

## **SUPPLEMENTARY MATERIALS**

### **Supplementary Table 1 (Table S1). Scoring instructions for the YFAS 2.0**

These scoring instructions are those described in Gearhardt et al.'s validation study of the YFAS 2.0.<sup>21</sup> Each question falls under a DSM 5 Substance-Related and Addictive Disorders (SRAD) symptom criterion or clinical impairment/distress:

1) Substance taken in larger amount and for longer period than intended

Questions #1, #2, #3

2) Persistent desire or repeated unsuccessful attempts to quit

Questions #4, #25, #31, # 32

3) Much time/activity to obtain, use, recover

Questions #5, #6, #7

4) Important social, occupational, or recreational activities given up or reduced

Questions #8, #10, #18, #20

5) Use continues despite knowledge of adverse consequences (e.g., emotional problems, physical problems)

Questions, #22, #23

6) Tolerance (marked increase in amount; marked decrease in effect)

Questions #24, #26

7) Characteristic withdrawal symptoms; substance taken to relieve withdrawal

Questions #11, #12, #13, #14, #15

8) Continued use despite social or interpersonal problems

Questions #9, #21, #35

9) Failure to fulfill major role obligation (e.g., work, school, home)

Questions #19, #27

10) Use in physically hazardous situations

Question #28, #33, #34

11) Craving, or a strong desire or urge to use

Questions #29, #30

12) Use causes clinically significant impairment or distress

Questions #16, #17

Each question has a different threshold: 0 = threshold not met, 1 = threshold is met

- 1) Once a month: #9, #10, #19, #27, #33, #35
- 2) Two to three times a month: #8, #18, #20, #21, #34
- 3) Once a week: #3, #11, #13, #14, #22, #28, #29
- 4) Two to three times a week: #5, #12, #16, #17, #23, #24, #26, #30, #31, #32
- 5) Four to six times a week: #1, #2, #4, #6, #7, #15, #25

After computing the threshold for each question, sum up the questions under each criterion (e.g. Tolerance, Withdrawal, Clinical Significance, etc.). If the score for the symptom criterion is  $\geq 1$ , then the criterion has been met and is scored as 1. If the score is = 0, then the symptom criterion has not been met and is scored as 0.

Example:

Tolerance: (#24 = 1) + (#26 = 0) = 1, Criterion Met

Craving (#29=0) + (#30 = 0), Criterion Not Met

Failure to fulfill role obligations (#19 = 1) + (#27 = 1), Criterion Met and scored as 1

For the symptom count scoring option, add up all of the scores for each of the 11 criterion (e.g. Tolerance, Withdrawal, Use Despite Negative Consequence, ...). Do not add clinical significance to the score. This score should range from 0 to 11 (0 symptoms to 11 symptoms.)

For the “diagnosis” scoring option (“diagnostic version”), a participant can meet criteria for mild, moderate or severe food addiction. Both the symptom count score and the clinical significance criterion are used.

No Food Addiction = 1 or fewer symptoms

No Food Addiction = Does not meet criteria for clinical significance

Mild Food Addiction = 2 or 3 symptoms and clinical significance

Moderate Food Addiction = 4 or 5 symptoms and clinical significance

Severe Food Addiction = 6 or more symptoms and clinical significance

**Supplementary Table 2 (Table S2). Descriptive statistics and comparison between students and their family members (Reviewer#1 Comment#2).**

	Students (n=164)	Family members (n=166)	p
<i>Sociodemographic characteristics</i>			
Age (years)***	21.7 ± 2.9***	35.5 ± 12.3***	<0.001
Gender (male)***	11.6% (19)***	27.7% (46)***	<0.001
Marital status (married or in a relationship)	14% (23)	57.2% (95)	0.49
<i>Weight-related variables</i>			
Weight (kg)***	61.7 ± 13.6***	69.7 ± 17.8***	<0.001
BMI (kg/m <sup>2</sup> )***	22.2 ± 3.8***	24.5 ± 5.6***	<0.001
Previous maximal BMI (kg/m <sup>2</sup> )***	23.6 ± 4.0***	26.1 ± 6.0***	<0.001
<i>Food addiction prevalence and symptoms</i>			
Prevalence of food addiction	10.4% (17)	6% (10)	0.15
Mild food addiction	3.7% (6)	2.4% (4)	-
Moderate food addiction	3.0% (5)	1.2% (2)	-
Severe food addiction	3.7% (6)	2.4% (4)	-
Number of food addiction symptoms	1.2 ± 2.0	0.9 ± 1.8	0.15
<i>Eating disorders according to DSM-5 criteria (QEWP-R and EDDS)</i>			
Anorexia nervosa*	3.0% (5)*	0% (0)*	<0.05
Bulimia nervosa	4.3% (7)	1.8% (3)	0.19
Binge eating disorder	3.7% (6)	4.8% (8)	0.60
<i>Binge eating (mean BES score)*</i>	9.3 ± 7.6*	7.6 ± 7.4*	<0.05
<i>Eating behaviour characteristics (TFEQ)</i>			
Cognitive restraint	11.7 ± 3.9	11.8 ± 4.1	0.76
Uncontrolled eating	18.7 ± 5.0	18.2 ± 5.2	0.40
Emotional eating	6.7 ± 2.6	6.2 ± 2.8	0.09
<i>Emotional overeating (EOQ total score)</i>	3.1 ± 4.0	2.5 ± 3.6	0.18
<i>= Eating in response to ...</i>			
Anxiety**	0.9 ± 1.1**	0.6 ± 1.0**	<0.01
Sadness	0.6 ± 0.9	0.4 ± 0.8	0.07
Loneliness	0.6 ± 0.9	0.4 ± 0.9	0.20
Tiredness	0.4 ± 1.0	0.4 ± 1.0	0.73
Anger	0.3 ± 0.6	0.3 ± 0.8	0.97
Happiness	0.4 ± 0.7	0.4 ± 0.7	0.86

*Legends:* Descriptive data are presented as mean ± standard deviation or percentage (number). We compared participants with and without food addiction using ANOVA and chi-squared tests.

\* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

BMI: Body Mass Index.

**Supplementary Table 3 (Table S3). Item statistics for the Yale Food Addiction Scale 2.0 (Reviewer#3 Comment#2).**

	Mean	SD	Item-total correlation
<i>Food consumed in larger quantities or over a longer period than intended</i>			
Item 1.	.09	.28	.51
Item 2.	.11	.31	.35
Item 3.	.08	.28	.45
<i>Persistent desire or unsuccessful efforts to cut down or control consumption of certain foods</i>			
Item 4.	.05	.21	.45
Item 25.	.01	.10	.36
Item 31.	.08	.28	.66
Item 32.	.02	.15	.39
<i>Considerable time spent to obtain, consume, or recover from effects of food</i>			
Item 5.	.10	.30	.44
Item 6.	.03	.17	.24
Item 7.	.01	.10	.22
<i>Giving up important social, occupational, or recreational activities because of food consumption</i>			
Item 8.	.03	.16	.43
Item 10.	.04	.20	.50
Item 18.	.02	.15	.46
Item 20.	.02	.15	.26
<i>Continuing to eat certain foods despite physical or psychological problems</i>			
Item 22.	.05	.21	.47
Item 23.	.04	.20	.39
<i>Tolerance</i>			
Item 24.	.04	.19	.59
Item 26.	.05	.22	.62
<i>Withdrawal</i>			
Item 11.	.03	.17	.54
Item 12.	.06	.23	.58
Item 13.	.02	.14	.56
Item 14.	.05	.23	.62
Item 15.	.02	.13	.62
<i>Continued use despite social or interpersonal problems</i>			
Item 9.	.05	.21	.38
Item 21.	.02	.13	.38
Item 35.	.11	.31	.55
<i>Failure to fulfill major role obligations</i>			
Item 19.	.01	.10	.26
Item 27.	.05	.23	.55
<i>Eating certain foods in physically hazardous situations</i>			
Item 28.	.07	.26	.52
Item 33.	.09	.28	.73
Item 34.	.02	.12	.57
<i>Craving, or a strong desire or urge to eat certain food</i>			
Item 29.	.07	.26	.71
Item 30.	.06	.24	.71
<i>Clinically significant impairment or distress</i>			
Item 16.	.08	.27	.66
Item 17.	.04	.20	.41

*Legends:* a mean of 0.09 for item 1 indicates that 9% of the sample scored above the cut-off. Item-total correlation indicates the correlation between each item and the total score for the 35 items.



**Supplementary Table 4 (Table S4). Comparison of the French version of the original YFAS, the French version of the YFAS 2.0 and the US version of the YFAS 2.0 (Reviewer#3 Comment#2).**

SRAD Diagnostic Indicators	French version of the original YFAS	French version of the YFAS 2.0	US version of the YFAS 2.0
Prevalence of food addiction	8.7%	8.2%	14.6%
Consumed more than planned	16.1%	20.0%	19.6%
Unable to cut down (=persistent desire or unsuccessful efforts to cut down or control consumption of certain foods)	90.1%	12.1%	16.7%
Great deal of time spent	19.0%	12.4%	17.2%
Important activities given up	9.4%	7.6%	23.9%
Use despite physical/emotional consequences	19.7%	7.9%	16.3%
Tolerance	23.5%	6.4%	12.0%
Withdrawal	11.8%	7.9%	22.5%
Use despite social/interpersonal consequences	-	13.3%	14.4%
Failure in role obligation	-	3%	17.7%
Use in physically hazardous situations	-	9.1%	18.7%
Craving***	-	8.2%	13.4%
Impairment or distress	9.9%	9.7%	16.7%

*Legends:* YFAS, Yale Food Addiction Scale; SRAD, Substance-related and addictive disorders. The impairment or distress indicator is only used in the diagnostic computation (not the symptom summary score). Craving, failure in role obligation, use despite interpersonal/social consequences, and use in physically hazardous situations were not assessed in the original YFAS.