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IMAGINE YOUR FIRST DAY AT THE UNIVERSITY… WHAT WOULD YOU PREFER?

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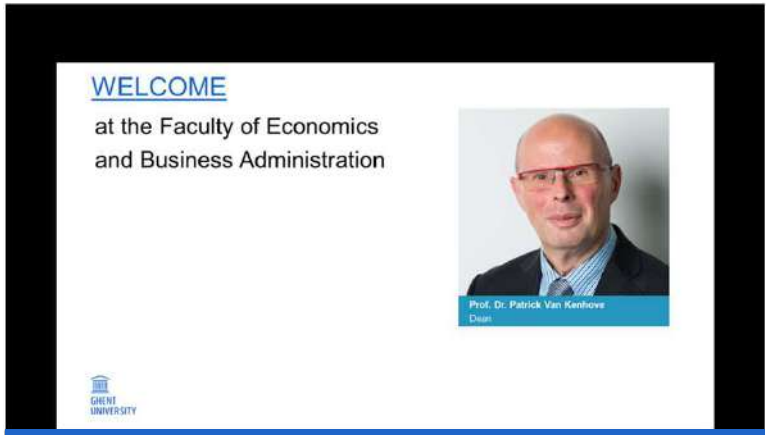

Lecture-based

VS.

Game-based

FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION

DEPARTMENT OF ACCOUNTING, CORPORATE FINANCE AND TAXATION
RESEARCH GROUP ACCOUNTING EDUCATION

MENTAL WELLBEING OF FIRST-YEAR ECONOMICS STUDENTS: THE EFFECT OF A GAME-BASED **ORIENTATION DAY**

Developments in Economics Education Conference 2021
Lize Vanderstraeten, Evelien Opdecam, Patricia Everaert

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RESEARCH CONTEXT

- 1 out of 3 university students has **mental problems** (Auerbach et al., 2018)
- **First-year students** are the most vulnerable (Auerbach et al., 2018)
- **Low** degree of **help-seeking**, especially among students in economics and business (Lipson et al., 2016)
- **Universities' responsibility** to manage student wellbeing (Conley et al., 2014)
- Added value of **orientation** activities (Conley et al., 2014)

FRAMEWORK FOR ENHANCING STUDENT MENTAL WELLBEING IN UNIVERSITIES (BAIK ET AL., 2016)

HYPOTHESES

Students who participated in the game-based orientation day …

1. have a **higher mental wellbeing** at the moment of university entrance (e.g. Baik et al., 2016; Brooman & Darwent, 2014; Conley et al., 2014)
2. experience a **smaller decline** in their **mental wellbeing** after three weeks (e.g. Bewick et al., 2010; Vinson et al., 2010)
3. have more **confidence** in their **own academic success** (e.g. Bowman et al., 2019; St Clair-Thompson et al., 2017)
4. are more **satisfied** with their **orientation day** experience (e.g. Myrtveit et al., 2017; Zhoc et al., 2019)

compared to students who participated in the lecture-based orientation day.

ORIENTATION DAY FORMATS

Lecture-based orientation day

Game-based orientation day

ORIENTATION DAY FORMATS

Lecture-based orientation day	Game-based orientation day
Plenary presentation in a large **auditorium**	**Small groups** of students play the game across the **faculty building**
One-way formal communication by staff	**Informal** student-staff **interaction**
No informal opportunity to **talk** to peers	Working **together with peers**
Limited number of **staff** members are present	**Many staff** members of **all layers** of the faculty are present
All information **in one** slideshow	**Information divided into** +/- 10 different info booths
Students sit and listen: **passively** acquire information	Students **actively** look for information and experience the university's look-and-feel

EXPERIMENTAL DESIGN

	Year 1 (2019)	Year 2 (2020)
SP1 (BE)	**Game-based** orientation day	**Game-based** orientation day
SP2 (BA)	**Lecture-based** orientation day	**Game-based** orientation day

Quasi-experiment:

- Experimental (game-based) vs. control (lecture-based) treatment
- 2x2 factorial design
  - 2 study programmes
  - 2 years of data
- First-year students at the Faculty of Economics and Business Administration
- Quantitative survey data longitudinally collected at $\mathbf{t_0}$ (orientation) and $\mathbf{t_3}$ (week 3)

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SAMPLE

	Year 1 (2019)			Year 2 (2020)		
SP1 (BE)	**Game-based** orientation day			**Game-based** orientation day		
t	t_0	t_3	t_0 and t_3	t_0	t_3	t_0 and t_3
N	464	305	271	448	294	257

SP2 (BA)	**Lecture-based** orientation day			**Game-based** orientation day		
t	t_0	t_3	t_0 and t_3	t_0	t_3	t_0 and t_3
N	488	472	341	450	348	270

t_0 (orientation)
- Mental wellbeing
- Academic self-confidence
- Satisfaction

t_3 (week 3)
- Mental wellbeing

t_0 (orientation)
- Mental wellbeing
- Academic self-confidence
- Satisfaction

t_3 (week 3)
- Mental wellbeing

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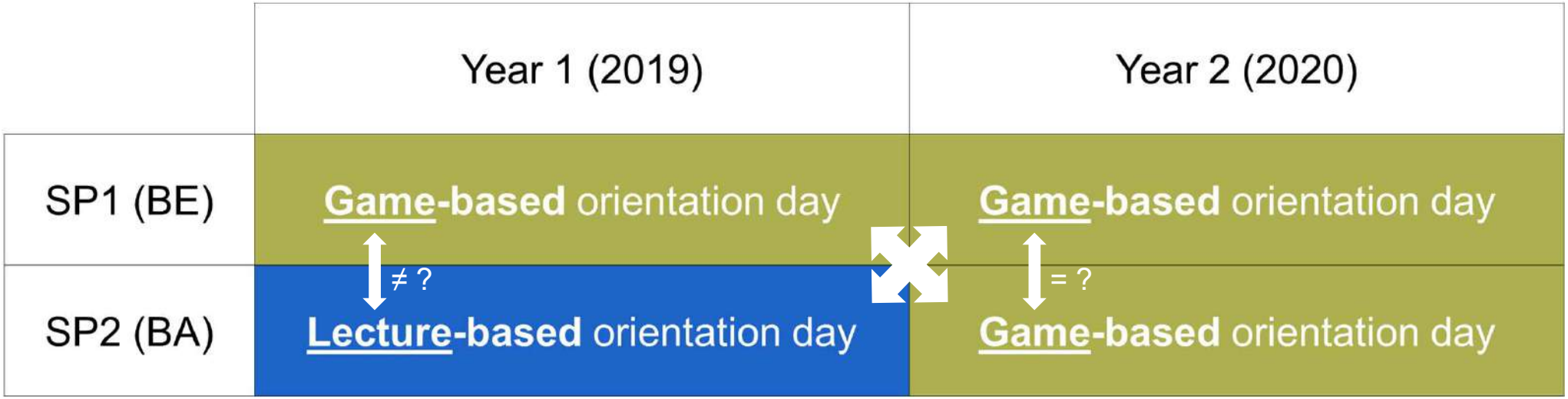
DATA ANALYSIS

Analyses of Covariance



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RESULTS – HYPOTHESIS 1

	Mental wellbeing at the moment of university entrance (t_0)			
	Year 1, N = 888		Year 2, N = 894	
	F-test	p-value	F-test	p-value
Intercept	28851.671	.000	29544.747	.000
Gender	17.502	.000	14.249	.000
Study programme	40.715	**.000**	.712	.399
F-value	29.986		7.650	
p-value	.000		.001	
Adj. R^2	.061		.015	

	Year 1 (2019)	Year 2 (2020)
SP1 (BE)	**Game**-based orientation day	**Game**-based orientation day
SP2 (BA)	**Lecture**-based orientation day	**Game**-based orientation day

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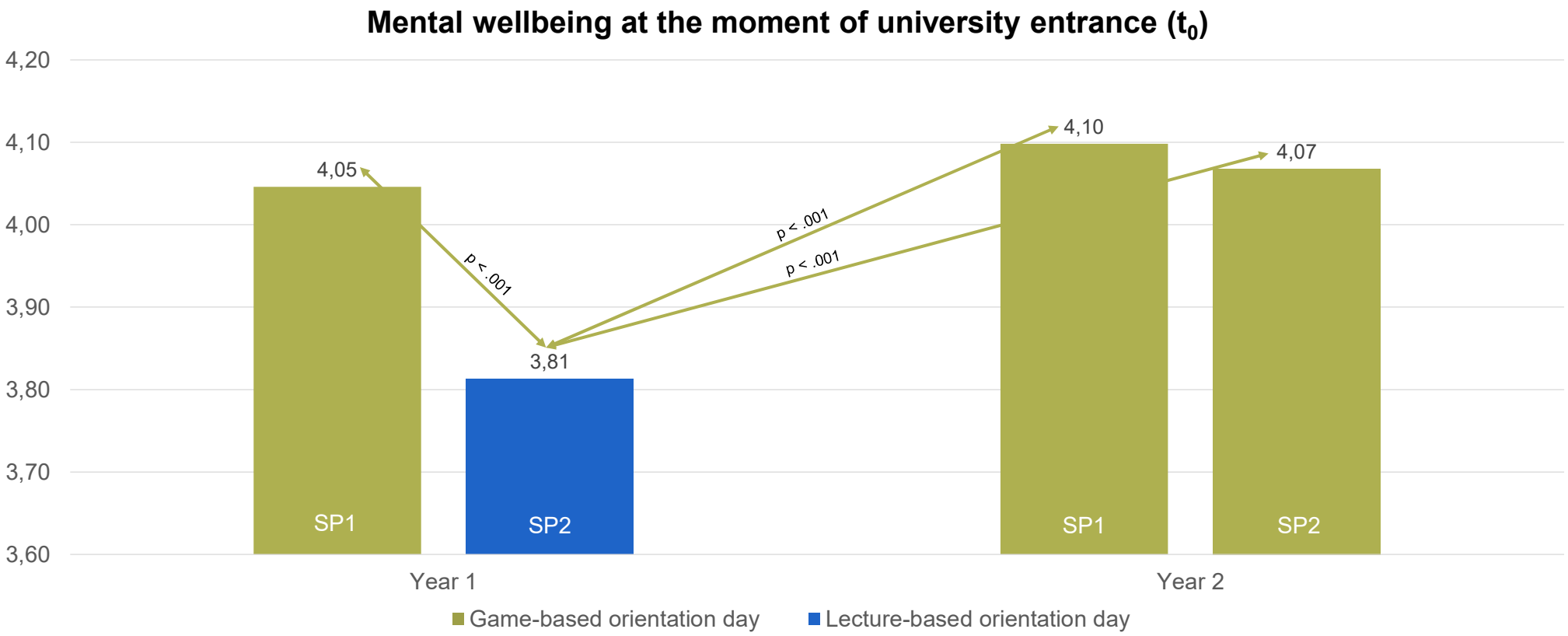
RESULTS – HYPOTHESIS 1



The values are estimated marginal means resulting from ANCOVA (N = 1782) with gender as a covariate. The experimental groups do not differ significantly from each other (p > .10).

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RESULTS – HYPOTHESIS 2

	Evolution of mental wellbeing after three weeks ($\Delta = t_3 - t_0$)			
	Year 1, N = 597		Year 2, N = 525	
	F-test	p-value	F-test	p-value
Intercept	210.281	.000	108.712	.000
Gender	299.660	.000	169.171	.000
Mental wellbeing t_0	2.760	.097	4.552	.033
Study programme	25.833	**.000**	1.025	.312
F-value	100.459		56.572	
p-value	.000		.000	
Adj. R^2	.334		.241	

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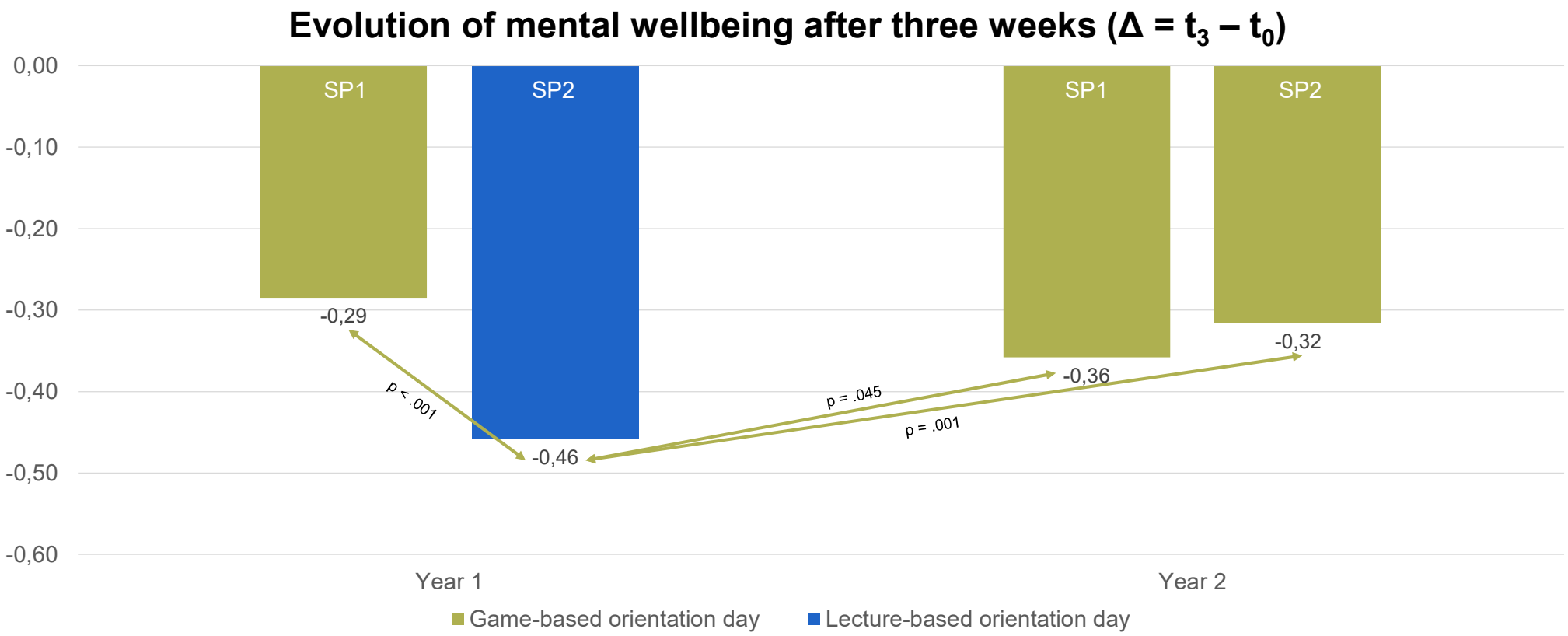
	Year 1 (2019)	Year 2 (2020)
SP1 (BE)	**Game**-based orientation day	**Game**-based orientation day
SP2 (BA)	**Lecture**-based orientation day	**Game**-based orientation day

RESULTS – HYPOTHESIS 2



The values are estimated marginal means resulting from ANCOVA (N = 1122) with gender and mental wellbeing t_0 as covariates. The experimental groups do not differ significantly from each other ($p > .10$).

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RESULTS – HYPOTHESIS 3

	Academic self-confidence			
	Year 1, N = 777		Year 2, N = 818	
	F-test	p-value	F-test	p-value
Intercept	11575.565	.000	12864.155	.000
Gender	10.306	.001	3.299	.070
Study programme	15.432	**.000**	2.857	.091
F-value	13.204		3.280	
p-value	.000		.038	
Adj. R^2	.030		.006	

	Year 1 (2019)	Year 2 (2020)
SP1 (BE)	**Game**-based orientation day	**Game**-based orientation day
SP2 (BA)	**Lecture**-based orientation day	**Game**-based orientation day

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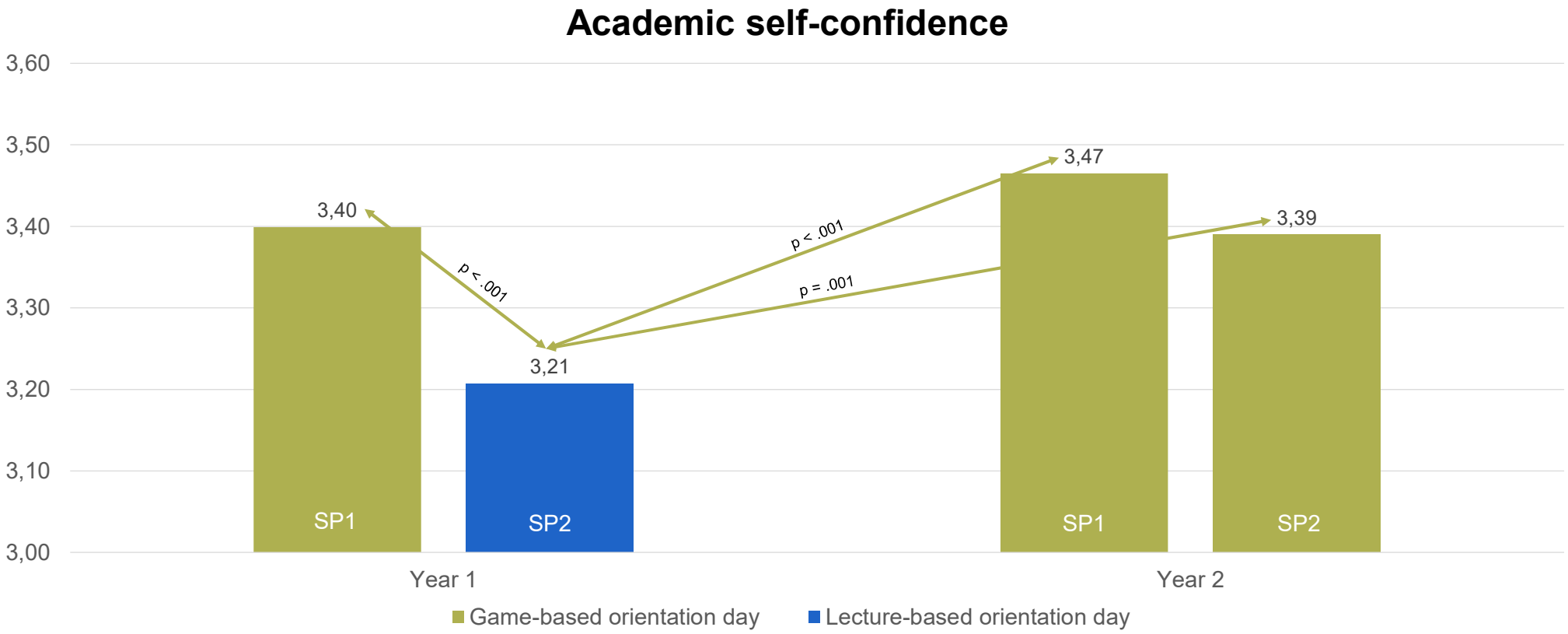
RESULTS – HYPOTHESIS 3



The values are estimated marginal means resulting from ANCOVA (N = 1595) with gender as a covariate. The experimental groups do not differ significantly from each other ($p > .10$).

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RESULTS – HYPOTHESIS 4

	Satisfaction with orientation day			
	Year 1, N = 866		Year 2, N = 887	
	F-test	p-value	F-test	p-value
Intercept	9929.289	.000	11831.361	.000
Gender	7.087	.008	1.010	.315
Study programme	28.644	**.000**	.639	.424
F-value	17.503		.787	
p-value	.000		.455	
Adj. R^2	.037		.000	

	Year 1 (2019)	Year 2 (2020)
SP1 (BE)	**Game**-based orientation day	**Game**-based orientation day
SP2 (BA)	**Lecture**-based orientation day	**Game**-based orientation day

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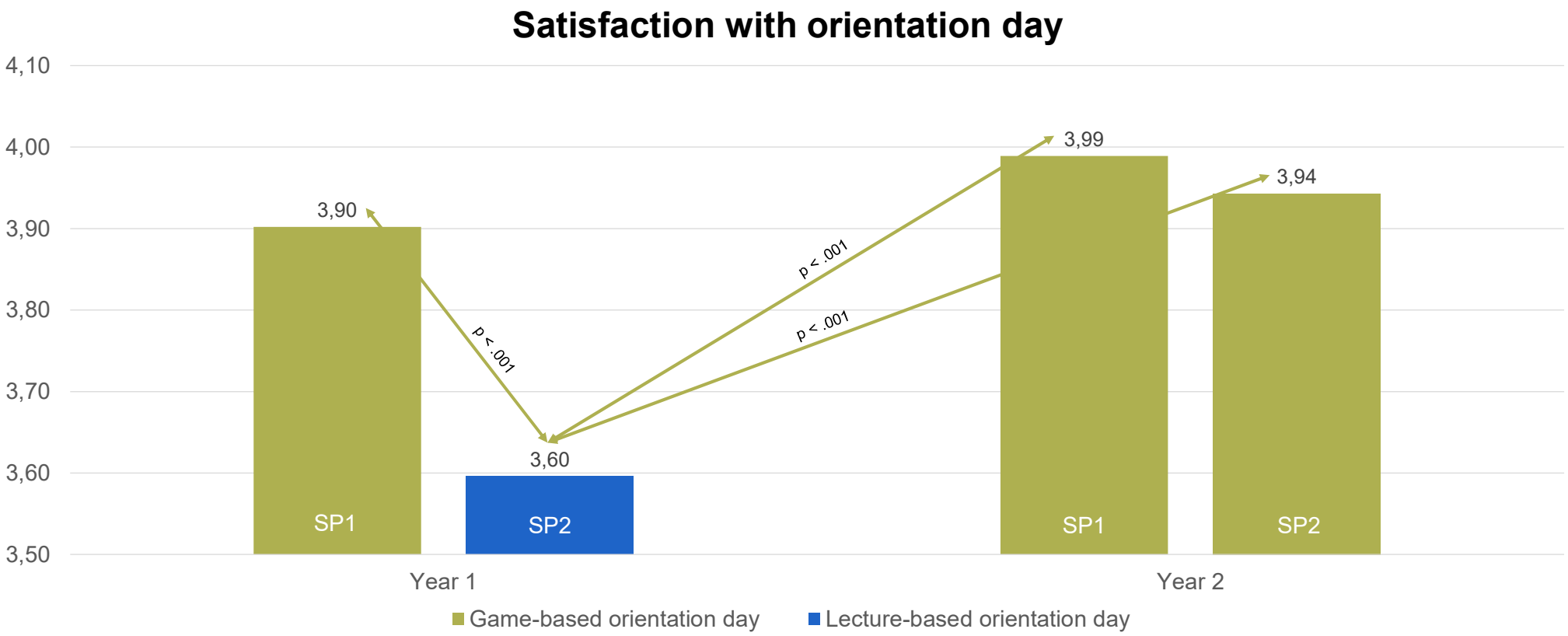
RESULTS – HYPOTHESIS 4



The values are estimated marginal means resulting from ANCOVA (N = 1753) with gender as a covariate. The experimental groups do not differ significantly from each other (p > .10).

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CONCLUSION

Students who participated in the game-based orientation day …

- ☑ have a **higher mental wellbeing** at the moment of university entrance
- ☑ experience a **smaller decline** in their **mental wellbeing** after three weeks
- ☑ have more **confidence** in their own **academic success**
- ☑ are more **satisfied** with the orientation day




compared to students who participated in the lecture-based orientation day.

CONTRIBUTIONS

- Targeted **intervention** to enhance mental wellbeing
  - Beyond observing and reporting
  - Combination of **orientation** activity and **gamified** learning
  - Relevance of **target group**
  - **Immediate** as well as **medium-term** effects
- Large **sample** size (total N = 1850)
- Experimental design:
  both **between-subject** and **within-subject** analyses

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Lecture-based orientation day

Game-based orientation day

Better support during university transition

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