

Appendix

The main aim of the original version of the study was to replicate the results of Ballová Mikušková (2018) study on a non-student sample as well as on a new sample of students – to verify the mid-pointed level of conspiracy beliefs and relationship of conspiracy beliefs with analytic cognitive style and preference for analytic thinking. The secondary aim of the study was the comparison of students and non-students in their conspiracy beliefs. The methods and results for both samples are presented here as originally intended.

Methods

The study was confirmatory. The study was conducted in accordance with the provisions of the Declaration of Helsinki and according to APA standards.

Participants and Procedure

The data from the student sample were collected also in 2018 by the author from first and second-year pedagogy students attending courses of general and ontogenetic psychology. Participation was voluntary and students received extra course credits for participating. A total of 169 undergraduates (84.6% women) aged 18-45 years old ($M = 20.36$; $SD = 3.16$) participated in the study.

For non-student sample details see the “Participants and procedure” in the final study.

Measurement

After reading and signing the informed consent form, the participants completed the Slovak Conspiracy Belief Scale, the Cognitive Reflection Test, the Jellybean Task, the Conspiracy Mentality Questionnaire, the Rational-Experiential Inventory, and the Master Rationality Motive Scale. For description of all the materials used, see the main manuscript.

Results

Descriptive Statistics, Correlations and Differences

The descriptive statistics of all the measures used for student and non-student samples are in Table A1. Conspiracy beliefs of participants were compared (one-sample t-test) to the mean conspiracy beliefs score of students in a previous study ($N = 275$; $M = 3.21$; $SD = 0.80$): both non-students ($t = 2.102$; $p = .036$; $d = 0.097$) and students ($t = 4.182$; $p < .001$; $d = 0.322$) had significantly lower conspiracy belief than students in the previous

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study. Second, the mean of conspiracy beliefs was at the midpoint level (the range was 1-6 points and $M = 3.11$; $SD = 1.06$ for non-students and $M = 2.93$; $SD = 0.87$ for students).

Next, both samples were compared in all variables (Table A1). Non-students preferred rational thinking (REI) significantly more and had a stronger motivation for rational integration. Because there were no differences in conspiracy mentality and conspiracy beliefs between students and non-students, all the following analysis were conducted on the whole sample.

Table A1 *Descriptive statistics and differences between student and non-student samples*

	total		students		non-students		<i>t</i>	<i>p</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
age	36.53	14.94	20.36	3.16	42.35	13.12	21.56	< .001	1.93
cognitive reflection	0.35	0.32	2.17	1.92	2.05	1.91	-0.67	.504	-0.06
denominator neglect (E)	0.74	0.39	2.18	1.18	2.25	1.16	0.65	.518	0.06
denominator neglect (U)	0.52	0.45	1.72	1.33	1.49	1.37	-1.84	.066	-0.17
conspiracy mentality	4.45	0.96	4.43	0.88	4.45	0.99	0.22	.828	0.02
conspiracy beliefs	3.06	1.02	2.93	0.87	3.11	1.06	1.95	.051	0.18
rational thinking	4.00	0.83	3.71	0.79	4.11	0.82	5.53	< .001	0.50
rational engagement	3.94	0.94	3.70	0.92	4.03	0.93	3.84	< .001	0.35
rational ability	4.06	0.92	3.71	0.89	4.19	0.89	6.12	< .001	0.55
experiential thinking	3.93	0.79	3.95	0.74	3.92	0.81	-0.44	.664	-0.04
experiential engagement	4.03	0.90	4.09	0.85	4.01	0.91	-1.03	.303	-0.09
experiential ability	3.83	0.80	3.81	0.78	3.83	0.80	0.29	.769	0.03
motivation for rational integration	3.80	0.57	3.59	0.58	3.88	0.55	5.65	< .001	0.51

Note. $N = 639$, $N_{\text{students}} = 169$, $N_{\text{non-students}} = 470$, denominator neglect (E) – task with equal probability, denominator neglect (U) – task with unequal probability

All conspiracy theories (SCBS) as well as items of the Conspiracy Mentality Questionnaire were sorted by mean to find out what theories people believe (Table A2). On the Slovak conspiracy beliefs scale, participants believed the most (above the mean) that doctors prescribe many harmful medications and antibiotics because they are paid by pharmaceutical companies that profit from manufacturing new medications ($M = 3.79$; $SD = 1.55$), that discrimination against alternative medicine is due to pharmaceutical companies wanting to hide medications' ineffectiveness ($M = 3.78$; $SD = 1.55$), that the source of all problems are lobbyist groups threatening our future in the name of humanism by supporting Muslim immigrants and the Roma minority ($M = 3.53$; $SD = 1.56$), that the 1989 revolution had been prepared since June 1988 and it became an instrument of the internal political power struggle ($M = 3.51$; $SD = 1.41$), that some groups begin attempts to influence our children in school, in order to raise obedient citizens, who will not question orders from above ($M = 3.36$; $SD = 1.46$), that some so-called independent newspapers are under the governance of certain secret groups supported by other countries in order to brainwash and control people ($M = 3.33$; $SD = 1.55$), that the American government was behind the 9/11 attacks in order to start a war with the Muslim world and gain cheap access to power and oil in that part of the world ($M = 3.29$; $SD = 1.58$), and that in the past, some of our prominent politicians have been assassinated by foreign governments to keep the secret of trying to take political control of us ($M = 3.24$; $SD = 1.50$).

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In the Conspiracy Mentality Questionnaire, participants believed the most (above the mean 4.45) that many very important things happen in the world, which the public is never informed about and that politicians usually do not tell the true motives for their decisions.

Table A2 *Factor loading and endorsement rate for all conspiracy beliefs*

	<i>M</i>	<i>SD</i>	<i>Md</i>	<i>Mo</i>	agreem ent (%)
SCBS					
Doctors prescribe many harmful medications and antibiotics because they are paid by large pharmaceutical companies that profit from producing new, unnecessary medications.	3.79	1.55	4	4	36.0
Discrimination of alternative medicine is caused by large pharmaceutical companies in order to hide that many medications are ineffective or less effective than alternative treatments.	3.78	1.55	4	4	35.4
The source of our problems are various lobbyist groups that threaten our future in the name of humanism, e.g. by supporting Muslim immigrants and the Roma minority.	3.53	1.56	4	4	28.3
The 1989 revolution had been prepared since June 1988; it was not spontaneous. It became an instrument of an internal political power struggle, as evidenced by the fact that the communist regime fell in all countries of the former Eastern bloc almost simultaneously.	3.51	1.41	3	3	24.0
Some groups begin efforts to influence our children in school in order to raise obedient citizens who will not question orders from above.	3.36	1.46	3	3	22.5
Some of our so-called independent newspapers are under the governance of certain secret groups supported by other countries in order to brainwash and control us.	3.33	1.55	3	3	25.0
The American government was behind the 9/11 attacks in order to start a war with the Muslim world and gain cheap access to power and oil in that part of the world.	3.29	1.58	3	3	24.2
In the past, some of our prominent politicians have been assassinated by foreign governments to keep the secret of trying to take political control of us.	3.24	1.50	3	3	21.6
There is a growing effort in our country to destroy the traditional family and Christian values through gender propaganda in schools which was produced by influential homosexuals.	3.02	1.71	3	1	22.7
There are efforts to legalize the taking of children for adoption for paying customers from the West (especially homosexuals and paedophiles).	2.88	1.49	3	1	14.4
Global warming is deliberately caused by developed countries to control and subsequently reduce the world's population.	2.77	1.51	3	1	14.2
The world should not have learnt that Princess Diana was pregnant by her lover Dodi al-Fayed, so her death was ordered by the British royal family.	2.64	1.42	3	1	11.6
The deadly HIV virus was cultivated in a CIA laboratory and along with other viruses is being spread as aerosols by airplanes in the form of vapour trails in the sky.	2.37	1.39	2	1	8.7
Global warming is a fabrication of several groups in order to halt industry in Western countries and make profit by penalties from companies who produce the so-called emissions.	2.23	1.35	2	1	6.4

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Childhood vaccination is mandatory so that large pharmaceutical companies can experiment on our children and develop biological weapons.	2.16	1.37	2	1	7.3
CMQ					
I think that politicians usually do not tell us the true motives for their decisions.	5.06	1.06	5	6	74.8
I think that many very important things happen in the world which the public is never informed about.	4.90	1.14	5	6	66.3
I think that there are secret organizations that greatly influence political decisions.	4.28	1.36	4	4	45.9
I think that events which superficially seem to lack a connection are often the result of secret activities.	4.00	1.31	4	4	36.2
I think that government agencies closely monitor all citizens.	3.99	1.32	4	4	36.7

Note. Agreement – score of 5 or 6

Predictors of conspiracy beliefs

The mutual correlation of all used variables are in Table A3. Conspiracy beliefs positively correlated with conspiracy mentality (CMQ) and a preference for experiential thinking (REI) and negatively with cognitive reflection (CRT), denominator neglect (JBT – items with unequal probabilities), preference for rational thinking (REI) and motivation for rational integration (MRMS).

Table A3 Correlations of conspiracy beliefs and conspiracy mentality with other variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. conspiracy beliefs											
2. conspiracy mentality	.60**										
3. cognitive reflection	-.18**	-.11**									
4. denominator neglect (E)	-.07	-.02	.22**								
5. denominator neglect (U)	-.14**	-.12**	.42**	.15**							
6. rational thinking	-.14**	-.06	.23**	.12**	.15**						
7. rational engagement	-.14**	-.10*	.17**	.09*	.10*	.90**					
8. rational ability	-.12**	-.01	.24**	.12**	.17**	.90**	.62**				
9. experiential thinking	.18**	.29**	-.16**	-.03	-.14**	-.03	-.02	-.03			
10. experiential engagement	.17**	.28**	-.13**	-.04	-.11**	-.00	.02	-.03	.94**		
11. experiential ability	.16**	.26**	-.17**	-.01	-.15**	-.04	-.05	-.03	.93**	.75**	
12. motivation for rational integration	-.24**	-.13**	.18**	.11**	.142**	.50**	.38**	.53**	-.29**	-.29**	-.25**

Note. * $p < .05$; ** $p < .01$; *** $p < .001$

The conspiracy mentality, cognitive reflection, resistance to denominator neglect, rational thinking preference, experiential thinking preference and motivation for rational thinking were examined as predictors of conspiracy beliefs. First, the assumption of linear regression was tested: A P-P plot showed that residuals of

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the regression followed a normal distribution and are equally distributed, and the variance inflation factor (VIF) values were between 1.101 and 1.495 – the predictor variables were not highly correlated with each other. The assumption of linear regression was met and the linear regression was conducted (Table A4).

Regression statistics are in Table 4. The linear regression revealed that only conspiracy mentality, cognitive reflection and motivation for rational integration contributed significantly to the regression model ($F(6, 632) = 68.663, p < .001, R^2 = .395$).

Table A4 Summary of linear regression analysis for variables predicting conspiracy beliefs

predictors	conspiracy beliefs					collinearity	
	B	SE	β	t	p	tolerance	VIF
(Constant)	1.761	0.334		5.271	< .001		
conspiracy mentality	0.614	0.034	0.581	17.892	< .001	0.908	1.101
cognitive reflection	-0.260	0.111	-0.082	-2.338	0.020	0.788	1.269
denominator neglect	-0.058	0.077	-0.026	-0.760	0.448	0.816	1.226
rational thinking	-0.009	0.045	-0.007	-0.202	0.840	0.706	1.416
experiential thinking	-0.065	0.044	-0.051	-1.487	0.137	0.822	1.217
motivation for rational integration	-0.268	0.067	-0.152	-4.011	< .001	0.669	1.495
$F(6, 632) = 68.663, p < .001, R^2 = .395$							

Comment

Because there were no differences in main variables between student and non-student samples, the exclusion of a student sample would not play any significant role in the results (in particular if it was a sample which was not representative). To sum up, the analysis with both of the study samples consistently showed the mid-pointed level of conspiracy beliefs of participants, and that conspiracy mentality, cognitive reflection and motivation for rational integration were significant predictors of the conspiracy beliefs.