

Effects of Reducing Visible Light on Sleep Quality

2024 Spring 241 Final Project

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Table 1: Regression Results of Sleep Score

	<i>Dependent variable:</i>			
	Sleep Score			
	Base Model	Previous Sleep Info	Demographic Info	By Individual
	(1)	(2)	(3)	(4)
(Intercept)	78.172*** (1.384)	55.321*** (7.496)	64.261*** (7.580)	76.059*** (2.068)
Sunglasses Treatment	−0.361 (2.025)	−0.483 (1.907)	−0.502 (1.824)	−0.470 (1.374)
Sleep Quality		6.316*** (1.556)	6.253*** (1.457)	
Trouble Sleeping		−0.834 (1.322)	−1.768 (1.162)	
Typical Total Sleep		0.548** (0.257)	0.856*** (0.265)	
Age Group			−3.601*** (1.084)	
Gender			3.330* (1.782)	
participant_id1				−0.699 (2.655)
participant_id2				−20.324*** (4.318)
participant_id3				0.676 (2.612)
participant_id4				14.051*** (2.316)
participant_id5				1.353 (2.682)
participant_id6				2.286 (2.419)
participant_id7				4.426 (3.512)
participant_id8				−16.949*** (3.751)
participant_id9				11.176*** (3.457)
participant_id10				12.051*** (3.238)
participant_id11				6.301*** (2.263)
participant_id12				−13.574** (5.779)
participant_id13				5.801* (3.340)
participant_id14				−13.449*** (3.237)
participant_id15				9.301* (5.071)
participant_id16				7.301 (6.927)
participant_id17				4.676** (2.238)
participant_id18				10.176*** (3.185)
participant_id19				14.801*** (2.641)
participant_id20				−6.000 (6.513)
participant_id21				12.926*** (3.291)
Observations	172	172	172	172
R ²	0.0002	0.136	0.219	0.592
Adjusted R ²	−0.006	0.116	0.190	0.532
Residual Std. Error	13.267 (df = 170)	12.441 (df = 167)	11.904 (df = 165)	9.050 (df = 149)
F Statistic	0.032 (df = 1; 170)	6.590*** (df = 4; 167)	7.699*** (df = 6; 165)	9.836*** (df = 22; 149)

Note:

*p<0.1; **p<0.05; ***p<0.01
 HC robust standard errors in parantheses.

Table 2: Regression Results of Sleep Score

	<i>Dependent variable:</i>	
	Sleep Score	
	Model by Week of Experiment	Model by Watch
	(1)	(2)
(Intercept)	76.400*** (3.244)	78.266*** (1.975)
Week of Experiment	1.058 (2.023)	
Sunglasses Treatment		−0.335 (2.021)
watchFitbit watch		−0.366 (1.990)
watchGarmin watch		2.024 (2.710)
watchOther device		5.026 (6.551)
watchSamsung Galaxy watch		−4.599* (2.795)
Observations	172	172
R ²	0.002	0.028
Adjusted R ²	−0.004	−0.001
Residual Std. Error	13.258 (df = 170)	13.237 (df = 166)
F Statistic	0.274 (df = 1; 170)	0.964 (df = 5; 166)

Note:

*p<0.1; **p<0.05; ***p<0.01

HC robust standard errors in parantheses.