

**S2 Table. Correlations between symptom severity and RL parameters.**

		HC	OCD	PG
Reward trial	$\alpha_+$ vs. OCI-R:	$r = 0.153$ ( $P = 0.389$ )	$r = 0.059$ ( $P = 0.760$ )	$r = -0.036$ ( $P = 0.891$ )
	$\alpha_+$ vs. PGSI:	$r = \text{N/A}$ ( $P = \text{N/A}$ )	$r = -0.105$ ( $P = 0.588$ )	$r = -0.220$ ( $P = 0.400$ )
	$\alpha_-$ vs. OCI-R:	$r = -0.177$ ( $P = 0.318$ )	$r = -0.178$ ( $P = 0.356$ )	$r = -0.184$ ( $P = 0.480$ )
	$\alpha_-$ vs. PGSI:	$r = \text{N/A}$ ( $P = \text{N/A}$ )	$r = 0.020$ ( $P = 0.920$ )	$r = -0.286$ ( $P = 0.266$ )
Avoidance trial	$\alpha$ vs. OCI-R:	$r = -0.133$ ( $P = 0.452$ )	$r = 0.163$ ( $P = 0.397$ )	$r = 0.115$ ( $P = 0.659$ )
	$\alpha$ vs. PGSI:	$r = \text{N/A}$ ( $P = \text{N/A}$ )	$r = -0.104$ ( $P = 0.593$ )	$r = -0.216$ ( $P = 0.404$ )
	$\gamma$ vs. OCI-R:	$r = -0.305$ ( $P = 0.080$ )	$r = 0.021$ ( $P = 0.916$ )	$r = -0.066$ ( $P = 0.802$ )
	$\gamma$ vs. PGSI:	$r = \text{N/A}$ ( $P = \text{N/A}$ )	$r = -0.084$ ( $P = 0.663$ )	$r = -0.081$ ( $P = 0.758$ )

RL parameters:  $\alpha_+$ , learning rate for the positive reward prediction error;  $\alpha_-$ , learning rate for the negative reward prediction error;  $\alpha$ , learning rate; and  $\gamma$ , perseveration. Symptom severity: OCI-R, total score of Obsessive-Compulsive Inventory-Revised; and PGSI, total score of Problem Gambling Severity Index. Note that in HC all the participants had zero score in PGSI and so the correlations with the RL parameters are not defined.