

Short-term benefits of continuous positive airway pressure treatment on cognition in the obstructive sleep apnea syndrome: a retrospective study.

Table S1. Results of the hierarchical multiple linear regression analysis investigating the possible predictors of the efficiency of the alerting attention network (i.e., the *Attention Network Test - Alerting* score). Adjust R^2 and F-statistics are reported for each model. Standardized Beta, t -values, p -values and partial r correlation coefficients are reported for each predictor in each model. *BMI*: body mass index; *AHI*: apnea-hypopnea index; *% Time SpO2 < 90%*: cumulative time spent with peripheral blood oxygen saturation (SpO2) below 90%; *STAI-Y2*: State-Trait Anxiety Inventory form Y2; *BDI*: Beck Depression Inventory.

		Beta	t-value	p-value	Partial r
Model 1	Adjust $R^2 = 0.03$ ($F_{6,43} = 1.25$, $p = 0.30$)				
	(Constant)		1.07	0.290	
	<i>Sex</i>	-0.19	-1.27	0.211	-0.19
	<i>Age</i>	0.03	0.17	0.868	0.03
	<i>Education</i>	-0.08	-0.45	0.652	-0.07
	<i>BMI</i>	-0.30	-1.89	0.066	-0.28
	<i>AHI</i>	-0.09	-0.55	0.588	-0.08
	<i>% Time SpO2 < 90%</i>	-0.03	-0.21	0.838	-0.03
Model 2	Adjust $R^2 = 0.05$ ($F_{8,41} = 1.31$, $p = 0.26$)				
	(Constant)		0.73	0.471	
	<i>Sex</i>	-0.22	-1.46	0.152	-0.22
	<i>Age</i>	0.05	0.29	0.770	0.05
	<i>Education</i>	-0.09	-0.51	0.611	-0.08
	<i>BMI</i>	-0.32	-2.00	0.053	-0.30
	<i>AHI</i>	-0.07	-0.38	0.702	-0.06
	<i>% Time SpO2 < 90%</i>	-0.06	-0.39	0.700	-0.06
	<i>STAI-Y2</i>	0.25	1.34	0.187	0.21
	<i>BDI</i>	-0.29	-1.61	0.110	-0.24
Model 3	Adjust $R^2 = 0.03$ ($F_{9,40} = 1.14$, $p = 0.36$)				
	(Constant)		0.63	0.532	
	<i>Sex</i>	-0.22	-1.45	0.156	-0.22
	<i>Age</i>	0.06	0.31	0.760	0.05
	<i>Education</i>	-0.08	-0.43	0.671	-0.07

<i>BMI</i>	-0.31	-1.77	0.085	-0.27
<i>AHI</i>	-0.07	-0.39	0.696	-0.06
<i>% Time SpO2 < 90%</i>	-0.06	-0.39	0.702	-0.06
<i>STAI-Y2</i>	0.25	1.30	0.203	0.20
<i>BDI</i>	-0.30	-1.54	0.131	-0.24
<i>Days of Adaptation</i>	-0.02	-0.10	0.921	-0.02

Table S2. Results of the hierarchical multiple linear regression analysis investigating the possible predictors of the efficiency of the orienting attention network (i.e., the *Attention Network Test - Orienting* score). Adjust R^2 and F-statistics are reported for each model. Standardized Beta, t -values, p -values and partial r correlation coefficients are reported for each predictor in each model. *BMI*: body mass index; *AHI*: apnea-hypopnea index; *% Time SpO2 < 90%*: cumulative time spent with peripheral blood oxygen saturation (SpO2) below 90%; *STAI-Y2*: State-Trait Anxiety Inventory form Y2; *BDI*: Beck Depression Inventory.

		Beta	t -value	p -value	Partial r
Model 1	Adjust $R^2 = 0.16$ ($F^{6,43} = 2.52, p = 0.04$)				
	(Constant)		0.96	0.343	
	<i>Sex</i>	-0.09	-0.62	0.538	-0.09
	<i>Age</i>	0.13	0.82	0.415	0.12
	<i>Education</i>	-0.36	-2.30	0.026	-0.33
	<i>BMI</i>	-0.34	-2.30	0.026	-0.33
	<i>AHI</i>	0.09	0.59	0.557	0.09
	<i>% Time SpO2 < 90%</i>	-0.08	-0.54	0.595	-0.08
Model 2	Adjust $R^2 = 0.13$ ($F_{8,41} = 1.95, p = 0.08$)				
	(Constant)		0.96	0.343	
	<i>Sex</i>	-0.09	-0.64	0.529	-0.10
	<i>Age</i>	0.12	0.71	0.483	0.11
	<i>Education</i>	-0.37	-2.28	0.028	-0.34
	<i>BMI</i>	-0.35	-2.29	0.027	-0.34
	<i>AHI</i>	0.08	0.51	0.615	0.08
	<i>% Time SpO2 < 90%</i>	-0.06	-0.41	0.684	-0.06
	<i>STAI-Y2</i>	-0.02	-0.12	0.903	-0.02
	<i>BDI</i>	0.14	0.82	0.419	0.13

Model 3	Adjust $R^2 = 0.17$ ($F_{9,40} = 2.12$, $p = 0.051$)				
	(Constant)		1.53	0.134	
	<i>Sex</i>	-0.09	-0.59	0.557	-0.09
	<i>Age</i>	0.05	0.27	0.787	0.04
	<i>Education</i>	-0.48	-2.79	0.008	-0.40
	<i>BMI</i>	-0.46	-2.81	0.008	-0.41
	<i>AHI</i>	0.15	0.93	0.358	0.15
	<i>% Time SpO2 < 90%</i>	-0.06	-0.39	0.701	-0.06
	<i>STAI-Y2</i>	-0.11	-0.62	0.539	-0.10
	<i>BDI</i>	0.24	1.33	0.190	0.21
	<i>Days of Adaptation</i>	0.27	1.67	0.104	0.25

Table S3. Results of the hierarchical multiple linear regression analysis investigating the possible predictors of the speed associated with strategic reasoning, problem-solving, and mental planning (i.e., *Tower of London -Time score**). Adjust R^2 and F-statistics are reported for each model. Standardized Beta, t -values, p -values and partial r correlation coefficients are reported for each predictor in each model. *BMI*: body mass index; *AHI*: apnea-hypopnea index; *% Time SpO2 < 90%*: cumulative time spent with peripheral blood oxygen saturation (SpO2) below 90%; *STAI-Y2*: State-Trait Anxiety Inventory form Y2; *BDI*: Beck Depression Inventory. Results refer to the logarithmic transformation of *Tower of London – Time score*.

		Beta	t -value	p -value	Partial r
Model 1	Adjust $R^2 = 0.01$ ($F_{6,43} = 1.04$, $p = 0.41$)				
	(Constant)		16.83	0.000	
	<i>Sex</i>	0.12	0.78	0.440	0.12
	<i>Age</i>	-0.29	-1.68	0.101	-0.25
	<i>Education</i>	-0.05	-0.27	0.790	-0.04
	<i>BMI</i>	0.06	0.39	0.698	0.06
	<i>AHI</i>	0.06	0.38	0.707	0.06
	<i>% Time SpO2 < 90%</i>	0.20	1.26	0.214	0.19
Model 2	Adjust $R^2 = 0.003$ ($F_{8,41} = 1.02$, $p = 0.44$)				
	(Constant)		16.10	0.000	

	<i>Sex</i>	0.07	0.48	0.635	0.07
	<i>Age</i>	-0.28	-1.61	0.115	-0.24
	<i>Education</i>	-0.06	-0.35	0.732	-0.05
	<i>BMI</i>	0.03	0.20	0.845	0.03
	<i>AHI</i>	0.09	0.51	0.612	0.08
	<i>% Time SpO2 < 90%</i>	0.18	1.14	0.262	0.17
	<i>STAI-Y2</i>	0.28	1.52	0.137	0.23
	<i>BDI</i>	-0.22	-1.24	0.221	-0.19
Model 3	Adjust R ² =0.04 (F _{9,40} =1.22, <i>p</i> = 0.31)				
	(Constant)		14.62	0.000	
	<i>Sex</i>	0.07	0.43	0.667	0.07
	<i>Age</i>	-0.21	-1.18	0.247	-0.18
	<i>Education</i>	0.05	0.30	0.763	0.05
	<i>BMI</i>	0.14	0.83	0.414	0.13
	<i>AHI</i>	0.02	0.09	0.931	0.01
	<i>% Time SpO2 < 90%</i>	0.17	1.13	0.266	0.18
	<i>STAI-Y2</i>	0.37	1.96	0.057	0.30
	<i>BDI</i>	-0.32	-1.72	0.093	-0.26
	<i>Days of Adaptation</i>	-0.28	-1.61	0.115	-0.25

Table S4. Results of the hierarchical multiple linear regression analysis investigating the possible predictors of the accuracy of strategic reasoning, problem-solving, and mental planning (i.e., *Tower of London - Accuracy* score). Adjust R² and F-statistics are reported for each model. Standardized Beta, *t*-values, *p*-values and partial *r* correlation coefficients are reported for each predictor in each model. *BMI*: body mass index; *AHI*: apnea-hypopnea index; *% Time SpO2 < 90%*: cumulative time spent with peripheral blood oxygen saturation (SpO2) below 90%; *STAI-Y2*: State-Trait Anxiety Inventory form Y2; *BDI*: Beck Depression Inventory.

		Beta	<i>t</i> -value	<i>p</i> -value	Partial <i>r</i>
Model 1	Adjust R ² =0.04 (F _{6,43} =1.31, <i>p</i> =0.28)				
	(Constant)		4.79	0.000	
	<i>Sex</i>	0.03	0.21	0.833	0.03

	<i>Age</i>	-0.16	-0.95	0.347	-0.14
	<i>Education</i>	0.11	0.67	0.505	0.10
	<i>BMI</i>	0.22	1.37	0.176	0.21
	<i>AHI</i>	0.00	-0.01	0.995	0.00
	<i>% Time SpO2 < 90%</i>	0.21	1.35	0.184	0.20
<hr/>					
Model 2	Adjust R ² =0.09 (F _{8,41} =1.64, <i>p</i> =0.15)				
	(Constant)		4.31	0.000	
	<i>Sex</i>	-0.03	-0.19	0.853	-0.03
	<i>Age</i>	-0.15	-0.89	0.381	-0.14
	<i>Education</i>	0.10	0.59	0.561	0.09
	<i>BMI</i>	0.18	1.13	0.265	0.17
	<i>AHI</i>	0.03	0.18	0.861	0.03
	<i>% Time SpO2 < 90%</i>	0.19	1.22	0.230	0.19
	<i>STAI-Y2</i>	0.38	2.11	0.041	0.31
	<i>BDI</i>	-0.30	-1.71	0.095	-0.26
<hr/>					
Model 3	Adjust R ² =0.12 (F _{9,40} =1.71, <i>p</i> =0.12)				
	(Constant)		3.52	0.001	
	<i>Sex</i>	-0.03	-0.24	0.815	-0.04
	<i>Age</i>	-0.09	-0.50	0.616	-0.08
	<i>Education</i>	0.19	1.10	0.279	0.17
	<i>BMI</i>	0.27	1.61	0.115	0.25
	<i>AHI</i>	-0.03	-0.19	0.848	-0.03
	<i>% Time SpO2 < 90%</i>	0.18	1.21	0.235	0.19
	<i>STAI-Y2</i>	0.46	2.46	0.018	0.36
	<i>BDI</i>	-0.38	-2.10	0.042	-0.31
<hr/>					
	<i>Days of Adaptation</i>	-0.24	-1.41	0.165	-0.22