

# Loneliness and Food Addiction: How important is emotion dysregulation and impulsivity?

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## Introduction

- Research on Food Addiction (FA) is in its nascent stage; thus further empirical research is needed to provide evidence on the factors that contribute to the development of FA.
- The Syndrome Model of addiction suggests all addictions have similarities, such as positive/negative events that increase vulnerability to substance (e.g. drug abuse) as well as behavioural (e.g. food) addiction (1).
- FA and drug abuse share many similarities such as activation of the same brain regions, activity in the same neuronal circuits, and acting on dopamine (2,3).
- It is likely that food and drug addiction share salient etiological variables, including impulsivity and emotion dysregulation (4).
- Impulsivity has previously been found to be higher in individuals who met criteria for FA and binge eating disorder (5).
- Emotion dysregulation occurs when an individual cannot regulate negative affect or emotional distress (6). There is support that disordered eating can occur in order to ameliorate negative affect and, by extension, regulate negative emotions (7).
- Psychological problems, such as loneliness, have been identified as a risk factor to develop an addiction (8) and abnormal eating (9). Characteristics that have been associated with loneliness clearly relate to abnormal eating, such as emotional eating and bulimic symptomatology. Thus, understanding the role of loneliness in FA is vital.



## Objectives and Hypotheses

### Objectives:

The scope of this research was to investigate the direct effect loneliness has on FA; and the indirect effect impulsivity and emotion dysregulation might have on this relationship.

### Hypotheses:

Based on the influence of loneliness to develop an addiction and the etiological impact of impulsivity and emotion dysregulation on food and drug addiction that was found in previous studies, it was hypothesised that

- there is a positive relationship between loneliness and FA (H1), and
- that there is a mediating effect of impulsivity and emotion dysregulation on this relationship (H2).

## Method

### Design:

Correlational design investigating associations between loneliness and FA while controlling for emotion dysregulation and impulsivity on this relationship.

### Materials:

Table 1 presents the measures used to assess loneliness, FA, impulsivity and emotion dysregulation in this research.

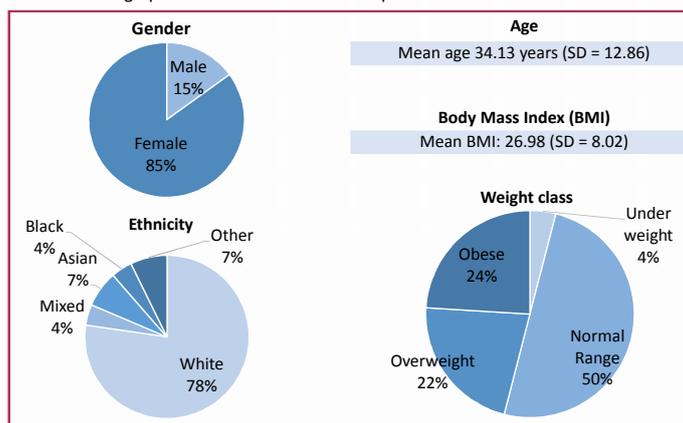
Table 1: Measures used to assess loneliness, FA, impulsivity and emotion dysregulation

Questionnaire	Assessment of	Items	Scale	Indication
UCLA Loneliness Scale (11)	Loneliness and social isolation	20 questions	Likert-scale ranging from 1 = Never to 4 = Always	Higher scores indicate greater degrees of loneliness
Yale Food Addiction Scale YFAS (10)	Levels of dependency towards certain food as experienced in the past 12 months	25 questions	Likert-type scale ranging from 0 = Never to 4 = 4 or more times or daily	Higher scores indicate greater proneness to FA
UPPS Impulsive Behavior Scale (12)	Impulsive Behaviour	45 questions in 4 subscales assessing Premeditation (11 items), Urgency (12 items), Sensation Seeking (12 items), and Perseverance (10 items)	Likert-scale ranging from 1 = Agree strongly to 4 = Disagree strongly	Higher scores indicate greater impulsive behaviour. For this research the overall UPPS score was used.
Difficulties in Emotion Regulation Scale DERS (13)	Multiple aspects of emotion dysregulation	36 questions to assess a total score or scores on the 6 subscales of Nonacceptance, Goal directed behaviour, Control difficulties, Awareness, Regulation strategies and Clarity of emotion.	Likert-scale ranging from 1 = Almost never to 5 = Almost always	Higher scores indicate greater emotion dysregulation. For this research the overall DERS score was used.

### Participants:

143 participants were recruited via opportunity sampling and from online communities aimed at FA such as Overeaters Anonymous (OA). The participants were required to be aged 18+ and fluent in English. Table 2 presents their demographic characteristics.

Table 2: Demographic characteristics of the sample



### Procedure:

Following ethical approval, participants were invited to take part in the study online via Qualtrics. After completing a consent form, participants were instructed to complete a series of self-report measures. All participants were tested in accordance with the BPS ethics guidelines.

### Analytic procedure:

- Preliminary analyses were performed to ensure no violation of the assumptions of normality.
- A Pearson correlation was conducted to explore associations between loneliness and FA.
- A partial correlation was used to investigate the mediating effect of impulsivity and emotion dysregulation on the relationship between loneliness and FA.

## Results

Pearson's correlation showed a moderate positive relationship between Loneliness and FA,  $r(141) = .368$ ,  $p = .001$ . The proportion of variance that is explained by Loneliness and FA is 14%.

Further analysis using a Partial correlation explored the mediating effect of Impulsivity and Emotion Dysregulation on the relationship between Loneliness and FA. The results indicated no significant relationship between loneliness and FA, controlling for impulsivity and emotion dysregulation,  $r(139) = .071$ ,  $p = .403$ .



## Conclusion

According to the findings in this research:

- H1 is accepted,
- H2 rejected.

### Implications:

This research provides further evidence on the area of FA and the factors contributing to its development.

Analysis indicated a direct association between loneliness and FA. This finding supports previous research which indicated there is a relationship between loneliness and the development of an addiction in general (8) and the current study suggests possibly also FA.

Impulsivity (5) and emotion dysregulation (7) have previously been found to be contributors to the development of an addiction. This research indicates loneliness is unrelated to FA when controlling for impulsivity and emotion dysregulation. This finding suggests that the relationship between loneliness and FA could be affected/mediated by the effects of impulsivity and emotion dysregulation which supports published literature on the direct effects impulsivity and emotion dysregulation have on the development of an addiction. However, this research study cannot support the claim that loneliness has an influence on the development of FA as the relationship is affected by the mediators.

### Limitations:

The majority of the sample were white females which might limit the extent to which the results of this study can be generalized to individuals from a different gender or ethnic background.

### Future research:

Based on the current findings, investigation of the following factors on FA is needed:

- the direct effect of impulsivity and its different aspects as represented in the UPPS subscales and
- the direct effect of emotion dysregulation and its different aspects as represented in the DERS subscales.

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