

Appendix 1 to Petker T, Owens MM, Amlung MT, et al. Cannabis involvement and neuropsychological performance: findings from the Human Connectome Project.. *J Psychiatry Neurosci* 2019.

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SUPPLEMENTARY MATERIALS

Supplementary Table 1. Zero-order correlation matrix between covariates and cannabis involvement variables.

	1	2	3	4	5	6	7	8	9	10	11
1. Sex	—										
2. Age	.214**	—									
3. Income	.004	.266**	—								
4. Education	.041	.091**	.388**	—							
5. Tobacco Use	-.145**	.007	-.187**	-.326**	—						
6. Alcohol Use	.205**	.054	-.075	-.118**	-.064*	—					
7. DZ Twin	.086*	.058	.007	.023	.015	-.006	—				
8. MZ Twin	.046	.074*	.054	.007	-.037	.039	-.246**	—			
9. UDS THC+	-.141**	-.085**	-.246**	-.288**	.325**	-.100**	-.022	-.090*	—		
10. CUD+	-.182**	-.022	-.089*	-.112**	.228**	-.128**	-.015	-.027	.271**	—	
11. Cannabis AFU	-.127**	-.001	-.099**	-.145**	.298**	-.215**	-.016	-.061	.329**	.409**	—
12. Lifetime Cannabis Use	-.194**	-.012	-.156**	-.169**	.353**	-.269**	.008	-.067	.502**	.556**	.800**

Notes: DZ Twin = dizygotic twin status; MZ Twin = monozygotic twin status; UDS = Urine Drug Screen; THC = tetrahydrocannabinol; CUD = Cannabis Use Disorder; AFU = age of first use; SPCPT. * Correlation is significant at the .005 level (2-tailed); ** Correlation is significant at the .001 level (2-tailed)

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Supplemental Table 2. Hierarchical regressions comprising covariate model (Sex, Age, Income, Education, Tobacco Use, Alcohol Use, DZ Twin, MZ Twin) and cannabis involvement variables (UDS THC, CUD and cannabis AFU) .

Neuropsychological Test	Covariate Model R²	P	Cannabis Involvement ΔR²	P
Word Memory Test	.050	<.001*	.003	.383
Flanker Task	.031	<.001*	.008	.020
Card Sorting Task	.032	<.001*	.003	.403
SPCPT	.049	<.001*	.005	.115
Progressive Matrices	.141	<.001*	.012	.001*
Delay Discounting	.063	<.001*	.003	.316
Picture Sequence Task	.070	<.001*	.010	.005*
Pattern Completion	.033	<.001*	.016	<.001*
List Sorting Task	.067	<.001*	.006	.061
9-hole Pegboard	.104	<.001*	.005	.098

Note: DZ Twin = dizygotic twin status; MZ Twin = monozygotic twin status; UDS = Urine Drug Screen; THC = tetrahydrocannabinol; CUD = Cannabis Use Disorder; AFU = age of first use; * Significant at the $p < .005$ level.

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Supplemental Table 3. Individual hierarchical regressions of covariates and cannabis involvement variables in relation to neuropsychological performance for regression models significant at the $p < .005$ level.

Model	Variables	Progressive Matrices		Picture Sequence		Processing Speed	
		β	P	β	P	β	P
<i>Covariate Model</i>	Gender	.145	<.001*	.147	<.001*	.019	.540
	Age	.083	.005*	-.037	.229	-.041	.185
	Income	-.065	.037	.069	.034	.060	.070
	Education	-.258	<.001*	.173	<.001*	.070	.037
	Tobacco	.092	.003*	.018	.567	.002	.952
	Alcohol	.035	.235	-.016	.594	-.055	.072
	DZ Twin	-.009	.751	.035	.239	.075	.014
MZ Twin	-.011	.687	-.001	.962	.052	.088	
<i>Cannabis Involvement</i>	UDS THC+	.064	.042	-.113	<.001*	-.126	<.001*
	Cannabis AFU	.059	.063	.030	.366	-.035	.295
	CUD+	-.105	.001*	.034	.282	.064	.050

Notes: DZ Twin = dizygotic twin status; MZwin = monozygotic twin status; UDS = Urine Drug Screen; THC = tetrahydrocannabinol; AFU = age of first use; CUD = Cannabis Use Disorder; *Significant at the $p < .005$ level.

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Model	Variables	Females Progressive Matrices		Males Progressive Matrices		Females Picture Sequence		Males Picture Sequence		Females Pattern Completion		Males Pattern Completion	
		β	<i>P</i>	β	<i>P</i>	β	<i>P</i>	β	<i>P</i>	β	<i>P</i>	β	<i>P</i>
<i>Covariate Model</i>	Age	.037	.347	.098	.030	-.035	.408	-.037	.431	.028	.506	-.070	.132
	Income	-.076	.077	-.048	.318	.125	.006	.005	.913	.085	.066	.044	.372
	Education	-.329	<.001	-.192	<.001	.227	<.001	.120	.017	.075	.105	.058	.248
	Tobacco	.103	.012	.083	.082	.036	.404	-.001	.990	.038	.388	-.020	.678
	Alcohol	.076	.058	-.004	.923	.028	.498	-.051	.257	-.139	.001	.007	.884
	DZ Twin	.029	.461	-.050	.246	.018	.672	.040	.372	.002	.960	.129	.004
	MZ Twin	.042	.289	-.069	.107	-.048	.323	-.018	.689	.008	.850	.091	.040
<i>Cannabis Involvement</i>	UDS THC+	.013	.774	.080	.111	-.048	.458	-.183	<.001	-.130	.008	-.105	.042
	Lifetime Use	.032	.529	.097	.106	.040	.458	.010	.865	.003	.959	-.064	.298
	CUD+	-.142	.001	-.113	.031	.056	.211	.032	.550	.096	.035	.065	.225

Supplementary Table 4. Sex-stratified individual hierarchical regressions of covariates and cannabis involvement variables in relation to neuropsychological performance.

Note: DZ Twin = dizygotic twin status; MZ Twin = monozygotic twin status; UDS = Urine Drug Screen; THC = tetrahydrocannabinol; CUD = Cannabis Use Disorder