The Ecological Validity of the Yale Food Addiction Scale 2.0

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Introduction

- Food addiction is a behavioral addiction characterized by compulsive eating of highly palatable foods that leads to significant impairment and distress and is associated with obesity and psychiatric morbidity.[1,2]
- The Yale Food Addiction Scale (YFAS) is a standardized self-report assessment tool to identify individuals exhibiting signs of addiction towards foods high in fat and/or refined carbohydrates.[1]
- Despite evidence supporting its psychometric properties, to date there is no research on its ecological validity - i.e., extent the YFAS reflects food addiction symptoms in daily life. [3]

Objectives

1. Assess the ecological validity of the YFAS 2.0 using ecological momentary assessment (EMA), comparing the extent to which YFAS scores were associated with EMA-reported variables corresponding to food addiction criteria.
2. Further examine the real-world convergent validity of the YFAS by exploring relationships with other EMA-reported constructs that were not directly related to diagnostic criteria but have been shown to correlate with food addiction. [4,5]

Methods

- A total of 25 English reading and speaking adults between the ages of 18 and 64 who met criteria for either binge-eating disorder or food addiction (as determined by the Eating Disorder Diagnostic Scale and YFAS) were recruited from prior study databases and online platforms.
- Eligible participants completed online self-report questionnaires administered via REDCap and a 10-day EMA protocol via smartphone app (LifeData).
- Participants additionally rated degree of binge-eating symptoms during eating episodes, and completed items assessing body satisfaction, impulsivity, negative affect, and expectancy that eating would alleviate negative affect.
- Generalized linear mixed models using SPSS v28 examined associations between the total YFAS 2.0 score and EMA-measured variables.

Results

YFAS predicting EMA-measured FA symptoms:

- **Binge eating on palatable food (B=0.15, p<.001)**
- **Avoiding work/social activities due to overeating (B=0.07, p<.001)**
- **Effects of overeating on relationships (B=0.07, p<.001)**
- **Failed attempts to cut down or stop eating (B=0.07, p<.001)**
- **Preoccupation with food (B=3.00, p=.001)**
- **Feeling sluggish or tired from overeating (B=0.09, p<.001)**
- **Distress/problems because of food and eating (B=0.08, p<.001)**
- **Eagerness and urge to eat (B=1.69, p=.046)**

YFAS predicting EMA-measured FA correlates:

- **Negative affect (B=0.11, p=.002)**
- **Impulsivity (B=0.14,,p<.001)**
- **Palatable food consumption (B=0.19, p<.001)**
- Eating expectancies (B=0.06, p=.128)
- Body satisfaction (B=0.06, p=.213)
- Taste response to palatable food (B=0.06, p=.385)

- Bolded effects reflect significance at p<.05.

Conclusion

- The results of this study generally supported the ecological validity of the YFAS 2.0, with YFAS scores being significantly associated with the EMA-reported variables corresponding to food addiction criteria.
- Additional evidence of convergent validity was demonstrated by positive associations between YFAS scores, negative affect and palatable food consumption.
- Contrary to expectations, no significant relationship was found between YFAS scores and eating expectancies, body satisfaction, or taste response to palatable foods.
- Limitations include the modest sample size, which also consisted of mostly female participants (76%), and mostly young adults (mean age=28.7±6.2 years). As such, this may limit the generalizability of results to males or other age ranges.
- Strengths include the diverse racial/ethnic composition of the sample, which consisted of approximately 68% racial/ethnic minorities, and the use of real-time data collection.
- While the current study was a pilot study, results are based on a substantial number of data points gathered via EMA and can be updated as the parent study aims to collect data from additional participants.

Authors & Disclosures

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