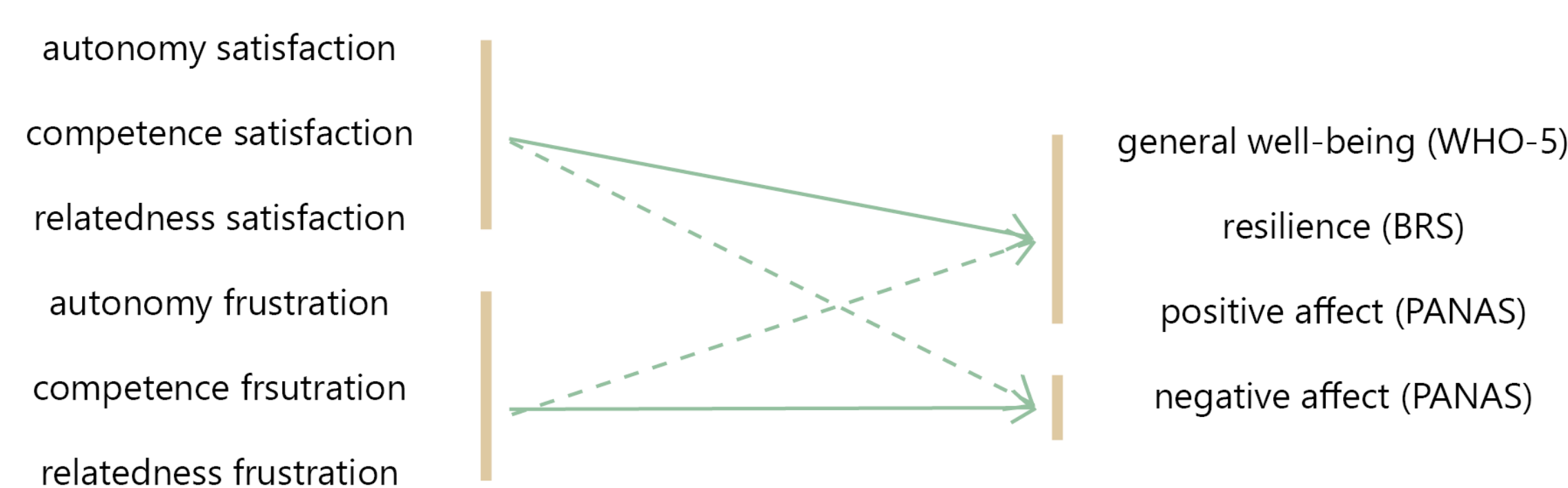
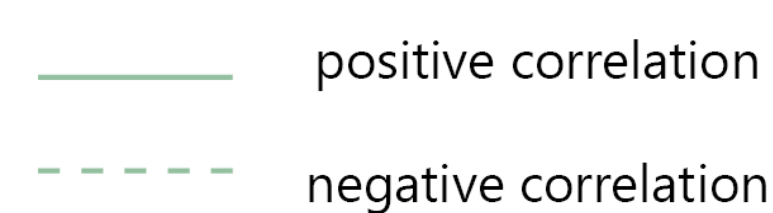
How effective is the intervention in promoting student well-being and resilience?

BASIC PSYCHOLOGICAL NEEDS

- autonomy satisfaction
- competence satisfaction
- relatedness satisfaction
- autonomy frustration
- competence frustration
- relatedness frustration

STUDENT WELL-BEING

- general well-being (WHO-5)
- resilience (BRS)
- positive affect (PANAS)
- negative affect (PANAS)



3 RESULTS

Basic psychological needs:

For positive affect, need satisfaction constitutes a predictor; for negative affect, however, it is mainly need frustration; competence frustration constitutes the strongest predictor in general (Table 1).

Group differences: The intervention course displayed higher well-being ($\Delta^2 = 124.3$, $F(1) = 6.5$, $p = .01$, $\eta^2 = .05$) and less frequent negative affect ($\Delta^2 = 254.5$, $F(1) = 4.7$, $p = .03$, $\eta^2 = .04$) than the control course. Regarding basic psychological needs, students in the intervention course were more satisfied than those in the control course with both their competence ($\Delta^2 = 2.5$, $F(1) = 4.4$, $p = .04$, $\eta^2 = .03$) and their relatedness ($\Delta^2 = 6.3$, $F(1) = 12.0$, $p < .01$, $\eta^2 = .09$). Time and interaction effects remain insignificant.

Qualitative feedback: Students reported feeling seen and more competent, and that they valued the social contact. Beyond that, both students and teachers emphasised the intervention's influence on their need satisfaction and well-being.

Table 1. Results of the multiple regression (both courses, t1)

	β WHO-5	β pos affect	β neg affect	β resilience
autonomy (S)	.16	.24*	.12	.14
competence (S)	.14	.28*	.07	.04
relatedness (S)	.24*	.02	-.07	.05
autonomy (F)	-.09	.13	.12	-.03
competence (F)	-.39**	-.40**	.50**	-.62**
relatedness (F)	-.10	-.04	.34**	.08
adjusted R^2	.58	.41	.47	.46

Note. $p = * < 0.05$, $** < 0.01$; S = satisfaction, F = frustration

„We get even more the sense that the teachers etc. really care about us.“

„[I liked] the amount of input we were allowed to make. I also enjoyed that [the teacher] made an effort to create personal connections between students.“

„We opened ourselves for the first time with our friends for the board game.“

2 METHOD

- Design: longitudinal mixed method with questionnaire, observational, and interview data (Figure 2)
- Sample: intervention course ($n_{t1} = 41$, $M_{age} = 19.6$, $n_{woman} = 19$, $n_{other} = 1$; $n_{t2} = 25$, $n_{t3} = 11$) vs. control course ($n_{t1} = 51$, $M_{age} = 19.5$, $n_{woman} = 14$, $n_{other} = 2$; $n_{t2} = 23$, $n_{t3} = 8$)
- Analysis: quantitative (multiple regression, multivariate analysis of (co)variances); qualitative (interviews $n_{students} = 2$, $n_{teachers} = 2$); observational (descriptive)

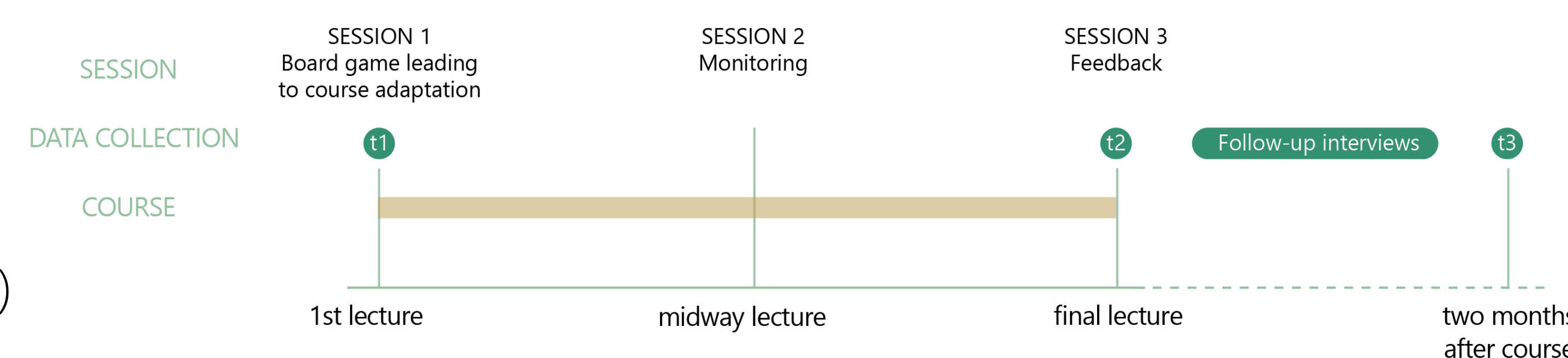


Figure 2. Procedure of intervention

4 DISCUSSION

- Although we could not prove the effectiveness of the intervention quantitatively, the qualitative remarks hint towards the intervention's potential
- **Take-home-message:** Promoting the basic psychological needs on a systemic level can be beneficial for student well-being also within the academic system

