



**S5 Fig. Supplementary behavioural analysis on the simulated data.**

- (a) Proportion of correct choices in reward trials (mean  $\pm$  SD). The correct choice was defined as selecting the option that provided the higher reward (or lower loss) probability in the given trial. HC, healthy control; OCD, obsessive-compulsive disorder; and PG, pathological gambling.
- (b) Proportion of correct choices in avoidance trials (mean  $\pm$  SD). The format is the same as in (a).
- (c) Effects of past rewards and choices on current behaviour in reward trials (mean  $\pm$  SEM). The format is the same as in Fig 2a.
- (d) Effects of past losses and choices on current behaviour in avoidance trials. The format is the same as in Fig 2b.

Summary data to reproduce the figure are available at <https://osf.io/v7em5/>.