

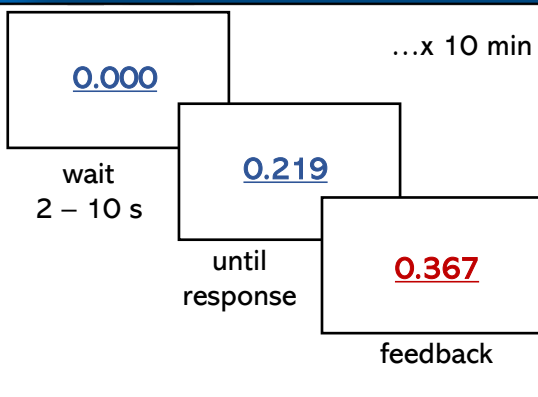


Introduction

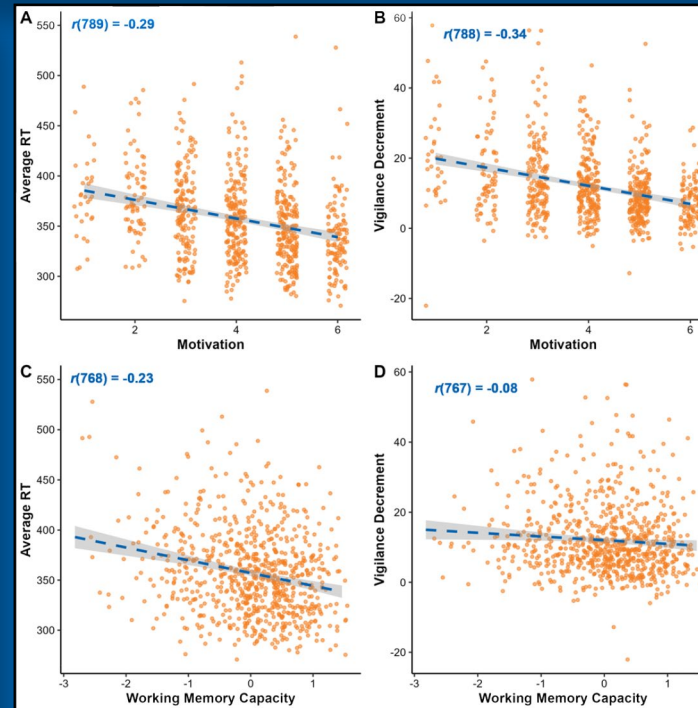
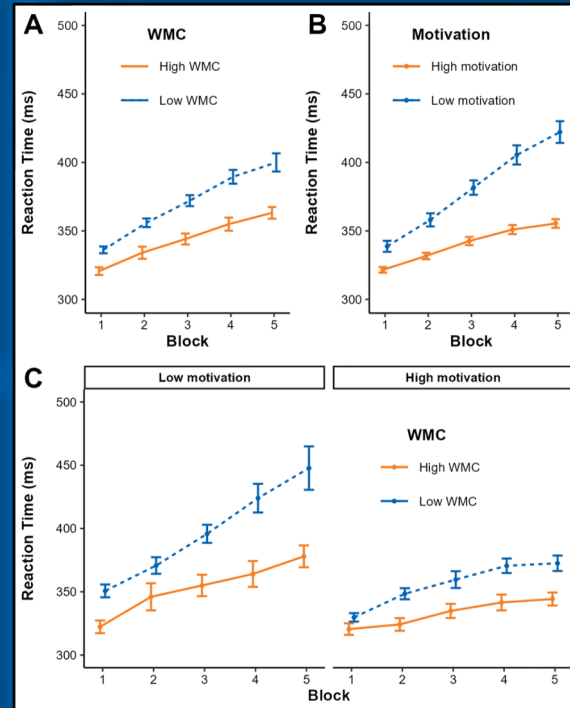
- Individual differences in working memory capacity (WMC) correlate with sustained attention abilities.¹
- But sustained attention is also sensitive to intrinsic^{2 3 4} and extrinsic^{5 6 7} motivation.
- Are motivational differences eliminated for high/low WMC participants?
- Are WMC-related differences eliminated at high/low motivation?

Method

- Participants ($N = 784$) completed complex span working memory tasks (operation span, symmetry span, and reading span) and a 10-minute psychomotor vigilance task.
- At the end of the task, participants were asked to rate their motivation on 6-point scale.



Matthew K. Robison
The University of Texas at Arlington



Results

- Motivation and WMC were not correlated ($r = 0.004$).
- Motivation correlated with faster overall RTs and a shallower vigilance decrement.
- WMC correlated with faster overall RTs, but was only weakly correlated with the vigilance decrement.
- WMC-related differences were observed at both high and low levels of motivation.
- Motivation-related differences were observed for both high- and low-WMC participants.

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Linear mixed effects model

Effect	b	SE	df	t	p
Intercept	362.40	2.05	777.44	176.45	< 0.001
Block	13.52	0.66	756.48	20.51	< 0.001
Motivation	-14.98	2.61	777.56	-9.78	< 0.001
WMC	-16.03	0.49	778.10	-6.13	< 0.001
Block x Motivation	-1.93	0.84	756.27	-8.56	< 0.001
Block x WMC	-4.21	1.51	758.95	-2.23	0.022
Motivation x WMC	0.20	1.94	778.62	0.11	0.917
Block x Motivation x WMC	0.13	0.63	760.23	0.22	0.834