

# On the prevalence of 'food addiction' in persons with bulimia nervosa

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## Abstract

A meta-analysis by Praxedes and colleagues published in this journal reports that the prevalence of 'food addiction' as measured with the Yale Food Addiction Scale is lower than 50% in persons with bulimia nervosa and higher in persons with binge eating disorder. However, closely examining the supplementary material of that article reveals that these numbers cannot possibly be correct. Instead, most studies indicate that the prevalence of 'food addiction' is higher than 80% in persons with bulimia nervosa and, thus, higher than in persons with other eating disorders.

## KEYWORDS

bulimia nervosa, eating addiction, food addiction, prevalence, Yale Food Addiction Scale

## Highlights

- Patterns of binge eating and associated features in persons with bulimia nervosa and binge eating disorder closely resemble an addiction to certain foods
- A meta-analysis by Praxedes et al. (2022) erroneously reported that the prevalence of 'food addiction' is lower than 50% in persons with bulimia nervosa and higher in persons with binge eating disorder
- This commentary demonstrates that most studies indicate that the prevalence of 'food addiction' is higher than 80% in persons with bulimia nervosa and, thus, higher than in persons with binge eating disorder

Praxedes et al. (2022) reported on a meta-analysis about the prevalence of 'food addiction' as measured with the Yale Food Addiction Scale (Gearhardt et al., 2009, 2016) in this journal. I applaud the authors for this endeavour as meta-analytic studies are an important part of moving the field forward for better understanding this controversially discussed construct. Yet, I was surprised to see

that Tab. 2 in the article displays that the pooled prevalence of 'food addiction' as measured with the Yale Food Addiction Scale in persons with bulimia nervosa was 16% (non-clinical diagnosis) and 48% (clinical diagnosis). In contrast, the prevalence of 'food addiction' as measured with the Yale Food Addiction Scale in persons with bulimia nervosa was around 95% or even higher in

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**TABLE 1** Prevalence of ‘food addiction’ as measured with the Yale Food Addiction Scale in persons with bulimia nervosa reported in the supplementary material by Praxedes et al. (2022).

References	Prevalence reported by Praxedes et al. (2022)	Notes
Carlson et al. (2018)	94.9%	Correct
de Vries and Meule (2016)	95.7%	Correct
El Archi et al. (2020)	94.7%	Correct
Fauconnier et al. (2020)	83.6%	This is the number for all persons with eating disorders. The prevalence in persons with bulimia nervosa was 97.6%, as is reported in section 3.2 on page 9 in the article by Fauconnier et al. (2020)
Herbozo et al. (2018)	81.0%	This is a conference abstract that reports that 21 of 26 persons in a mixed sample of persons with bulimia nervosa and binge eating disorder received a ‘food addiction’ diagnosis. The number for the persons with bulimia nervosa only is not reported in that abstract
Hilker et al. (2016)	90.6%	Correct
Meule et al. (2014)	29.4%	This is the number for the total sample, which combines persons with bulimia nervosa, persons remitted from bulimia nervosa, and persons without bulimia nervosa. The prevalence of ‘food addiction’ in persons with bulimia nervosa was 100% (26 of 26) in that study

previous studies (Carlson et al., 2018; de Vries & Meule, 2016; Granero et al., 2018; Meule et al., 2014).

Because of this blatant discrepancy, I have examined the supporting information that is available on the article’s website (<https://onlinelibrary.wiley.com/doi/10.1002/erv.2878>). This supplementary file lists all studies included in the meta-analysis and the final column (headed ‘clinical context’) indicates if the study included persons with bulimia nervosa. Table 1 reproduces the numbers in persons with bulimia nervosa that are reported in that supporting information file. As can be seen, the prevalence of ‘food addiction’ in persons with bulimia nervosa was higher than 90% in all studies but the authors erroneously reported lower numbers for three studies that also included persons without bulimia nervosa.

Of note is that Tab. 2 in the article by Praxedes et al. (2022) reports that 32 studies (14 for non-clinical diagnosis and 18 for clinical diagnosis)—not only 7—were used for estimating the pooled prevalence of ‘food addiction’ in persons with bulimia nervosa. Thus, I assume the remaining articles are those that are denoted with ‘eating disorder’ in the column ‘clinical context’ in the meta-analysis’ supplementary file. When examining some of these articles, it turns out that the prevalence of ‘food addiction’ was still larger than 50% in persons with bulimia nervosa. For example, the overall prevalence of ‘food addiction’ in the study by Albayrak et al. (2017) is reported as 16.5% by Praxedes et al. (2022) but was 62.5% (five out of eight) in persons with bulimia nervosa (p. 217

in Albayrak et al., 2017). The overall prevalence in the study by Cinelli et al. (2020) is reported as 49.4% but was 57.1% (four out of seven) in persons with bulimia nervosa (see Tab. 2 in the article by Cinelli et al., 2020). The overall prevalence in persons with eating disorders in the studies by Granero et al. (2014, 2018) are reported as 72.8% and 77.8% but were 81.5% (p. 392 in the article by Granero et al., 2014) and 95.3% (see Fig. 2 in the article by Granero et al., 2018) in persons with bulimia nervosa.

In conclusion, the prevalences of ‘food addiction’ in persons with bulimia nervosa reported in the meta-analysis by Praxedes et al. (2022) are highly implausible if not impossible. My hunch is that these numbers are based on samples that included persons without bulimia nervosa, which would also explain the large number of persons included ( $n = 1313$  and  $n = 1221$ , see Tab. 2 in the article by Praxedes et al., 2022), although the single studies included relatively few persons with bulimia nervosa. In line with earlier reports (Meule & Gearhardt, 2019), the studies included in the meta-analysis clearly show that a large majority of persons with bulimia nervosa receive a ‘food addiction’ diagnosis as measured with the Yale Food Addiction Scale. Importantly, the analyses by Praxedes et al. (2022) not only underestimate the prevalence in persons with bulimia nervosa but one of the main conclusions—that prevalence is highest in persons with binge eating disorder—is most likely false as well. Thus, the authors should carefully reanalyse their data and publish a correction with the rectified numbers.

## AUTHOR CONTRIBUTIONS

Adrian Meule solely wrote this manuscript.

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## CONFLICT OF INTEREST STATEMENT

The author declares that there is no conflict of interest.

## DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analysed in this study.

## CONSENT FOR PUBLICATION

Not applicable.

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