The Yale Food Addiction Scale (YFAS) measures addictive-like eating of palatable, high-calorie foods based on the seven diagnostic criteria for substance use disorder in the fourth version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). Approximately 5-10% of individuals in the general population receive a “food addiction” diagnosis based on the YFAS. Receiving a YFAS diagnosis is associated with higher BMI, more frequent food cravings and binge eating episodes, lower perceived self-regulatory success in dieting, and higher impulsivity. Moreover, it has been found that the number of endorsed “food addiction” symptoms mediates the association between impulsivity and body mass.

In the newest version of the DSM (DSM-5), diagnostic criteria for substance use disorder were revised and now include eleven symptoms. Most recently, a revised version of the YFAS – the YFAS 2.0 – has been developed accordingly. The aim of the current study was to provide a German translation of the YFAS 2.0, describe the prevalence of YFAS 2.0 diagnoses, and examine psychometric properties and correlates of the scale.

The YFAS 2.0 was translated into German and used in an online study with N = 455 participants (80% students, 85% women, age M = 25.6 ± 7.0 years, BMI M = 22.3 ± 3.7 kg/m²). Other measures were the Food Cravings Questionnaire-Trait-reduced, the binge eating items of the Eating Disorder Examination – Questionnaire, the Perceived Self-Regulatory Success in Dieting Scale, and the short form of the Barratt Impulsiveness Scale.

Factor structure of the eleven “food addiction” symptoms was tested with confirmatory factor analysis for dichotomous data. Internal consistency was evaluated with Kuder-Richardson’s alpha. Differences between participants with and without a YFAS diagnosis were tested with t-tests (age, BMI, trait food craving, binge eating, perceived self-regulatory success in dieting, impulsivity; Fig. 1) and χ²-test (sex). Finally, a linear regression-based, serial mediation model was tested examining indirect effects of impulsivity on BMI via eating-related measures (Fig. 2A). Indirect effects were evaluated with bias-corrected confidence intervals based on 10,000 bootstrap samples.

The one-factorial structure of the eleven YFAS symptoms had high model fit (RMSEA = .02, CFI = .99). Internal consistency was α = .90. Diagnostic thresholds for “food addiction” were met by 1.3% (mild severity), 1.8% (moderate severity), and 6.6% (severe severity) of the sample (9.7% in total).

Participants with a YFAS diagnosis had higher BMI, reported more frequent food cravings and binge eating episodes, and lower perceived self-regulatory success in dieting than those without a YFAS diagnosis (all t(2) > 2.1, p < .04; Fig. 1A-D). They also had higher attentional impulsivity (t(444) = 2.1, p = .04), but did not differ in motor and non-planning impulsivity (both t(444) < 1.2, ns; Fig. 1E). Groups did not differ in sex distribution ($\chi^2 = 2.1$, ns) or age (t(444) = 1.4, ns).

There was neither a direct (b = -0.04, ns) nor total (b = 0.002, ns) effect of impulsivity on BMI. However, there was an indirect effect of impulsivity on BMI via food addiction symptomatology, food cravings, binge eating, and perceived self-regulatory success (bootstrap estimate 0.002, SE = 0.001, 95%CI [0.001, 0.004]; Fig. 2B).

The eleven symptoms as assessed with the YFAS 2.0 had an underlying one-factorial structure and high internal consistency, suggesting that they represent “food addiction” as a homogenous construct. Prevalence of “food addiction” was similar to those reported for the previous version of the YFAS. Thus, the changes made to the scale (e.g., inclusion of a higher number of symptoms) did not affect the likelihood of classifying participants as “food addicted”. Likewise, correlates of “food addiction” that have been reported for the previous version of the YFAS (i.e., higher BMI, more frequent food cravings and binge eating episodes, lower perceived success in dieting, higher attentional impulsivity) were similarly found in the present study.

A serial mediation model showed that “food addiction” symptomatology, in addition to related measures, mediated the association between impulsivity and body mass. Of note, impulsivity was not directly, but only indirectly related to body mass: higher impulsivity was associated with more “food addiction” symptoms, which were in turn related to more frequent food cravings and binge eating episodes, ultimately resulting in lower eating-related self-regulatory success and higher BMI. As this was a cross-sectional study, causal inferences need to be interpreted with caution. Results do, however, suggest possible mechanisms that link impulsivity and body mass.

REFERENCES