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# **Sleep-body Composition Relationship: Roles of Sleep Behaviors in General and Abdominal Obesity in Chinese Adolescents Aged 17-22 years**

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Table S1. Description of body composition parameters according to demographic characteristics of study population.																		
Variables	Gender		Race		Location		The only child		Father's education						Mother's education		Self-rated family income	
	t	P	t	P	t	P	t	P	F	P	F	P	F	P				
Visceral fat area (cm <sup>2</sup> )	-5.468	<0.001			0.803	0.422			-0.768	0.443	-1.648	0.100	4.765	0.001	3.189	0.013	1.460	0.233
Body mass index (kg/m <sup>2</sup> )	1.536		0.125		0.483	0.629			0.023	0.982	-0.784	0.433	2.700	0.030	2.585	0.037	0.168	0.846
Waist to height ratio	-3.221		0.001		0.616	0.538			0.216	0.829	-0.471	0.638	3.287	0.011	2.308	0.057	0.310	0.734
Waist to hip ratio			0.737		0.653	0.514			-0.182	0.856	-0.471	0.293	4.920	0.001	2.344	0.054	1.599	0.203
Fat mass index	0.337		<0.001		0.667	0.505			0.104	0.917	-1.052	0.605	3.182	0.014	2.117	0.078	0.532	0.588
Fat free mass index	-9.637		<0.001		-0.103	0.918			0.104	0.666	-0.517	0.422	0.559	0.693	1.375	0.242	1.131	0.324
Body fat percentage (%)	18.284		<0.001		0.767	0.443			-0.432	0.934	-0.804	0.578	2.630	0.034	1.630	0.166	1.168	0.312
	-18.554								0.082									

Tests for difference were performed by using unpaired *t*-test and univariate one-way ANOVAs. Bold: *p*<0.05.

**Table S2.** Description of body composition parameters according to takeaway food consumption, breakfast consumption, vegetables consumption, fruits consumption and dried fruits consumption of study population.

Variables	Takeaway food consumption/week					Breakfast consumption/week					Vegetables consumption/d		Fruits consumption/d		Dry fruits consumption/d	
	F	P	t	P	t	P	F	P	F	P						
Visceral fat area (cm²)	0.548			0.584			-2.397		<b>0.017</b>		0.084	0.933	-0.178	0.859	0.832	0.406
Body mass index (kg/m²)	1.258			0.209			-1.218		0.224		-0.187	0.852	1.572	0.117	0.846	0.398
Waist to height ratio	0.576			0.565			-1.251		0.211		0.445	0.657	0.765	0.445	0.668	0.505
Waist to hip ratio	-1.137			0.256			-1.251		0.840		0.591	0.555	0.559	0.576	0.508	0.612
Fat mass index	1.228			0.220			-0.203		<b>0.021</b>		0.353	0.724	-0.426	0.670	0.910	0.363
Fat free mass index	0.453			0.651			-2.324		0.415		-0.726	0.468	<b>0. 001</b>	-0.087	0.931	
Body fat percentage (%)	1.195			0.233			0.816		<b>0.010</b>		0.808	0.420	3.357	0.143	0.946	0.345
							-2.589						-1.466			

Tests for difference were performed by using unpaired *t*-test and univariate one-way ANOVAs. Bold: *p*<0.05.

**Table S3.** Description of body composition parameters according to pure juice consumption, soft drinks consumption and sugar-sweetened beverage consumption of study population.

Variables	Pure juice consumption (>250ml)/d		Soft drinks consumption (≥250ml)/week		Sugar-sweetened beverage Consumption (≥250ml)/week	
	F	P	F	P	F	P
Visceral fat area (cm <sup>2</sup> )	0.535		0.593		1.322	0.187
Body mass index (kg/m <sup>2</sup> )	-0.315		0.753		-0.013	0.989
Waist to height ratio	0.901		0.368		0.375	0.708
Waist to hip ratio	0.550		0.582		0.488	0.052
Fat mass index	1.381		0.168		2.038	<b>0.042</b>
Fat free mass index	-2.356		<b>0.019</b>		<b>0.002</b>	0.752
Body fat percentage (%)	2.172		<b>0.030</b>		<b>0.004</b>	1.022
					2.927	0.307

Tests for difference were performed by using univariate one-way ANOVAs. Bold:  $p < 0.05$ .

**Table S4.** Description of body composition parameters according to weekday screen time and weekend screen time of study population.

Variables	Weekday screen time/d		Weekend screen time/d	
	F	P	F	P
Visceral fat area (cm <sup>2</sup> )	0.268		0.789	
Body mass index (kg/m <sup>2</sup> )	0.615		0.539	
Waist to height ratio	0.400		0.689	
Waist to hip ratio	-0.363		0.717	
Fat mass index	0.312		0.755	
Fat free mass index	0.918		0.360	
Body fat percentage (%)	0.380		0.704	
			-0.573	

Tests for difference were performed by using univariate one-way ANOVAs.

**Table S5.** Description of body composition parameters according to duration of physical exercise each time and number of physical exercise of study population.

Variables	Duration of physical exercise each time		Number of physical exercise/d	
	t	P	t	P
Visceral fat area (cm <sup>2</sup> )	-0.671		0.507	
Body mass index (kg/m <sup>2</sup> )	-2.014		<b>0.045</b>	
Waist to height ratio	-0.959		0.338	
Waist to hip ratio	-1.600		0.119	
Fat mass index	0.467		0.640	
Fat free mass index	-4.324		<b>&lt;0.001</b>	
Body fat percentage (%)	1.903		0.058	
			-1.393	
			-0.818	
			-0.986	
			-0.201	
			-1.574	
			0.525	
			-1.910	

Tests for difference were performed by using unpaired *t*-test. Bold:  $p < 0.05$ .

**Table S6.** Description of body composition parameters according to alcohol consumption and smoking of study population.

Variables	Alcohol consumption Smoking			
	<i>t</i>	<i>P</i>	<i>t</i>	<i>P</i>
Visceral fat area (cm <sup>2</sup> )	1.196		0.233	<b>0.040</b>
Body mass index (kg/m <sup>2</sup> )	-0.628		0.530	0.926
Waist to height ratio	0.515		0.607	0.143
Waist to hip ratio	-0.777		0.438	0.107
Fat mass index	2.073		<b>0.039</b>	<b>0.027</b>
Fat free mass index	-4.037		<b>&lt;0.001</b>	<b>0.005</b>
Body fat percentage (%)	3.372		<b>0.001</b>	<b>0.002</b>

Tests for difference were performed by using unpaired *t*-test. Bold: *p*<0.05.