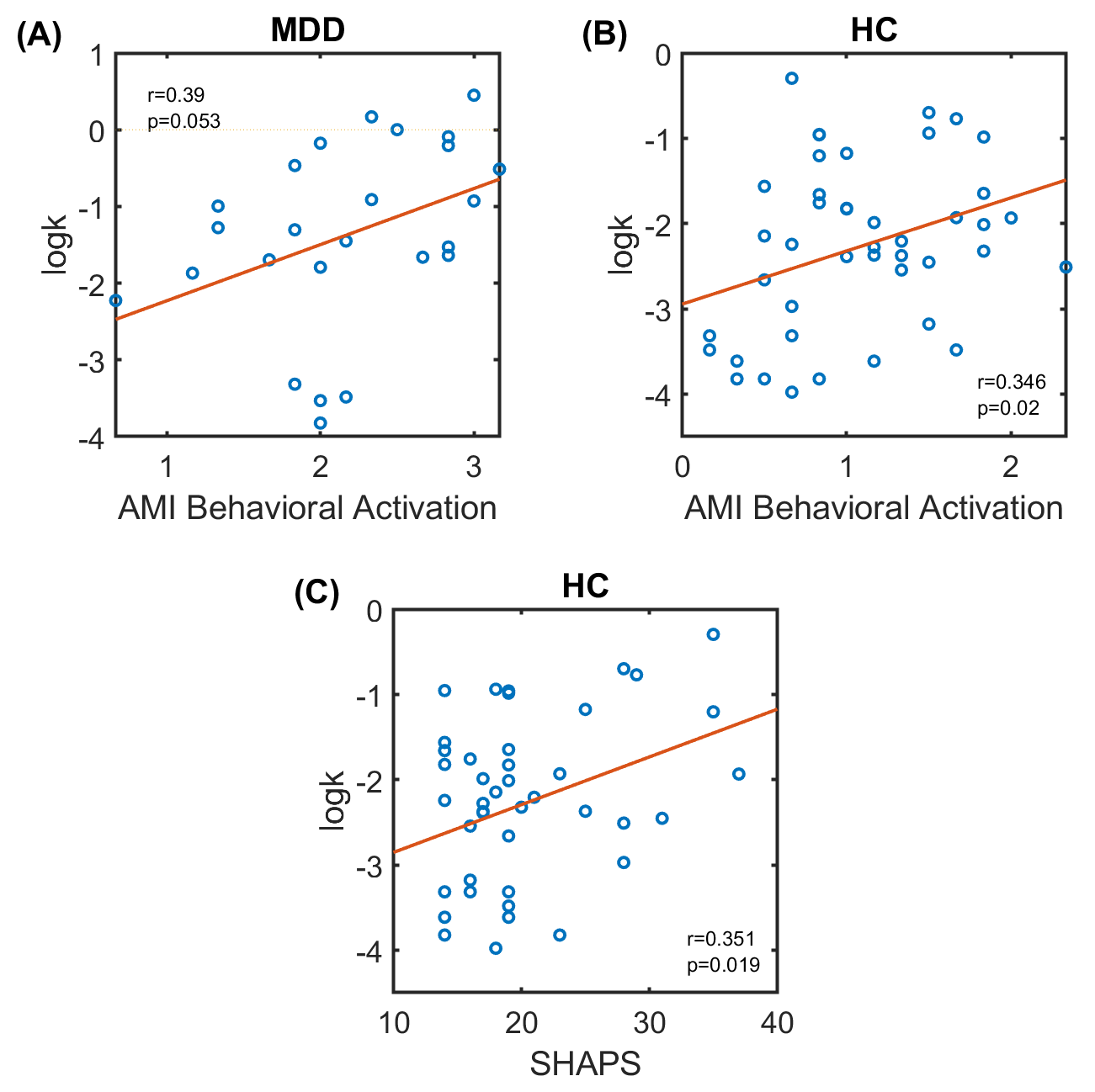
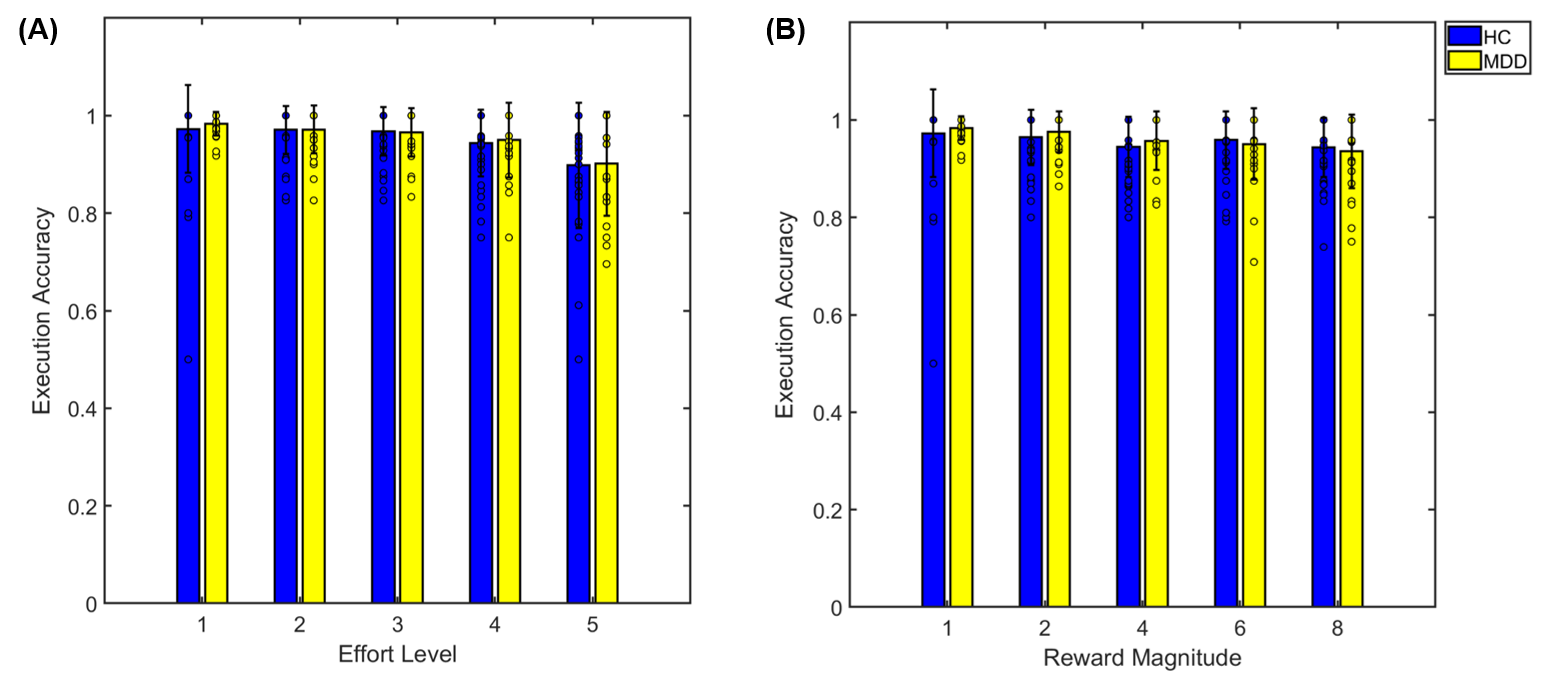
**Supplemental Information**

Cognitive Effort-based Decision Making in Major Depressive Disorder

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**Supplemental Figure 1. Associations of log*k* with self-reported motivation and anhedonia. (A)** There was a positive trending correlation between log*k* and the Apathy Motivation Index (AMI) *Behavioral Activation* subscale in the MDD group, suggesting that depressed patients who reported lower motivation in the behavioral domain were less willing to invest cognitive effort for reward on the task. **(B)** Within the healthy controls (HC), log*k* was significantly positively correlated with AMI *Behavioral Activation* subscale, which suggests that healthy individuals who had lower behavioral motivation exhibited lower willingness to exert cognitive effort in order to obtain reward. **(C)** In the HC group, there was a significant positive association between log*k* and total score on the Snaith Hamilton Pleasure Scale (SHAPS), suggesting that healthy participants who reported lower anhedonia were less willing to invest cognitive effort for reward.



**Supplemental Figure 2. Association of execution accuracies with effort and reward levels. (A)** Participants overall had significantly lower execution accuracy when they had to remember 5 squares compared to other effort levels, but there were no significant differences in execution accuracy when remembering between 1–4 squares. Nevertheless, the mean accuracy at the effort level of 5 squares was still high at ~87%. **(B)** There were no differences in execution accuracy between the various reward magnitude levels. Dots within the bars represent individual participant data.