PROMOTING UNIVERSITY STUDENTS' WELL-BEING AND RESILIENCE BY MEANS OF A GAME-APPROACH BASIC PSYCHOLOGICAL NEED INTERVENTION: A CASE STUDY

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Online Resource I – Additional Information and Analyses

1. Additional Information on the Sample

First, Table S1 summarises further sociodemographic information on the sample not included in the main manuscript. Furthermore, we want to elaborate on the process of matching the sample for the rmANOVA analysis elaborated in the main manuscript. We planned to analyse the data with two-factorial repeated measurements analyses of variance (rmANOVAs) with time (t1, t2, and t3) and group affiliation (IC and CC) as factors for each of the six need measures separately. However, matching the students in the CC led to a sample size of only n = 2 students for at least two times. Therefore, we did not include them in the analysis and adjusted our initial analysis plan to one-factorial rmANOVAs solely for the IC, with time as a factor. For the IC, we could match n = 2 across all three time points, n = 17 students for t1 and t2, and n = 1 for t1 and t3. We attribute the high number of missing values at t3 to how we approached students – namely, via email instead of in the course. Because this method resulted in a smaller response rate, we solely analysed students who participated in t1 and t2, resulting in a final sample size of n = 19. Although a power analysis indicates the required sample size should be n = 20; we nevertheless ran the analysis, keeping this limitation in mind.

Table S1. Number and percentages of students to whom the sociodemographic information applies

		IC		CC	
		t1	t2	t1	t2
		n = 56	n = 25	n = 25	n = 8
Gender identity	Man	29 (52%)	16 (64%)	19 (76%)	4 (50%)
	Woman	25 (45%)	7 (28%)	6 (24%)	4 (50%)
	Other[a]	2 (4%)	1 (4%)	0 (0%)	0 (0%)
Nationality	Dutch	25 (45%)	11 (44%)	19 (76%)	4 (50%)
	Within Europe	22 (39%)	9 (36%)	4 (16%)	4 (50%)
	Outside Europe	9 (16%)	5 (20%)	2 (8%)	0 (0%)
First-generation student	Yes	10 (18%)	3 (12%)	9 (36%)	2 (25%)
	No	46 (82%)	23 (88%)	16 (64%)	6 (75%)

[a]participants indicated identifying as genderfluid

Note. Due to sensitivity, only samples of 5 or more students are displayed, excluding t3; missing values or students that indicated 'prefer not to say' are not included

2. The Interview Guide

Table S2 illustrates the interview guide used for the teacher, and Table S3 the one used for the student interview.

Table S2. Interview guide for the teacher interview

Topic	Question	Potential promts
Intervention	How did you experience planning the board game? What were your experiences concerning engaging with the students during the board game?	Do you think they played it differently, given that a teacher was in their group? How was the exchange of experiences?
	Which aspects did you like or did you find interesting and which ones didn't you like?	Is there anything you particularly liked/disliked? How was it to play such a game as part of your course? Is there anything you would have liked differently?
	How did you experience the discussions with the students? How was the exchange between you and the students?	What do you think about your students' suggestions? How do you think they reacted towards your suggestions? Which suggestions were surprising? Which ones were impossible to implement? What kind of suggestions would you have wanted to hear?
	How do you think the intervention as a whole influenced students' well-being? How did it influence your own well-being?	Which aspects made your students/you feel better/worse? How exactly did your students/you feel better/worse?) What contributed to their/your well-being?
Course	What changes do you plan to implement throughout the intervention in your course? How do you think they influenced students' (and your) well-being?	Which changes did you like, which did you dislike? What exactly made you feel better/worse? And how exactly did you feel better/worse? What contributed to their/your well-being?
	Would you recommend the intervention to other teachers? Why? Why not?	
Debriefing	Do you have anything more to say?	Is there anything you would have liked to tell me but did not have the chance yet?
	How did you experiences the interview?	Are there any things you would like to let me know? Do you feel unease in any regard now after the interview?
	Do you still have any questions?	

Table S3. Interview guide for the student interview

Topic	Question	Potential promts
Intervention	Which insights did you get from playing the board game?	What did you learn about yourself when playing the boardgame (autonomy, competence, relatedness?)
	Boardgame: Which aspects did you like and which ones didn't you like?	Is there anything you particularly liked/disliked?
	Discussion with teachers: Which aspects did you like and which ones didn't you like?	How was it to play such a game as part of your course? Is there anything you would have liked differently? How did you experience discussing student well-being with your teachers? How did your teachers react to your suggestions?
	How do you think the intervention as a whole may influence your well-being? How may it influence your study performance?	Which aspects made you feel better/worse? How exactly did you feel better/worse?) What contributed to your well-being?
	What changes did you decide upon throughout the intervention in your course? How do you think those may influence your well-being?	Which changes did you like, which did you dislike? What exactly made you feel better/worse? And how exactly did you feel better/worse? What contributed to your well-being?
Debriefing	Do you have anything more to say?	Is there anything you would have liked to tell me but did not have the chance yet?
	How did you experiences the interview?	Are there any things you would like to let me know? Do you feel unease in any regard now after the interview?
	Do you still have any questions?	

3. Additional Analyses

As explained in the main manuscript, we ran correlational analysis and multivariate analysis of variance (MANOVA) to indicate whether any sociodemographic information meaningfully related to students' well-being. As illustrated in Table S4, students' age significantly correlated with their relatedness satisfaction, with older students being more satisfied with their need for relatedness. Students' gender significantly correlated with their negative affect, resilience, and competence frustration, with female students reporting higher negative affect and competence frustration, and lower resilience. Whether they were the first ones in their family to attend university, however, did not correlate with any of the measures. As we assessed students' nationality categorically, differentiating between Dutch, European, and non-European students, we ran a MANOVA to detect any significant differences. Indeed, nationality significantly affected the measures ($F(18,136) = 1.78$, $p = .03$, $\eta^2(g) = .19$). Delving deeper in the between-subjects effect, we find nationality to be significantly associated with overall well-being ($F(2,88) = 6.25$, $p = .003$, $\eta^2(g) = .14$), negative affect ($F(2,198) = 4.76$, $p = .01$, $\eta^2(g) = .11$), and autonomy satisfaction ($F(2,2) = 3.57$, $p = .03$, $\eta^2(g) = .09$). The remaining measures remained unaffected by students' nationalities (positive affect: $F(2,13) = 0.38$, $p = .68$, $\eta^2(g)$

= .01; competence satisfaction: $F(2,1) = 1.18$, $p = .31$, $\eta^2(g) = .03$; relatedness satisfaction: $F(2,1) = 1.02$, $p = .37$, $\eta^2(g) = .03$; autonomy frustration: $F(2,1) = 1.03$, $p = .36$, $\eta^2(g) = .03$; competence frustration: $F(2,1) = 1.60$, $p = .21$, $\eta^2(g) = .04$; relatedness frustration: $F(2,1) = 1.66$, $p = .20$, $\eta^2(g) = .04$).Consequently, we need to control for students' age, gender, and nationality when analysing how their needs relate to their well-being.

Table S4. Correlations between students' sociodemographic information and well-being and need measures

	Age[a]	Gender	First-generation status
Well-being			
Overall well-being	-.16	-.22	-.05
Positive affect	-.11	-.17	-.13
Negative affect[a]	.09	.34**	-.05
Resilience	-.08	-.28*	.13
Need satisfaction			
Autonomy	-.00	-.06	-.07
Competence	-.08	-.06	.07
Relatedness	.24*	.12	.12
Need frustration			
Autonomy[a]	.01	-.02	.03
Competence[a]	.11	.26*	.04
Relatedness[a]	-.20	.14	-.10

* $p < .05$, ** $p < .01$.

[a]These variables were not normally distributed, which is why we display the Spearman instead of the Pearson correlation coefficient.