

## WEB MATERIAL

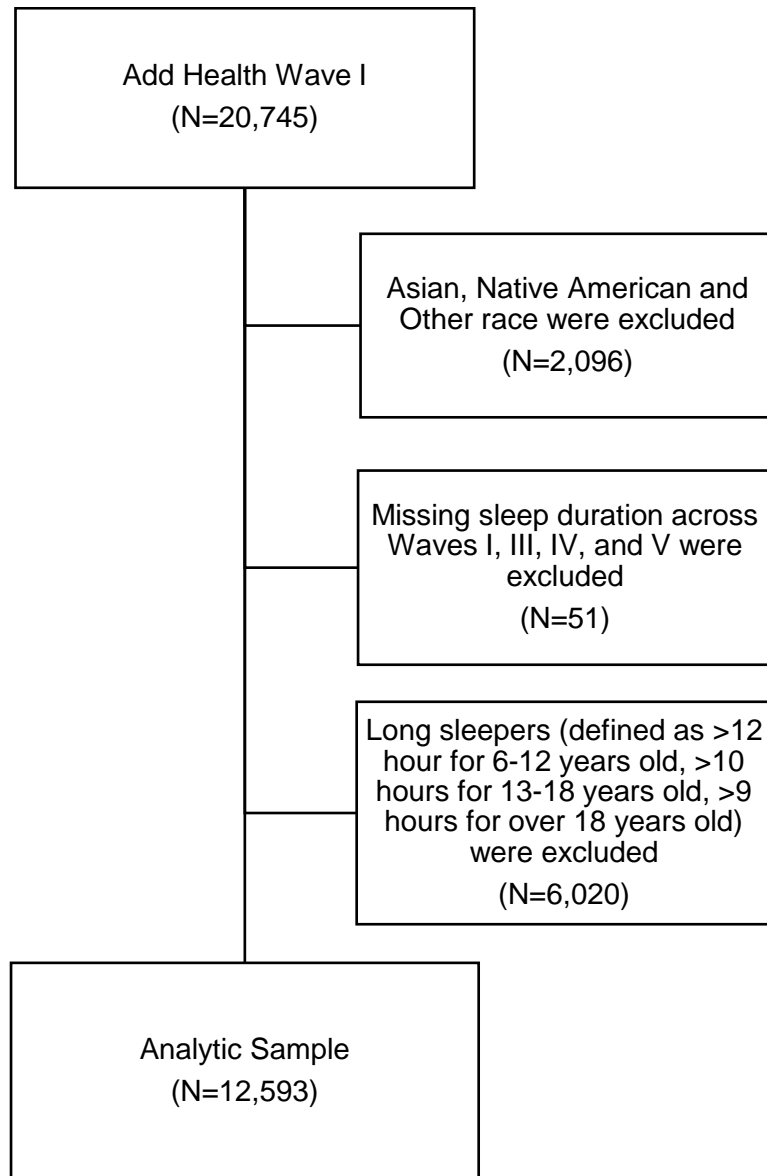
### Racial/Ethnic and Sex/Gender Differences in Sleep Duration Trajectories From Adolescence to Adulthood in a US National Sample

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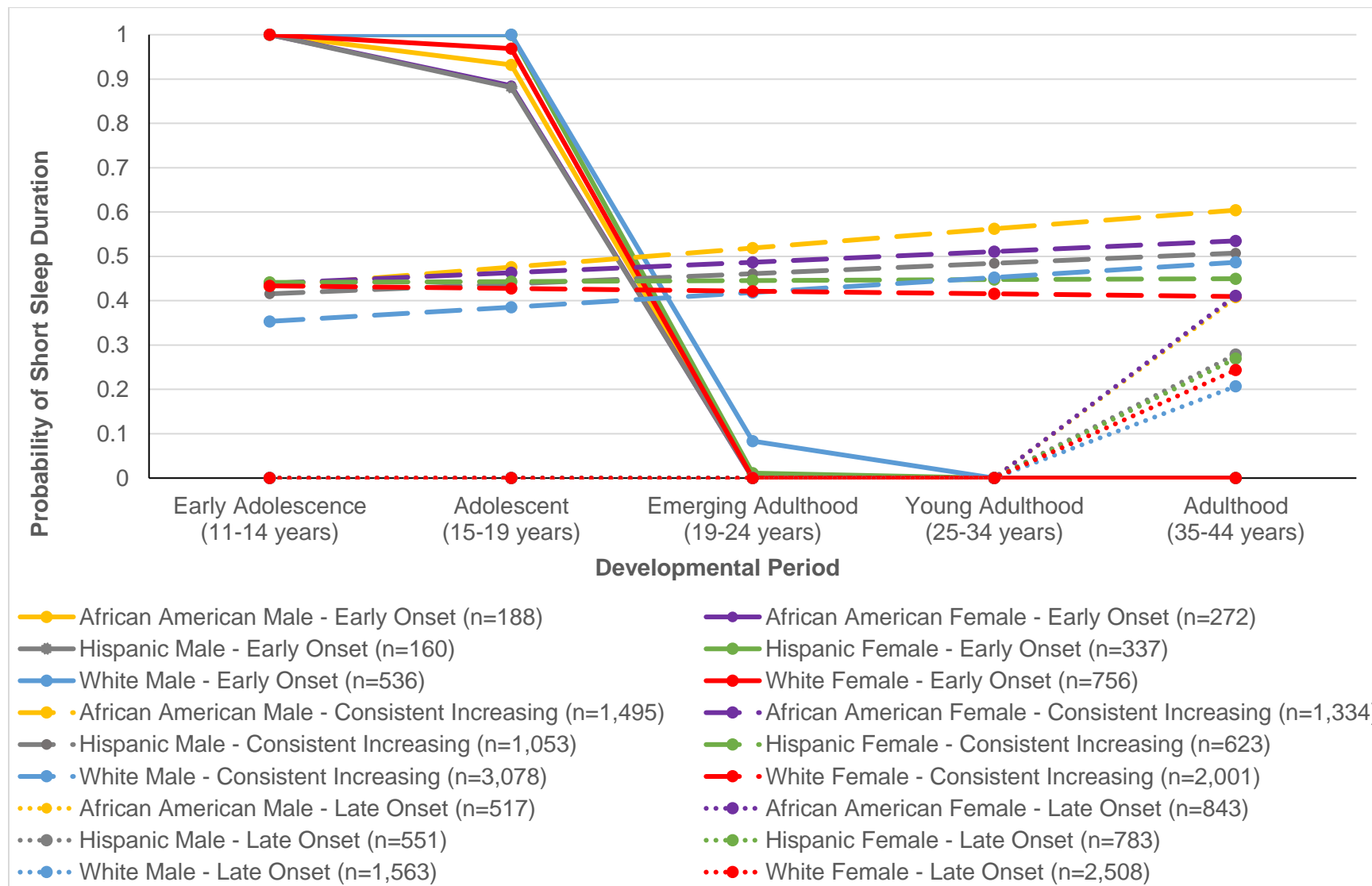
#### Table of Contents

<b>Web Figure 1:</b> Flow Diagram for Sample Inclusion.....	2
<b>Web Figure 2.</b> Growth Mixture Model Short Sleep Duration Trajectories by Race/Ethnicity and Sex/Gender including Long Sleepers, United States, 1994-2018.....	3
<b>Web Figure 3.</b> Conceptual Model for Potential Pathways Driving Race/Ethnicity and Sex/Gender Sleep Disparities.....	4
<b>Web Table 1.</b> Comparison of Analytical Sample to Excluded Sample from Waves I, III, IV, and V of the National Longitudinal Study of Adolescent to Adult Health, United States, 1994-2018.....	5
<b>Web Table 2.</b> Growth Mixture Model Fit Indicators for Short Sleep Duration Trajectories by Race/Ethnicity and Sex/Gender, United States, 1994-2018.....	7
<b>Web Table 3.</b> Multi-Group Growth Mixture Model Results - Estimated Probabilities Across Developmental Periods for Each Trajectory Type by Race/Ethnicity and Sex/Gender, United States, 1994-2018 (n=12,593).....	8

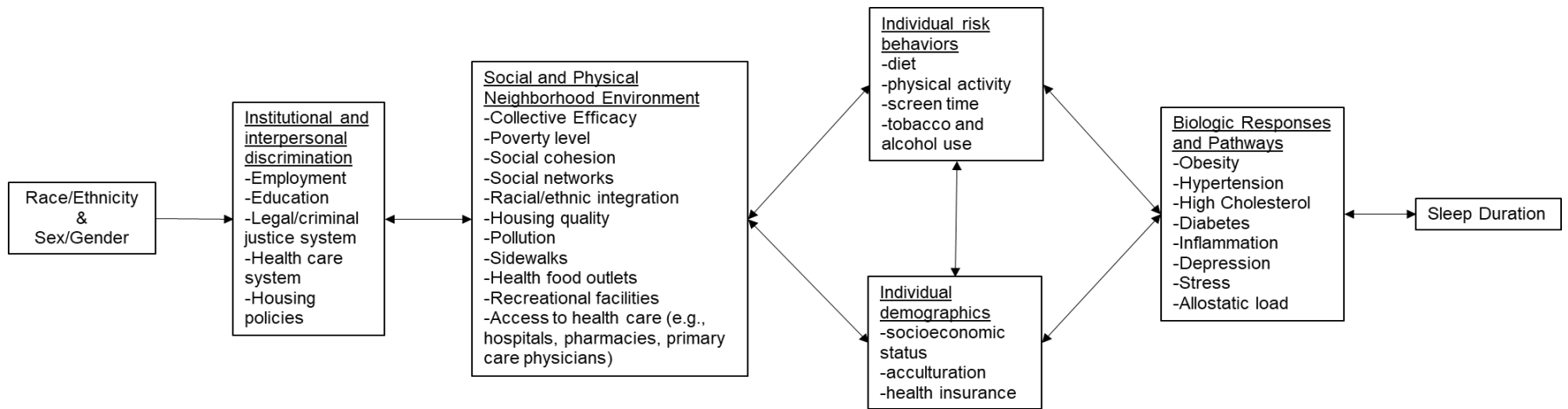
**Web Figure 1.** Flow Diagram for Sample Inclusion.



**Web Figure 2.** Growth Mixture Model Short Sleep Duration Trajectories by Race/Ethnicity and Sex/Gender including Long Sleepers, United States, 1994-2018



**Web Figure 3.** Conceptual Model for Potential Pathways Driving Race/Ethnicity and Sex/Gender Sleep Disparities



**Web Table 1.** Comparison of Analytical Sample to Excluded Sample from Waves I, III, IV, and V of the National Longitudinal Study of Adolescent to Adult Health, United States, 1994-2018

Characteristics	Analytic Sample (n=12,593)		Excluded (n=6,305)	
	N	%	N	%
<b>Female, n (%)</b>	5,887	46.8	3,594	53.4
<b>Race/ethnicity, n (%)</b>				
Black	3,098	24.6	1,571	25.9
Hispanic	2,428	19.3	1,097	18.1
White	7,067	56.1	3,388	55.9
<b>Age in years<sup>a</sup></b>				
Wave I		15.7 (<0.1)		15.5 (<0.1)
Wave III		22.0 (1.8)		21.8 (1.8)
Wave IV		28.5 (1.8)		28.3 (1.8)
Wave V		38.1 (1.9)		37.8 (1.9)
<b>Highest Parental Education, Wave 1</b>				
< high school	3,646	30.3	1,791	31.4
High school graduate	1,585	13.2	903	15.8
Some college	2,635	21.9	1,202	21.1
College or graduate education	4,180	34.7	1,804	31.7
<b>Highest Education, Wave 3, n (%)</b>				
< high school	1,343	16.1	579	11.0
High school graduate	3,440	41.3	1,836	34.8
Some college	2,603	31.2	2,009	38.1
College or graduate education	952	11.4	851	16.1
<b>Highest Education, Wave 4, n (%)</b>				
< high school	2,962	33.2	1,411	26.3
High school graduate	3,732	41.8	2,119	39.5
Some college	1,622	18.2	1,275	23.8
College or graduate education	607	6.8	562	10.5
<b>Highest Education, Wave 5, n (%)</b>				
< high school	3,037	42.6	1,399	34.8
High school graduate	2,717	38.1	1,512	37.6
Some college	1,136	15.9	866	21.5
College or graduate education	242	3.4	247	6.1
<b>Depressive Symptoms<sup>a</sup></b>				
Wave I		11.0 (7.5)		11.7 (7.7)
Wave III		6.2 (3.2)		6.6 (3.4)
Wave IV		7.6 (3.6)		8.1 (4.0)
Wave V		2.3 (2.5)		2.5 (2.7)
<b>Body Mass Index in kg/m<sup>2a</sup></b>				
Wave I		22.6 (4.4)		22.5 (4.6)
Wave III		26.5 (6.0)		26.3 (6.3)

Wave IV		29.3 (7.5)		29.2 (7.7)
Wave V		30.7 (7.6)		31.1 (8.2)
<b>Self-reported Health, Wave 1</b>				
Excellent	3,656	29.0	1,665	27.6
Very Good	5,069	40.3	2,261	37.4
Good	3,026	24.0	1,651	27.3
Fair	772	6.1	435	7.2
Poor	66	0.5	32	0.5
<b>Self-reported Health, Wave 3</b>				
Excellent	2,818	33.8	1,686	31.9
Very Good	3,453	41.4	2,070	39.2
Good	1,746	20.9	1,232	23.3
Fair	304	3.6	268	5.1
Poor	21	0.3	27	0.5
<b>Self-reported Health, Wave 4</b>				
Excellent	1,735	19.4	1,038	19.3
Very Good	3,509	39.3	1,917	35.7
Good	2,887	32.4	1,833	34.2
Fair	714	8.0	507	9.5
Poor	78	0.9	72	1.3
<b>Self-reported Health, Wave 5</b>				
Excellent	1,201	16.8	649	16.1
Very Good	2,666	37.4	1,379	34.3
Good	2,373	33.3	1,378	34.3
Fair	751	10.5	497	12.4
Poor	142	2.0)	117	2.9

<sup>a</sup>Values expressed as mean (standard deviation)

**Web Table 2.** Growth Mixture Model Fit Indicators for Short Sleep Duration Trajectories by Race/Ethnicity and Sex/Gender, United States, 1994-2018

<b>Number of Classes</b>	<b>AIC</b>	<b>BIC</b>	<b>Entropy</b>
2	89591.49	89851.93	0.80
3	89184.43	89578.80	0.86
4	89184.66	89712.96	0.83

Note: Models were conducted with 5000 starts using an expectation maximization algorithm. The best log likelihood was not replicated for 2- and 4-class models.

**Web Table 3.** Multi-Group Growth Mixture Model Results - Estimated Probabilities Across Developmental Periods for Each Trajectory Type by Race/Ethnicity and Sex/Gender, United States, 1994-2018 (n=12,593)

	Estimated Probabilities for Each Trajectory Type by Race/ethnicity and Sex																	
	Black Female			Black Male			Latinx Female			Latinx Male			White Female			White Male		
	Type:			Type:			Type:			Type:			Type:					
	C	E	L	C	E	L	C	E	L	C	E	L	C	E	L	C	E	L
Early Adolescence (11-14 years)	.48	1.00	0	.45	1.00	0	.46	1.00	0	.44	.41	0	.45	1.00	0	.37	1.00	0
Adolescent (15-19 years)	.51	1.00	0	.50	.93	0	.47	1.00	0	.50	.31	0	.45	1.00	0	.41	1.00	0
Emerging Adulthood (19-24 years)	.54	0	0	.56	.00	0	.48	.06	0	.56	.23	0	.46	.06	0	.45	.11	0
Young Adulthood (25-34 years)	.57	0	0	.62	.00	0	.49	0	0	.61	.16	0	.46	0	0	.49	0	0
Adulthood (35-44 years)	.60	0	.42	.67	.00	.33	.50	0	.29	.67	.11	.88	.46	0	.23	.52	0	.17

Abbreviations for trajectory type: C = Consistent Increasing Short Sleepers (i.e., increasing probability of short sleep into adulthood); E = Early Onset Short Sleepers (i.e., declining probability of short sleep from adolescence into adulthood); L = Late Onset Short Sleepers (i.e., no probability of short sleep in adolescence, but in adulthood)