

Web Material

Environmental influences on sleep in the California Teachers Study Cohort

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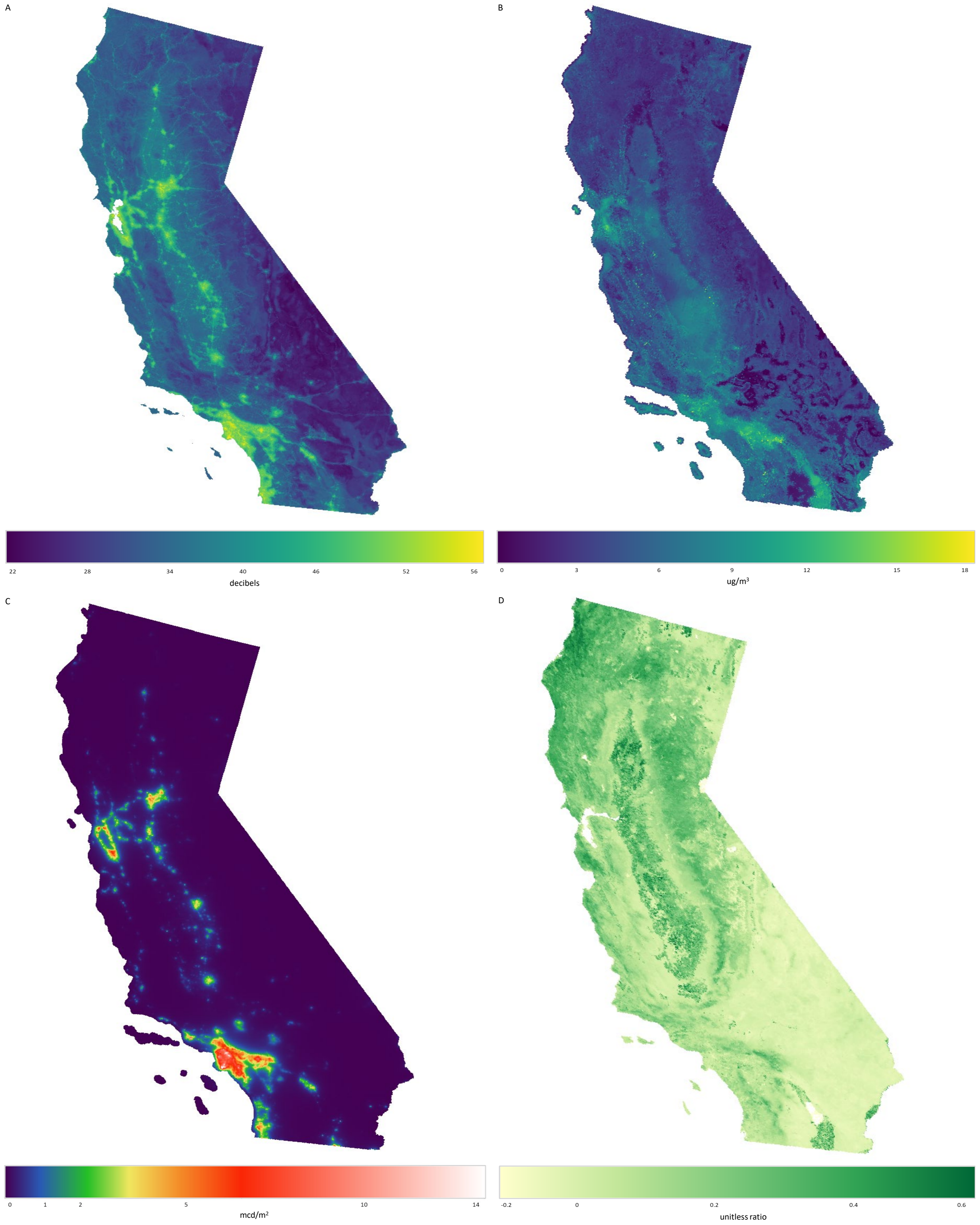
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Web Figure 1. Distribution across California, United States for A) Noise B) Particulate Matter 2.5 microns C) New World Atlas of Artificial Night Sky Brightness D) Enhanced Vegetation Index

Web Table 1. Correlation between environmental exposures

	Light at night	Noise	Natural Noise	EVI	PM2.5	SES z-score
Light at night	1	0.002	0.003	-0.46	0.4	-0.005
Noise		1	0.31	-0.003	-0.004	-0.0004
Natural Noise			1	-0.003	0.003	0.00009
EVI				1	-0.22	0.16
PM2.5					1	-0.09
SES z-score						1

Web Table 2. Correlation between self-reported sleep measures

	Latency	Duration	Disturbance	Medication use
Latency	1	0.279	0.464	0.28
Duration		1	0.407	0.103
Disturbance			1	0.268
Medication use				1

Web Table 3. Multipollutant model of environmental exposures and sleep among 42,239 participants residing in Rural-Urban Commuting Area Codes 1-3

	Sleep duration (< 7 hours)		Sleep latency (> 15 min)	
	Odds Ratio*	95% Confidence Interval	Odds Ratio**	95% Confidence Interval
Light at night (5 mcd/m2)	1.13	(1.05-1.020)	0.97	(0.92-1.04)
Noise (10 dB)	1.02	(0.95-1.10)	1.07	(1.00-1.14)
Greenspace (0.1 units)	0.41	(0.26-0.63)	0.57	(0.39-0.85)
Air pollution (5 ug/m3)	1.07	(1.03-1.10)	1.02	(0.99-1.05)

*adjusted for age, race, chronotype, use of sleep medication, trouble sleeping, and sleep latency

**adjusted for age, race, chronotype, use of sleep medication, trouble sleeping, and sleep duration

Web Table 4. Multipollutant model of environmental exposures and sleep with a natural sound model

	Sleep duration (< 7 hours)		Sleep latency (> 15 min)	
	Odds Ratio*	95% Confidence Interval	Odds Ratio**	95% Confidence Interval
Light at night (5 mcd/m ²)	1.12	1.06-1.19	0.97	0.91-1.02
Natural Noise (10 dB)	1.01	0.91-1.13	1.09	0.99-1.20
Greenspace (0.1 units)	0.40	0.27-0.65	0.59	0.41-0.84
Air pollution (5 ug/m ³)	1.06	1.04-1.09	1.02	0.99-1.05

*adjusted for age, race, chronotype, use of sleep medication, trouble sleeping, and sleep latency

**adjusted for age, race, chronotype, use of sleep medication, trouble sleeping, and sleep duration

Web Table 5. Multipollutant model of environmental exposures and sleep adjusting for neighborhood socioeconomic status

	Sleep duration (< 7 hours)		Sleep latency (> 15 min)	
	Odds Ratio*	95% Confidence Interval	Odds Ratio**	95% Confidence Interval
Light at night (5 mcd/m3)	1.14	1.08-1.21	0.99	0.93-1.04
Noise (10 dB)	1.01	0.91-1.13	1.09	0.99-1.20
Greenspace (0.1 units)	0.49	0.33-0.73	0.76	0.53-1.09
Air pollution (5 ug/m3)	1.06	1.03-1.09	1.02	0.99-1.04

*adjusted for age, race, chronotype, use of sleep medication, trouble sleeping, and sleep latency

**adjusted for age, race, chronotype, use of sleep medication, trouble sleeping, and sleep duration