Bayesian Analysis PDR1

The null hypothesis (H0) is that there is no difference between the time pressure and the self-paced conditions, the one-sided alternative hypothesis (H1) is that time pressure increases cheating. We calculated, using JASP 0.10 the Bayes Factor (BF) for the Bayesian Mann-Whitney test that assesses the differences between the time pressured and self-paced condition on the self-reported die roll outcome (using JAPS's default settings; i.e., Cauchy prior centered around zero with width of r=0.707; but also provide robustness check across wide range of priors). BF₁₀ expresses how more likely the data are to occur under H1 than under H0. BF₀₁ expresses how more likely the data are to occur under H0 than under H1.

Group Descriptives

						95% Credible Interval		
	Group	N	Mean	SD	SE	Lower	Upper	
Die outcome	0	230	3.757	1.701	0.112	3.536	3.977	
	1	198	3.611	1.732	0.123	3.368	3.854	

 $^{0 = \}text{self-paced}, 1 = \text{time pressured}$

Bayesian Mann-Whitney U Test

	$\mathbf{BF}_{ ext{!`}}$	\mathbf{W}	R^
Reporteddicerolloutcome	16.06	23862	1.000

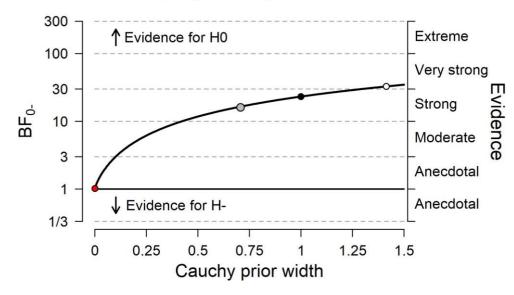
Note. For all tests, the alternative hypothesis specifies that group θ is less than group I. *Note.* Result based on data augmentation algorithm with 5 chains of 10000 iterations.

Bayes Factor Robustness Check

max BF₋₀: 0.981 at r = 0.0005
user prior: BF₀₋ = 16.056

• wide prior: $BF_{0-} = 23.165$

o ultrawide prior: BF₀₋ = 32.758



Conclusion

The data of PDR1 are 16.06 times more likely under H0 that time pressure does not affect cheating than under H1 that time pressure increases cheating. The data of PDR1 provide 'strong' evidence for the null hypothesis.