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Eating to live or living to eat? Exploring the causal attributions of self-perceived food addiction

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ABSTRACT

Previous studies indicate that many people perceive themselves to be addicted to food. However, little is known about how the concept of 'food addiction' is defined amongst members of the lay public. The current study examined beliefs about the cognitive and behavioural manifestations of food addiction. Participants ($N = 210$) completed an internet-delivered questionnaire in which they indicated whether or not they perceived themselves to be a food addict and provided a brief explanation for their response. Over a quarter of participants (28%) perceived themselves to be food addicts and self-diagnosis was predicted by increased BMI and younger age, but not by gender. Thematic analysis was conducted to explore the causal attributions provided by self-perceived food addicts and non-addicts. Six characteristics were identified: 1) Reward-driven eating (i.e. eating for psychological rather than physiological reasons), 2) A functional or psychological preoccupation with food, 3) A perceived lack of self-control around food, 4) Frequent food cravings, 5) Increased weight or an unhealthy diet, and 6) A problem with a specific type of food. The emergent themes, and their frequency, did not differ between self-perceived food addicts and non-addicts. However, self-perceived food addicts and non-addicts reported divergent cognitions, behaviours and attitudes within each common theme. This study is the first to provide qualitative insight into beliefs about food addiction in both self-perceived food addicts and non-addicts. The findings appear to reflect a view of food addiction that is identifiable through several core behaviours.

1. Introduction

The notion of 'food addiction' has gained widespread media attention and public support for its existence appears to be strong (Barry, Brescoll, Brownell, & Schlesinger, 2009; Bird, Murphy, Bake, Albayrak, & Mercer, 2013; Lee et al., 2013; Wilson et al., 2009). In one study, 86% of Australians and Americans endorsed the idea that some foods have addictive properties and 72% believed that food addiction could account for some cases of obesity (Lee et al., 2013). More recently, it has been shown that a substantial proportion (42%–52%) of people from community samples perceive themselves to be addicted to food (Hardman et al., 2015; Meadows & Higgs, 2013). In these studies, this 'self-perceived' food addiction was assessed simply by asking participants to indicate whether or not they believe themselves to be addicted to food. It has also been shown that self-perceived food addiction is associated with eating pathology, weight concerns, dieting behaviour, and internalised weight stigma (Meadows & Higgs, 2013).

In contrast, the extent to which compulsive overeating is akin to a substance-based addiction remains heavily debated within the scientific community (Rogers & Smit, 2000; Ziauddeen, Farooqi, & Fletcher, 2012; Ziauddeen & Fletcher, 2013). Nonetheless, the Yale Food Addiction Scale (YFAS; Gearhardt, Corbin, & Brownell, 2009) enables quantification and diagnosis of 'food dependence' based on the DSM-IV criteria for substance dependence (e.g. substance taken in larger amount than intended, persistent desire to quit, tolerance). Using this measure, the prevalence of food addiction was found to be around 15% for adults seeking weight loss treatment (Eichen, Lent, Goldbacher, & Foster, 2013), and between 5% and 7% within non-clinical populations (Meadows & Higgs, 2013; Pedram et al., 2013). Interestingly, previous studies indicate a substantial mismatch between the number of participants who are classified as food dependent on the YFAS (7%–8%) and those who self-diagnose (42%–52%) (Hardman et al., 2015; Meadows & Higgs, 2013). This

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finding implies that, for many people, their own interpretation and experience of food addiction is not consistent with the substance dependence model proposed by the YFAS.

On this basis, an important avenue for research concerns the identification of specific eating behaviours that are attributed to self-perceived food addiction amongst members of the lay public. In a qualitative study by Ifland et al. (2009), interview questions from the DSM-IV criteria for substance dependence were adapted to explore eating behaviours in a group of self-perceived food addicts. These participants reported requiring greater amounts of food over time, a tendency to engage in emotional eating, consuming more food than intended, unsuccessful attempts to cut down on certain foods, and spending a lot of time obtaining food, eating, or recovering from the effects of overeating. Ifland et al. (2009) interpret these findings as demonstrating an overlap between the eating patterns of self-perceived food addicts and the clinical criteria for substance dependence. However, applying a substance dependence model to over-eating in this way may be premature given the lack of concrete evidence for any specific addictive substance in food. Indeed, it has been suggested that many of the DSM-IV substance dependence criteria are not easily applicable to eating behaviour given the availability and necessity of food (Ziauddeen et al., 2012). Furthermore, as noted above, self-perceived food addiction and the YFAS diagnosis of food dependence often do not coincide, and the reason for this discrepancy is not clear.

To explore the manifestations of self-perceived food addiction, it may therefore be more appropriate to use a qualitative framework that is not guided by any prior theory of food addiction. To our knowledge, very few studies have employed this inductive approach in the current context. Hetherington and Macdiarmid (1993) found that the majority of self-perceived chocolate addicts attributed their addiction to an inability to resist chocolate. Participants also made causal attributions regarding the amount of chocolate they consumed, or having been labeled as a 'chocolate addict' by others.

Given the current lack of knowledge around self-perceived food addiction, the primary aim of the current study was to examine beliefs about the cognitive and behavioural manifestations of food addiction amongst members of the lay public. We adopted a similar inductive approach to Hetherington and Macdiarmid (1993) in order to build on and extend these initial findings. Participants completed a short internet-delivered questionnaire in which they were asked to indicate whether or not they perceived themselves to be a food addict. They were then asked to provide a brief explanation for their response. A potential issue was that participants may be unfamiliar with the term 'food addiction' and hence might find it difficult to respond. For this reason, a secondary aim was to determine whether it is necessary to provide a definition of food addiction prior to administering a measure of self-perceived food addiction. Thus, before indicating whether they perceived themselves to be a food addict, half of participants read a short definition of food addiction, and half of participants received no information.

2. Method

2.1. Participants

A total of 210 participants (males, $n = 65$; females, $n = 145$) completed an internet-delivered questionnaire. Participants were aged between 18 and 62 years (mean age = 28.95, $SD = 11.49$ years) and ranged from underweight (15.82 kg/m^2) to obese (37.32 kg/m^2) (mean BMI = 23.45, $SD = 4.01$). The questionnaire was advertised on an internal website at the University of Liverpool and was accessible to staff and students. The study was approved by the University of Liverpool Research Ethics Committee. Participants provided written informed consent prior to completing the questionnaire.

2.2. Materials and procedure

An internet-based questionnaire was developed using the resources available at www.qualtrics.com. Once they had given their consent, participants were randomly allocated to one of two conditions; (1) a "no information" condition ($n = 104$), in which no information about food addiction was provided, or (2) an "information" condition ($n = 106$), in which participants read a brief paragraph which provided the following definition of food addiction:

> *"People sometimes have difficulty controlling their intake of certain foods. One theory of why people overeat is that foods high in fat and sugar are addictive. In support of this, research in animals and humans suggests that certain foods activate similar brain areas to drugs of abuse. It is believed that addiction to food can be experienced by anyone, regardless of weight. For example, food addiction may be experienced as persistent craving for food as well as spending a lot of time thinking of, purchasing, preparing and eating food despite knowledge that this is unhealthy."*

Our aim here was to test whether providing participants with this information would influence the subsequent measure of self-perceived food addiction. For example, participants may be unfamiliar with the term 'food addiction' and so require this clarification in order to effectively self-diagnose themselves. The information included in the paragraph was adapted from current expert consensus on food addiction provided by the Neurofast project (http://www.neurofast.eu/consensus).

To assess self-perceived food addiction, participants were then asked "Do you agree with the following statement: 'I believe myself to be a food-addict'?" to which they could respond either "Yes", "No", or "I don't know". To provide insight into the causal attributions of food addiction, participants were then asked the following: "Please let us know why you do/do not perceive yourself to be a food addict. If you answered 'I don't know', please let us know why you gave this response". Participants were free to write as much as they wished in response to this question.

Finally, participants were asked to provide their age, gender, weight (in kg or stones), and height (in m or feet). On completion, participants were debriefed and thanked for their time.

2.3. Data analysis

2.3.1. Quantitative data

A chi-square test was used to compare the frequency of responses on the self-perceived food addiction measure (i.e. "Yes", "No" and "I don't know") between the information and no information conditions. In line with the study aims, we were particularly interested to see whether the frequency of indecisive (i.e. "I don't know") responses would be reduced among participants who had read a definition of food addiction (*i.e.*, information condition) relative to participants who had received no information.

For subsequent analyses, participants who had indicated an indecisive (i.e. "I don't know") response ($n = 26$) were excluded. This was so that we could directly compare the causal attributions made by self-perceived food addicts with those made by non-addicts. A chi-square test was conducted to explore whether self-perceived food addicts differed according to gender. Differences in age and BMI between self-perceived food addicts and non-addicts were explored using independent samples *t*-tests.