## **CMCM MBMC**

# THE ASSOCIATION BETWEEN FOOD ADDICTION, BODY MASS INDEX, AND BODY WEIGHT: A SYSTEMATIC REVIEW AND META-ANALYSIS

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#### INTRODUCTION

- Point 1; Aspects of obesity are associated with a wide range of health behaviors including unhealthy eating
- Point 2; Food addiction (FA) is an addictive behavior, which causes responses to food rewards similar to conditions like alcohol abuse or smoking

#### AIM:

• This study aimed to determine the relationship between body mass index, body

- Key finding 1: Participants with FA had higher BMI and higher body weight compared with their non-FA counterparts
- Key finding 2: According to subgroup analysis, age and sex were reported as the sources of heterogeneity
- Key finding 3: A meta-regression found a positive correlation coefficient between YFAS and BMI

#### **RESULTS:**

Combined correlation coefficients between YFAS and BMI

Study		%
ID .	ES (95% CI)	Weight
Senger, G et al. (2019)	0.33 (0.23, 0.43)	17.13
Naghashpour, M et al. (2018)	0.19 (0.06, 0.32)	15.93
Masheb,R et al. (2019)	- 0.46 (0.28, 0.64)	14.03
Ayaz, A et al.(a) (2018)	 0.50 (0.40, 0.61)	17.08
Ayaz, A et al.(b) (2018)	 0.27 (0.18, 0.35)	17.62
Sanlier, N et al. (2016)	 0.12 (0.05, 0.19)	18.21
Overall (I-squared = 88.9%, p = 0.000)	0.31 (0.18, 0.43)	100.00

#### **METHODS:**

- Point 1: A systematic review was conducted in PubMed and SCOPUS, from database onset up to May 2019
- Point 2: Inclusion criteria were observational studies investigating the relationship of body mass index (BMI) and body weight with FA, as measured by the Yale Food Addiction Scale (YFAS).
- Point 3: A random effects model was used to calculate the pooled effect size

#### **RESULTS:**

**RESULTS:** 

 Comparison in BMI between participants with & without FA

Study				%
ID .			WMD (95% CI)	Weight
		;		
sengor, G et al. (2019)		   	2.90 (1.81, 3.99)	16.96
Ayaz, A et al. (2018)	•		3.10 (1.46, 4.74)	16.08
Burrows, T et al. (2017)			7.20 (5.33, 9.07)	15.62
Burrows, T et al. (2017)			— 8.00 (4.61, 11.39)	12.26
Pursey, K et al. (2016)			5.10 (0.82, 9.38)	10.36
Meule, A et al. (2015)			-1.32 (-4.58, 1.94)	12.56
Lee, N et al. (2014)			7.30 (5.71, 8.89)	16.16
Overall (I-squared = 87.3%, p = 0.000)			4.64 (2.50, 6.77)	100.00
NOTE: Weights are from random effects analysis		         		
-11.4	0		11.4	

### **CONCLUSION:**

- FA may be associated with increased risk of higher BMI or body weight
- These findings provide a platform for the development of appropriate interventions to prevent or treat certain aspects of obesity
- Targeting FA may be an important component of a behavioral weight management program.

#### **SEARCH RESULTS:**

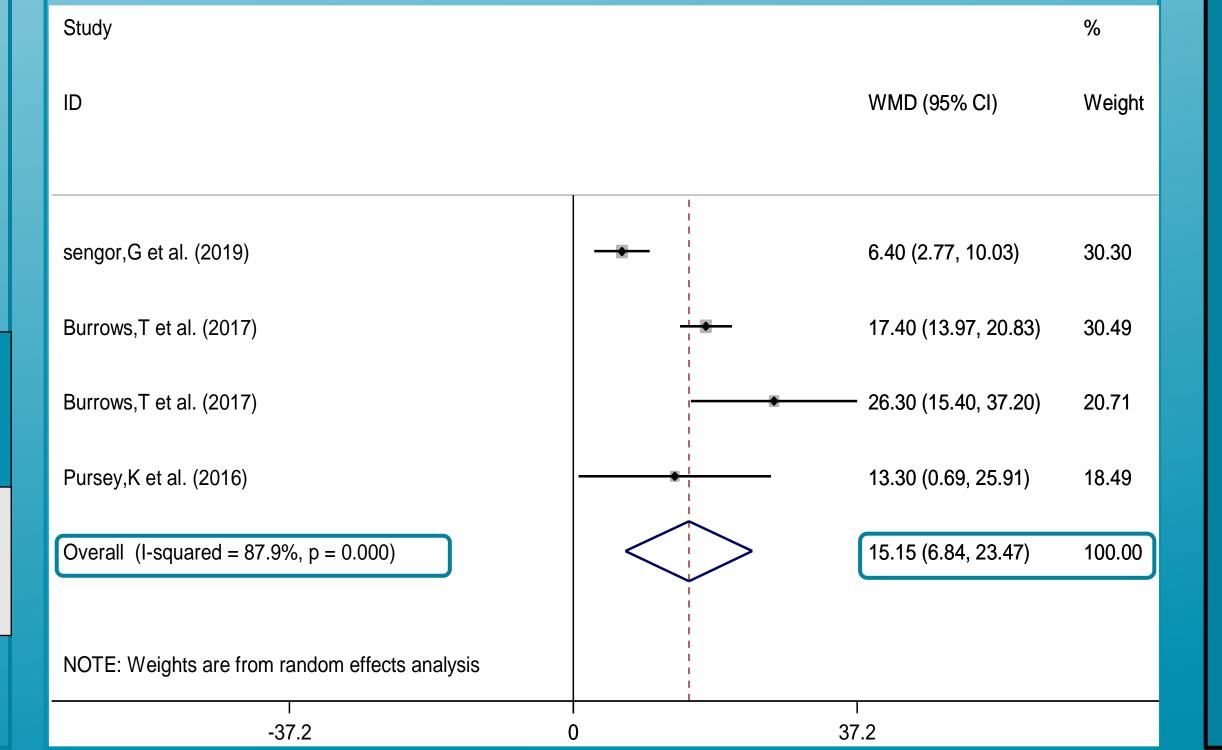
Overall, we screened 557 eligible studies, of which 7 full-text articles that reported body weight and BMI in both food addicted and nonfood addicted participants were included.

#### **STUDY CHARACTERISTICS:**

Publication year range	Sample size range (n)	Age range (years)	Study design	Quality of studies
2014- 2019	50-851	16.5-65	Cross- sectional	4-7

#### **RESULTS:**

• Comparison in body weight between participants with & without FA



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