



Supplementary Material

Dietary and Activity Factors Influence Poor Sleep and the Sleep-Obesity Nexus among Children

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Table S1. Data management: outline of variables and coding modifications.

	Variable	Original Coding	New Or Recoded Variable	Further recoding
Weight Status	Categorical BMI z-scores	Weight Status: four categories: -1 Thinness (BMI <-2SD) 0 Normal weight (BMI ≥-2SD & ≤1SD) 1 Overweight (BMI >1SD & ≤2SD) 2 Obesity (BMI >2SD)	Weight Status three categories: 0 Normal weight (BMI <1SD) 1 Overweight (BMI ≥1SD, <2SD) 2 Obesity (BMI ≥2SD)	Weight Status two categories: 0 Normal weight (BMI <1SD) 1 Overweight (BMI ≥1SD)
Sleep Variables	Sleep duration	There categories: 1 <9 hours (short) 2 ≥9-<11 hours (sufficient) 3 11 or more hours (long)	Two categories: 1 <9 hours (short) 2 ≥9 hours (sufficient)	Poor duration 0 YES (<9 hours) 1 NO (≥9 hours)
	Sleep timing	Bed time 1. Early to bed ≤ 20:15 2. Late to bed ≥20:30 Wake time 1. Early to rise ≤7:00 2. Late to rise ≥7:15	Sleep-wake timing categories 1 Early To Bed / Early To Rise 2 Early To Bed / Late To Rise 3 Late To Bed / Early To Rise 4 Late To Bed / Late To Rise	Poor bed time 0 YES (Late to bed ≥20:30) 1 NO (Early to bed ≤ 20:15) Poor wake time 0. YES (Early to rise ≤7:00) 1. NO (Late to rise ≥7:15)
	Sleep quality	How well sleep 0 Very Good 1 Fairly Good 2 Average 3 Fairly Bad 4 Very Bad	Three categories (reversed) 1 Bad/very bad 2 Average 3 Good	Poor sleep quality 0 YES (bad/very bad) 1 NO (good/average)

	Sleep initiation	Problem falling asleep (>20 mins) 0 Never >20 (Good) 1 Almost never > 20min 2 Sometimes >20min 3 Often >20min 4 Almost always >20 min (bad)	Three categories (reversed) 1 Bad/very bad 2 Average 3 Good	Poor sleep initiation 0 YES (bad/very bad) 1 NO (good/average)
	Sleep maintenance	How often wake up during the night 0 Never (I don't) 1 Almost never (every now and then) 2 Sometimes (at least once a night) 3 Often (3 times or more a night) 4 I don't know (CONVERT TO MISSING)	Three categories 1 Never 2 Once or twice 3 Three or more	Poor sleep maintenance 0 YES (≥ 3 wake episodes) 1 NO (< 3 wake episodes)
	Sleep score	Row total: Poor duration, poor bed time, poor wake time, poor sleep quality, poor sleep initiation, and poor sleep maintenance (Range 0-6)	Sleep score four categories 0 No sleep problem 1 One sleep problem 2 Two sleep problems 3 Three sleep problems 4 \geq Four sleep problems	Sleep score three categories 0 \leq One sleep problem 1 Two sleep problems 2 \geq Three sleep problems
Dietary Behaviours	Fruit Guidelines	Reported average number of serves per day 15 total options for number of serves 0.5 serve increments Range from 0 serves to 7 serves per day	Met recommended daily serves guidelines 0 No (< 2 serves) 1 Yes (≥ 2 serves)	
	Vegetable guidelines	Reported average number of serves per day 15 total options for number of serves 0.5 serve increments Range from 0 serves to 7 serves per day	Met recommended daily serves guidelines Boys aged 12years+: 0 No (< 5.5 serves) 1 Yes (≥ 5.5 serves) All girls and boys < 12 years: 0 No (< 5 serves) 1 Yes (≥ 5 serves)	

	Takeaway consumption	Average takeaway consumption as a meal 1 Every meal 2 More than once a day 3 Every day 4 Almost every day 5 2-4 times a week 6 Once a week 7 Once a fortnight 8 Rarely or never	Four categories (reversed) 0 Once a week or less 1 2-4 times a week 2 Every day/almost every day 3 More than once a	Two Categories 0 Once a week or less 1 2 times or more
	Sugar sweetened beverage (SSB) consumption	Average SSB consumption 1 3 or more times per day 2 2 times per day 3 1 time per day 4 Almost every day 5 Every second day 6 Once a week 7 Once a fortnight 8 Rarely or never	Four categories (reversed) 0 Once a week or less 1 Almost every day/ every second day 2 1-2 times per day 3 3 or more times per day	
	Sugar sweetened beverage before bed	How often drink SSB before bed 0 Never 1 Almost never 2 Sometimes 3 Often 4 Almost always	Two categories 0 Never/sometimes 1 Often/almost always	
	Snack consumption	Average snack consumption 1 3 or more times per day 2 2 times per day 3 1 time per day 4 Almost every day 5 Every second day 6 Once a week 7 Once a fortnight 8 Rarely or never	Four categories (reversed) 0 Once a week or less 1 Almost every day/ every second day 2 1-2 times per day 3 3 or more times per day	Two Categories 0 Once a day or less 1 Twice or more per day
Physical Activity Behaviours	Physical activity (PA) Guidelines	Meeting daily PA guidelines (separate for each day of the week) 0 Guidelines not met (<1 hour)	Meeting PA guidelines (for all seven days) 0 < 7 days with ≥ 1 hour PA 1 7 days with ≥ 1 hour PA	Meeting PA guidelines (for five of seven days) 0 < 5 days with ≥ 1 hour PA 1 ≥ 5 days with ≥ 1 hour PA

		<p>1 Guidelines met (≥ 1 hour)</p>		
	<p>Physically active 1 hour before bed</p>	<p>How often physically active 1 hour before bed</p> <p>0 Never</p> <p>1 Almost never</p> <p>2 Sometimes</p> <p>3 Often</p> <p>4 Almost always</p>	<p>Two categories</p> <p>0 Never/sometimes</p> <p>1 Often/almost always</p>	
<p>Screen Time Behaviours</p>	<p>Screen time (ST) guidelines</p>	<p>Meeting daily ST guidelines (separate for each day of the week)</p> <p>0 Guidelines not met (> 2 hours)</p> <p>1 Guidelines met (≤ 2 hours)</p>	<p>Meeting ST guidelines (for all seven days)</p> <p>0 < 7 days with ≤ 2 hours ST</p> <p>1 7 days with ≤ 2 hours ST</p>	<p>Meeting ST guidelines (for all seven days)</p> <p>0 < 5 days with ≤ 2 hours ST</p> <p>1 ≥ 5 days with ≤ 2 hours ST</p>
	<p>Screen time 1 hour before bed</p>	<p>How use screen device 1 hour before bed</p> <p>0 Never</p> <p>1 Almost never</p> <p>2 Sometimes</p> <p>3 Often</p> <p>4 Almost always</p>	<p>Two categories</p> <p>0 Never/sometimes</p> <p>1 Often/almost always</p>	
	<p>Screen time in bed</p>	<p>How often use screen device while in bed</p> <p>0 Never</p> <p>1 Almost never</p> <p>2 Sometimes</p> <p>3 Often</p> <p>4 Almost always</p>	<p>Two categories</p> <p>0 Never/sometimes</p> <p>1 Often/almost always</p>	

