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Supplementary Material

Article Title: One Month of Cannabis Abstinence in Adolescents and Young Adults Is Associated With Improved Memory

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Supplementary Table 1. Comparison of Baseline Cognitive Functioning Among Participants Randomized to Cannabis Abstinence or Monitoring

	Monitoring (MJ-Mon; n=26)	Abstinent (MJ-Abst; n=62)	p-values
Memory (z)	-0.01 (0.4)	0.004 (0.5)	0.91
Verbal Recognition Memory (z)	0.03 (0.8)	-0.01 (0.9)	0.85
Trial 1 (raw/z)	9.1 (2.0)/0.2 (0.9)	8.3 (2.2)/-0.1 (1.0)	0.16
Total Encoded (raw/z)	20.6 (4)/0.002 (0.9)	20.6 (4.9)/-0.001 (1.1)	0.99
Delayed Recall (raw/z)	9.9 (2.8)/-0.2 (1.0)	10.5 (3.0)/0.1 (1.0)	0.36
Spatial Span (z)	-0.03 (.4)	0.01 (0.5)	0.71
Span Length(raw/z)	6.9 (1.5)/-0.2 (1.1)	7.2 (1.2)/0.1 (0.9)	0.36
Time to Last Response (raw/z)	7758.5 (1931.1)/0.1 (1.1)	7978.2 (1642.3)/-0.04 (1.0)	0.59
Delayed Matching to Sample (z)	-0.03 (0.5)	0.01 (0.6)	0.80
Total Correct at 0ms Delay (raw Mdn, IQR/ z Mdn, IQR)	7[7, 8]/-0.03[-0.03,0.9]	7[6, 8]/-0.9[-0.03,0.9]	0.89
Total Correct at 4000ms Delay (raw Mdn, IQR/ z Mdn, IQR)	7[7, 8]/0.2[0.2,0.9]	7[5, 8]/-1. 3[0.2,0.9]	0.19
Total Correct at 12000ms Delay (raw Mdn, IQR/ z Mdn, IQR)	7[6, 8]/-0.02[-0.8,0.8]	8[6, 8]/0.8[-0.8,0.8]	0.49
Response Latency at 0ms Delay (raw/z)	2701.0 (607.1)/-0.1 (0.9)	2606.0 (743.7)/0.04 (1.1)	0.57
Response Latency at 4000ms Delay (raw/z)	3529.8 (1181.7)/-0.2 (1.2)	3243.9 (886.4)/0.09 (0.9)	0.22
Response Latency at 12000ms Delay (raw/z)	3933.6 (1467.7)/-0.2 (1.2)	3606.9 (1043.6)/0.1 (0.9)	0.24
Attention (z)	-0.08 (0.7)	0.02 (0.7)	0.54
Rapid Visual Processing (z)	-0.10 (1.0)	0.04 (0.7)	0.46
A Prime (raw/z)	0.9 (0.1)/0.02 (1.0)	0.9 (0.1)/-0.01 (1.0)	0.91
Total False Alarms (raw Mdn, IQR/ z Mdn, IQR)	1[0,2]/0.2[-0.2,0.6]	1[0,2]/0.2[-0.2,0.6]	0.59
Hits (raw/z)	19.7 (4.5)/0.05 (0.9)	19.4 (5.1)/-0.02 (1.0)	0.75
Response Latency (raw/z)	420.7 (120.4)/-0.2 (1.3)	396.3 (78.7)/0.1 (0.8)	0.27
Response Latency Variability (raw/z)	175.2 (129.6)/-0.1 (1.3)	160.5 (84.8)/0.04 (0.9)	0.53
Attention Switching Task (z)	-0.06 (0.6)	0.02 (0.8)	0.65
Total Errors (raw Mdn, IQR/ z Mdn, IQR)	0[0, 0]/0.4[0.4,0.4]	0[0, 0]/0.4[0.4,0.4]	0.56
Response Latency (raw/z)	516.3 (80.3)/-0.1 (0.7)	502.2 (121.2)/0.04 (1.1)	0.59
Congruency Cost (raw/z)	50.7 (45.6)/-0.01 (1.1)	50.1 (39.5)/0.004 (1.0)	0.96
Switching Cost (raw/z)	230.4 (124.0)/-0.2 (0.9)	188.5 (140.2)/0.1 (1.0)	0.19

Note. All values represent mean and standard deviations unless otherwise noted.

Supplementary Table 2. Baseline Comparison Between MJ-Abst Participants Who Were and Were Not Able to Maintain 30 Days of Cannabis Abstinence

	Abstinent Participants in MJ-Abst (n = 55)	Non-Abstinent Participants in MJ-Abst (n = 7)	p-values
Demographics			
Sex, male, n (%)	31 (56.4)	5 (71.4)	0.45
Age	20.6 (2.1)	19.9 (1.2)	0.36
Education (in years)	13.9 (1.9)	14.0 (1.0)	0.94
Race, n (%)			
White	42 (76.4)	2 (28.5)	0.002
Black	4 (7.3)	3 (42.9)	
Asian	2 (3.6)	0 (0)	
More than One Race	7 (12.7)	1 (14.3)	
Other	0 (0)	1 (14.3)	
Ethnicity, Hispanic, n (%)	4 (7.3)	2 (28.6)	0.07
Cognition and Achievement			
IQ	109.1 (7.6)	98.9 (10.8)	0.002
GPA	3.2 (0.4)	2.6 (0.5)	0.002
Baseline Alcohol Use			
Past 90 Day Alcohol Use			
Days Alcohol Consumed	22.3 (12.9)	17.1 (18.4)	0.35
Drinks Consumed (Mdn [IQR])	86 [51, 139]	44 [8, 224]	0.27
Days Since Last Alcohol Use (Mdn [IQR])	2 [1, 5]	2 [2, 10]	0.69
Dependence Symptoms (AUDIT)	8.5 (5.6)	9.4 (8.7)	0.71
Baseline Cannabis Use			
Past 90 Day Cannabis Use			
Days Cannabis Consumed	52.7 (24.3)	58.0 (27.4)	0.59
Times Cannabis Consumed (Mdn [IQR])	94 [43, 165]	200 [55, 264]	0.12
Grams of Cannabis Consumed (Mdn [IQR])	24.8 [8.8, 66]	115.7 [51, 160]	0.003
Initiated cannabis use at <16 years, n (%)	25 (45.5)	3 (42.9)	0.90
Days Since Last Cannabis Use (Mdn [IQR])	1 [1, 2]	1 [0, 1]	0.08
Dependence Symptoms (CUDIT-R)	14.3 (5.7)	15.4 (6.5)	0.62
CN-THCCOOH (Mdn [IQR])	45.6 [17.6, 138.4]	257.4 [41.1, 417.6]	0.09
Current SCID-IV Diagnoses, n (%)*			
Major depression	1 (2.1)	1 (16.7)	0.08
Bipolar disorder	2 (4.3)	0 (0)	0.61
Panic disorder	2 (4.3)	0 (0)	0.61
Agoraphobia	1 (2.1)	0 (0)	0.61
Social phobia	0 (0)	0 (0)	--
Specific phobia	0 (0)	0 (0)	--
OCD	0 (0)	0 (0)	--
PTSD	2 (4.3)	0 (0)	0.61
Generalized anxiety disorder	3 (6.4)	1 (16.7)	0.37
Anorexia	0 (0)	0 (0)	--
Bulimia	1 (2.1)	0 (0)	0.72
Psychosis	0 (0)	0 (0)	--

Note: all values are means, standard deviations, unless otherwise noted; AUDIT, Alcohol Use Disorders Identification Test; CN-THCCOOH, Creatinine-adjusted 11-nor-9-carboxy-tetrahydrocannabinol in ng/mg; CUDIT-R, Cannabis Use Disorder Identification Test-Revised; GPA, Grade point average; IQ, Intelligence quotient; IQR, Interquartile range; Mdn, Median; SCID-IV, Structured Clinical Interview for DSM-IV (*SCID-IV not administered to

participants recruited in high schools; Abstinent participants in MJ-Abst n = 47 and non-abstinent participants in MJ-Abst n = 6); TLFB, 90-day Timeline Followback.