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Supplementary Material

Impulsive and Omission Errors: Potential Temporal Processing Endophenotypes in ADHD

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Supplementary Table 1. Evaluation of a binary system for ADHD prediction. **(a)** Possible results when the real and predicted ADHD status are compared. Here, *a* is the number of individuals with ADHD that are correctly classified, *b* is the number of ADHD affected individuals classified unaffected (controls), *c* corresponds to the number of ADHD unaffected individuals (controls) classified as ADHD affected, and *d* to the number of ADHD unaffected individuals correctly classified. **(b)** Expressions for calculating the performance measures used to quantify the performance of the predictive model for ADHD.

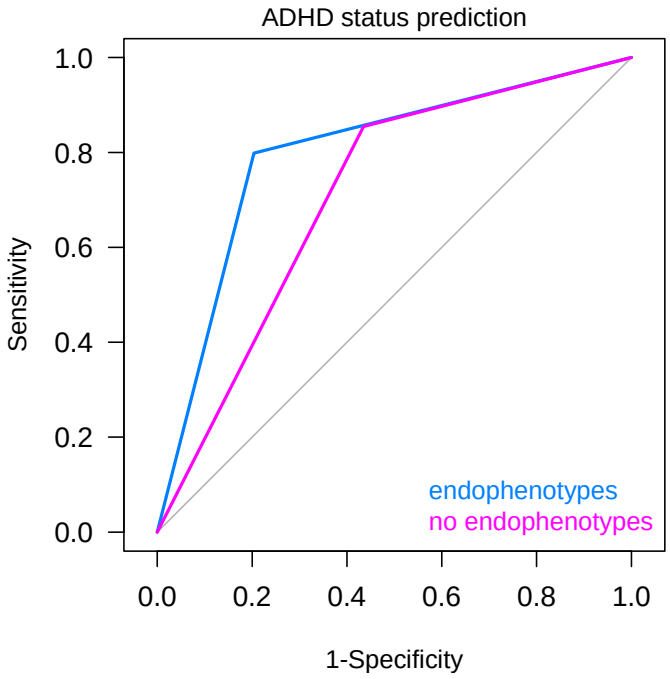
(a)

Phenotype	**Prediction**	
	ADHD affected	**Control**
ADHD affected	*a*	*b*
Control	*c*	*d*

(b)

Measure	**Expression**
Sensitivity	$a / (a+c)$
Specificity	$d / (b+d)$
Precision	$a / (a+b)$
Classification rate (CR)	$(a+d) / (a+b+c+d)$
Lift	$a\ (a+b+c+d) / \{(a+b)(a+c)\}$

ADHD: Attention Deficit Hyperactivity Disorder.



Supplementary Figure 1. ROC curves of predictive models for ADHD diagnosis including only demographic information (model 1, in pink) and endophenotypes (model 2, in blue). See Table 2 for more information on the neuropsychological tasks that met the endophenotypes criteria. Our results indicate that model 2 outperforms model 1 as measured by the specificity (0.796 vs. 0.565, $P<0.01$), classification rate (0.795 vs. 0.712, $P<0.05$), AUC (0.797 vs. 0.709, $P<0.05$) and lift (1.531 vs. 1.296, $P<0.05$) measures, and have a similar sensitivity (0.798 vs. 0.854, $P>0.05$). Overall, including the endophenotypes in the predictive model improves ADHD diagnosis classification compared to using demographic data alone.