

## **Supplementary Material**

Supplementary Table 1. Multivariate odds ratios (OR) and 95% confidence intervals (CI) of depressive and social anxiety symptoms for SSB consumption of  $\geq 1$  servings /day.

SSB Consumption	onsumption None-depressive symptoms Depressive symptoms		None-social anxiety	Social anxiety symptoms
Model 1				
Total population				
≥1 servings /day	1 (Reference)	2.06 (1.31-3.26)	1 (Reference)	1.17 (0.78-1.77)
Boys (n=658)				
≥1 servings /day	1 (Reference)	3.26 (1.78-5.98)	1 (Reference)	1.42 (0.82-2.46)
Girls (n=653)				
≥1 servings /day	1 (Reference)	1.20 (0.59-2.43)	1 (Reference)	0.93 (0.50-1.71)
Model 2				
<b>Total population</b>				
≥1 servings /day	1 (Reference)	2.02 (1.23-3.31)	1 (Reference)	1.11 (0.72-1.72)
Boys (n=658)				
≥1 servings /day	1 (Reference)	2.86 (1.45-5.64)	1 (Reference)	1.20 (0.65-2.20)
Girls (n=653)				
≥1 servings /day	1 (Reference)	1.37 (0.65-2.88)	1 (Reference)	1.00 (0.53-1.89)

Model 1: adjusted for age and sex.

Model 2: additionally adjusted for parental educational attainment, maternal smoking status, single-child status, BMI, incomes, fruit consumption, physical activity, screen time and the frequency of fried food consumption.

Bold values referred to P < 0.05.

Total population	None-depressive symptoms	Depressive symptoms
BFM≥ median		
SSB≥1 servings /day	1 (Reference)	1.98 (1.01–3.91)
BFM <median< td=""><td></td><td></td></median<>		
SSB≥1 servings /day	1 (Reference)	1.97 (0.94–4.16)
BF% ≥ median		
SSB≥1 servings /day	1 (Reference)	1.89 (0.92–3.90)
BF% <median< td=""><td></td><td></td></median<>		
SSB≥1 servings /day	1 (Reference) ⊢	2.21 (1.09–4.47)
FFMI ≥ median		
SSB≥1 servings /day	1 (Reference)	1.39 (0.64–2.99)
FFMI <median< td=""><td></td><td></td></median<>		
SSB≥1 servings /day	1 (Reference) ⊢	<b>2.71</b> (1.40–5.27)
Muscle rate ≥ median		
SSB≥1 servings /day	1 (Reference)	1.73 (0.83–3.61)
Muscle rate <median< td=""><td></td><td></td></median<>		
SSB≥1 servings /day	1 (Reference)	<b>◆</b> 2.47 (1.23–4.96)
FFM/FM ≥ median		
SSB≥1 servings /day	1 (Reference) →	1.95 (0.95–3.99)
FFM/FM <median< td=""><td></td><td></td></median<>		
SSB≥1 servings /day	1 (Reference) ⊢	2.15 (1.06–4.38)
	<u> !                                   </u>	

Total population	None-social anxiety	Social	anxiety
BFM ≥ median			•
SSB≥1 servings /day	1 (Reference)	<b>•</b>	1.05 (0.56-1.94)
BFM < median			
SSB≥1 servings /day	1 (Reference) ⊢	<del>  •</del>	1.16 (0.62-2.17)
BF% ≥ median			
SSB≥1 servings /day	1 (Reference)	<u> </u>	0.95 (0.49-1.85)
BF% <median< td=""><td></td><td></td><td></td></median<>			
SSB≥1 servings /day	1 (Reference) ⊢	<b>•</b>	1.23 (0.68-2.22)
FFMI ≥ median			
SSB≥1 servings /day	1 (Reference)	<u> </u>	0.94 (0.49-1.78)
FFMI <median< td=""><td></td><td></td><td></td></median<>			
SSB≥1 servings /day	1 (Reference) ⊢	<del> </del>	1.24 (0.68-2.29)
Muscle rate ≥ median			
SSB≥1 servings /day	1 (Reference) ⊢	<del> </del>	1.05 (0.58-1.91)
Muscle rate <median< td=""><td></td><td></td><td></td></median<>			
SSB≥1 servings /day	1 (Reference) ⊢	+	1.15 (0.60-2.21)
FFM/FM ≥ median			
SSB≥1 servings /day	1 (Reference) ⊢	+	1.17 (0.65-2.12)
FFM/FM < median			
SSB≥1 servings /day	1 (Reference)	<b>—</b>	0.99 (0.51–1.93)
	0.5	1.5 2.5	

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Boys	None-depressive symptoms	Depressive symptoms
BFM ≥ median		
SSB≥1 servings /day	1 (Reference)	4.28 (1.62–11.30)
BFM < median		
SSB≥1 servings /day	1 (Reference)	2.09 (0.77–5.66)
BF% ≥ median		
SSB≥1 servings /day	1 (Reference)	3.08 (1.08–8.76)
BF% <median< td=""><td></td><td></td></median<>		
SSB≥1 servings /day	1 (Reference)	2.93 (1.16–7.45)
FFMI ≥ median		
SSB≥1 servings /day	1 (Reference) ⊢——◆	3.56 (1.24–10.21)
FFMI <median< td=""><td></td><td></td></median<>		
SSB≥1 servings /day	1 (Reference)	2.40 (0.95–6.10)
Muscle rate ≥ median		
SSB≥1 servings /day	1 (Reference)	2.37 (0.89–6.27)
Muscle rate <median< td=""><td></td><td></td></median<>		
SSB≥1 servings /day	1 (Reference) ⊢	<b>◆</b> 3.96 (1.47–10.63)
FFM/FM ≥ median		
SSB≥1 servings /day	1 (Reference)	2.54 (0.96–6.70)
FFM/FM < median		
SSB≥1 servings /day	1 (Reference)	3.72 (1.38–10.06)
	0.5 2.5	4.5 6.5 8.5

Boys	None-social anxiety			Social	anxiety
BFM ≥ median	-				-
SSB≥1 servings /day	1 (Reference)	-	•		1.32 (0.54-3.20)
BFM < median					
SSB≥1 servings /day	1 (Reference)	<u> </u>	<b>*</b>		1.14 (0.49-2.66)
BF% ≥ median					
SSB≥1 servings /day	1 (Reference)	$\vdash$		—	1.01 (0.38-2.69)
BF% <median< td=""><td></td><td></td><td></td><td></td><td></td></median<>					
SSB≥1 servings /day	1 (Reference)	<b>—</b>	•		1.39 (0.63-3.08)
FFMI ≥ median					
SSB≥1 servings /day	1 (Reference)	-	•		1.30 (0.52-3.22)
FFMI <median< td=""><td></td><td></td><td></td><td></td><td></td></median<>					
SSB≥1 servings /day	1 (Reference)	Ь—	<b>•</b>	<b>—</b>	1.11 (0.48-2.57)
Muscle rate ≥ median					
SSB≥1 servings /day	1 (Reference)	<u> </u>	•	—	1.15 (0.51-2.60)
Muscle rate <median< td=""><td></td><td></td><td></td><td></td><td></td></median<>					
SSB≥1 servings /day	1 (Reference)		•		1.29 (0.51-3.24)
FFM/FM ≥ median					
SSB≥1 servings /day	1 (Reference)		<b>*</b>		1.19 (0.53-2.70)
FFM/FM < median		1			
SSB≥1 servings /day	1 (Reference)	-	•		1.24 (0.49–3.16)
	(	D	2		

C

Girls	None-depressive sympto	oms Depress	ive symptoms
BFM ≥ median			
SSB≥1 servings /day	1 (Reference)	<b>+</b>	1.06 (0.39-2.82)
BFM < median			
SSB≥1 servings /day	1 (Reference)	<b>·</b> •	1.79 (0.51–6.25)
BF% ≥ median			
SSB≥1 servings /day	1 (Reference)	<b>→</b>	1.28 (0.46-3.57)
BF% <median< td=""><td></td><td></td><td></td></median<>			
SSB≥1 servings /day	1 (Reference)	<b>+</b>	1.61 (0.50-5.21)
FFMI ≥ median			
SSB≥1 servings /day	1 (Reference) ⊢	<b>•</b>	0.59 (0.18-1.92)
FFMI <median< td=""><td></td><td></td><td></td></median<>			
SSB≥1 servings /day	1 (Reference)	<b>—</b>	<b>— 3.53 (1.22–10.18</b>
Muscle rate ≥ median			
SSB≥1 servings /day	1 (Reference) +	<u></u>	1.24 (0.36-4.24)
Muscle rate <median< td=""><td></td><td></td><td></td></median<>			
SSB≥1 servings /day	1 (Reference)	<b>⊢</b>	1.59 (0.59-4.28)
FFM/FM ≥ median			
SSB≥1 servings /day	1 (Reference)	<b>+</b>	1.52 (0.47-4.87)
FFM/FM < median			
SSB≥1 servings /day	1 (Reference)	<b>+</b>	1.39 (0.50–3.90)
	0	1 2 3 4 5	6

Girls	None-social anxiety		Social anxiety		
BFM ≥ median					
SSB≥1 servings /day	1 (Reference)	<b>⊢</b>	0.82 (0.34-1.96)		
BFM < median					
SSB≥1 servings /day	1 (Reference)	<b>⊢</b>	1.01 (0.37-2.75)		
BF% ≥ median					
SSB≥1 servings /day	1 (Reference)	<u> </u>	0.95 (0.37-2.41)		
BF% <median< td=""><td></td><td></td><td></td></median<>					
SSB≥1 servings /day	1 (Reference)	<b>⊢</b>	0.92 (0.37-2.33)		
FFMI ≥ median					
SSB≥1 servings /day	1 (Reference)	<b>→</b>	0.67 (0.27-1.68)		
FFMI < median		-			
SSB≥1 servings /day	1 (Reference)	<b>⊢</b>	1.39 (0.54-3.55)		
Muscle rate ≥ median					
SSB≥1 servings /day	1 (Reference)	<b>⊢</b>	0.85 (0.34-2.11)		
Muscle rate <median< td=""><td></td><td></td><td></td></median<>					
SSB≥1 servings /day	1 (Reference)	<b>⊢</b>	1.08 (0.42-2.76)		
FFM/FM ≥ median					
SSB≥1 servings /day	1 (Reference)	<b>—</b>	1.02 (0.41-2.52)		
FFM/FM < median					
SSB≥1 servings /day	1 (Reference)	<u> </u>	0.88 (0.34–2.30)		
		0 1 2 3	1		

E

Supplementary Figure 1. Multivariate odds ratios (OR) and 95% confidence intervals (CI) of depressive (panel A, C, E) and social anxiety (panel B, D, F) symptoms for SSB consumption  $\geq$ 1 servings /day among the total population and the each sex groups, stratified by body composition (Model was adjusted for age, sex, parental educational attainment, maternal smoking status, single-child status, BMI, incomes, fruit consumption, physical activity, screen time and the frequency of fried food consumption).