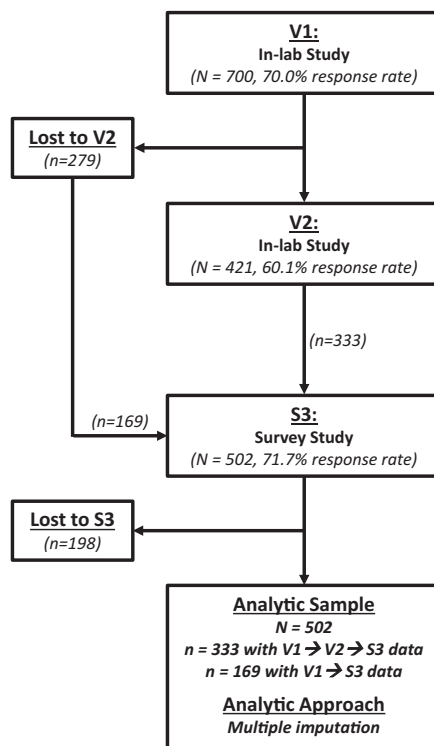
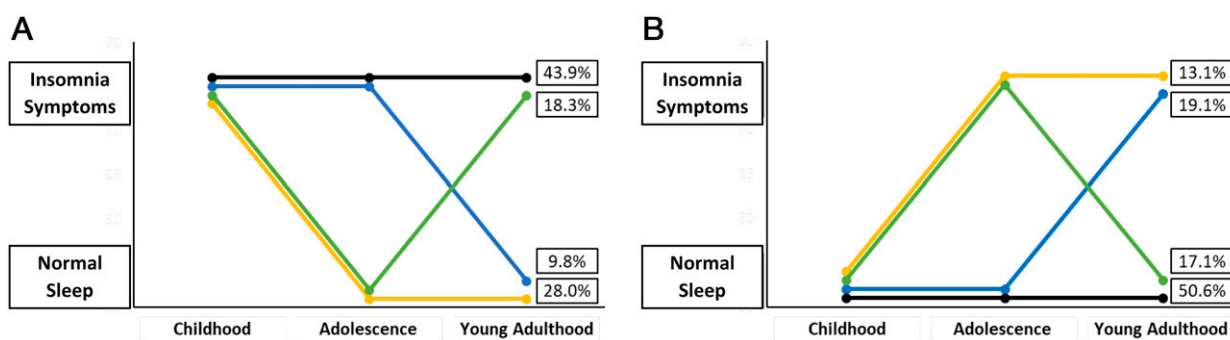


Supplemental Information



SUPPLEMENTAL FIGURE 3

Participants' flow in the present follow-up study of the Penn State Child Cohort. No subject was studied at overlapping developmental stages: all 12-year-olds at V1 were studied at age 15 to 23 at V2; all 18 to 23-year-olds at V2 were studied at age 23 to 31 at S3.



SUPPLEMENTAL FIGURE 4

Developmental trajectories of insomnia symptoms from childhood through adolescence into young adulthood in the 333 subjects with complete data in V1, V2, and S3. Lines depict the 8 potential trajectories and data are the percentage of each observed trajectory among 82 subjects with insomnia symptoms in childhood (A) and among 251 subjects with normal sleep in childhood (B).

SUPPLEMENTAL TABLE 3 Validity of the Definition of Adult Insomnia at Survey 3 (S3)

	1. Normal Sleep (<i>n</i> = 288)	2. Insomnia Symptoms (<i>n</i> = 152)	3. Adult Insomnia (<i>n</i> = 62)	1 vs 2	1 vs 3	2 vs 3
Nighttime sleep						
Habitual sleep duration ^a	7.40 (0.87)	6.97 (1.13)	6.30 (1.27)	<.0001	<.0001	<.0001
≥ 8 h	25.7%	18.4%	9.7%	<.0001	<.0001	<.0001
7–8 h	49.3%	35.5%	12.9%	—	—	—
6–7 h	17.0%	25.0%	38.7%	—	—	—
≤ 6 h	8.0%	21.1%	38.7%	—	—	—
Non-restorative sleep ^b	1.76 (0.76)	2.24 (0.91)	2.76 (0.99)	<.0001	<.0001	<.0001
No	42.0%	22.4%	12.9%	<.0001	<.0001	.002
Mild	41.0%	40.8%	24.2%	—	—	—
Moderate	15.6%	27.0%	37.1%	—	—	—
Severe	1.4%	9.9%	25.8%	—	—	—
Daytime functioning						
Sleepiness and fatigue ^c	1.55 (0.74)	1.93 (0.81)	2.31 (0.82)	<.0001	<.0001	.004
No	58.7%	34.2%	19.4%	<.0001	<.0001	.019
Mild	29.2%	40.1%	33.9%	—	—	—
Moderate	10.8%	23.7%	43.5%	—	—	—
Severe	1.4%	2.0%	3.2%	—	—	—
Inability to manage ^d	1.17 (0.47)	1.51 (0.70)	2.18 (0.91)	<.0001	<.0001	<.0001
No	86.5%	59.9%	27.4%	<.0001	<.0001	<.0001
Mild	9.7%	29.6%	33.9%	—	—	—
Moderate	3.8%	9.9%	32.3%	—	—	—
Severe	0.0%	0.7%	6.5%	—	—	—

Data are mean (standard deviation), unless otherwise stated. In young adulthood (S3), those with insomnia symptoms were further subdivided on the basis of a report of having insomnia as a disorder, so that no subject with normal sleep reported DIMS, sleep medication use, or adult insomnia; all subjects with insomnia symptoms or adult insomnia reported DIMS and/or sleep medication use; and no subject with insomnia symptoms reported having adult insomnia. The table data support that subjects with adult insomnia reported sleeping worse (shorter and less restorative) and having greater daytime impairment (greater sleepiness, fatigue, and inability to manage) than those with normal sleep or insomnia symptoms. *P* values for continuous variables after Bonferroni correction for multiple comparisons. —, not applicable.

^a How many hours of sleep do you usually get at night? [(hours during weekdays × 5) + (hours during weekends × 2)]/7 days.

^b Do you still feel groggy and unrefreshed after waking up in the morning? 1 (no); 2 (mild); 3 (moderate); and 4 (severe).

^c Do you feel drowsy or sleepy most of the day, but manage to stay awake? 1 (no); 2 (mild); 3 (moderate); and 4 (severe).

^d Do your sleep problems make you feel too exhausted or irritable to manage during the day? 1 (no); 2 (mild); 3 (moderate); and 4 (severe).

SUPPLEMENTAL TABLE 4 Demographic Characteristics of the 333 Subjects with Complete Data in V1, V2, and S3 and the 169 Subjects with Missing Data in V2

	Complete (<i>n</i> = 333)	Missing at V2 (<i>n</i> = 169)	<i>P</i>
Female sex	167 (50.2)	94 (55.6)	.246
Non-Hispanic White	258 (77.5)	131 (77.5)	.992
Age			
At V1, y, mean (SD)	8.64 (1.68)	8.61 (1.74)	.865
At S3, y, mean (SD)	23.90 (2.55)	24.36 (2.72)	.061
Overweight			
At V1	107 (32.1)	54 (32.0)	.968
At S3	168 (50.5)	78 (46.2)	.363
Psychiatric/learning disorder			
At V1	77 (23.1)	33 (19.5)	.357
At S3	150 (45.2)	81 (47.9)	.560
Psychotropic medication			
At V1	27 (8.1)	15 (8.9)	.769
At S3	76 (22.9)	33 (19.5)	.388
OSSD			
At V1	164 (49.2)	97 (57.4)	.084
OSA			
At V1	46 (13.8)	22 (13.0)	.805
PLMS			
At V1	11 (3.3)	7 (4.1)	.633
Insomnia symptoms			
At V1	82 (24.6)	36 (21.3)	.407
At S3	132 (39.6)	82 (48.5)	.057
Adult insomnia			
At S3	39 (11.7)	23 (13.6)	.541
Length of follow-up			
From V1 to S3, y, mean (SD)	14.71 (1.85)	15.24 (2.00)	.003

Values provided as *n* (%) unless otherwise indicated.