

Abstract

Debates regarding addictive-like eating have generated several conceptualizations of this construct. Qualitative research helps ensure that conceptualizations capture how individuals may experience addictive-like eating. In this study, we conducted semi-structured interviews with ten participants who identified themselves as addicted to food, or to food and eating, to determine how they conceptualized their addictive-like eating. Using thematic analysis, we identified four themes: (1) Social Environment, describing how past and present social environments affected addictive-like eating; (2) Situational Cues, encompassing situational contributions to addictive-like eating; (3) Persistent Cognitions, including preoccupation with food and loss of control; and (4) Impact of Weight, encompassing weight gain and its perceived impact on health, body image, and distress. Participants described properties specific to their preferred foods, as well as environmental and cognitive factors contributing to addictive-like eating. These descriptions were not completely captured by either substance-based “food addiction” or behavioural “eating addiction” frameworks, though characteristics of both were present. Further, existing scales of addictive-like eating do not assess the impact of social and situational cues, suggesting a need for new or revised measures. We propose a working definition of addictive-like eating that incorporates the characteristics described.

Keywords: Food addiction; Qualitative; Eating behaviour; Overeating; Binge eating

Conceptualizing addictive-like eating: A qualitative analysis

Carley Paterson¹, Emilie Lacroix¹ & Kristin M. von Ranson¹ *

¹ Department of Psychology, University of Calgary, 2500 University Dr. NW, Calgary, AB, Canada T2N 1N4

* Corresponding author

E-mail addresses: cepaters@ucalgary.ca (C. Paterson), emilie.lacroix@ucalgary.ca (E. Lacroix), kvonrans@ucalgary.ca (K.M. von Ranson)

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Conceptualizing addictive-like eating: A qualitative analysis

The theory that some people may develop an addiction to food has been hotly debated in recent years (Lacroix, Tavares, & von Ranson, 2018). There is no consensus on a term and definition to describe addictive-like eating¹ patterns (Hebebrand et al., 2014; Ziaudeen & Fletcher, 2013; Long, Blundell, & Finlayson, 2015), although these patterns have been associated with depression, negative affect, emotional dysregulation, lower self-esteem, negative body image (Gearhardt et al., 2012), and obesity (Davis & Carter, 2009). At least five perspectives on the nature of addictive-like eating have been presented in the literature (Lacroix et al., 2018), described below.

First, the food addiction hypothesis posits that certain foods, especially highly-processed foods high in sugar, salt, and/or fat, trigger physiological processes and symptoms similar to those caused by drug addiction (Gearhardt, Corbin, & Brownell, 2009; Gearhardt, Davis, Kushner, & Brownell, 2011). These symptoms include cravings, tolerance and withdrawal symptoms, and associated distress and/or impairment. A self-report measure, the Yale Food Addiction Scale (YFAS), was developed by Gearhardt et al. (2009) to assess addictive-like eating based on the seven DSM-IV diagnostic criteria for substance dependence (American Psychiatric Association [APA], 2000), and a revision was released to align with DSM-5 substance use disorder criteria (YFAS 2.0; Gearhardt, Corbin, & Brownell, 2016). Although the YFAS has been used in almost all research on "food addiction" (Meule, 2015), there is disagreement regarding whether a substance use disorder framework is the most appropriate way

¹ We employ the term "addictive-like eating" throughout this paper to describe the construct commonly associated with terms such as "food addiction" or "eating addiction." We chose this neutral, descriptive term to avoid aligning with existing hypotheses regarding the nature of this construct.

113
114
115 to conceptualize addictive-like eating (e.g., Hebebrand et al., 2014; Ziaudeen & Fletcher, 2013;
116
117 Long et al., 2015).

119
120 Second, the eating addiction hypothesis conceptualizes addictive-like eating as a
121
122 behavioural addiction, similar to gambling disorder, the only behavioural addiction included in
123
124 DSM-5 (APA, 2013). According to Potenza (2008), a behavioural addiction consists of a
125
126 behaviour that is highly rewarding, reinforcing, and capable of altering the reward system in a
127
128 similar manner as drugs of abuse. The ingestion of a substance is essential to produce the
129
130 addictive symptoms of a substance use disorder, whereas substance ingestion is not necessary in
131
132 behavioural addictions. Proponents of the food addiction hypothesis emphasize the importance of
133
134 food characteristics in provoking addictive-like symptoms (Schulte, Potenza, & Gearhardt,
135
136 2017), whereas proponents of the eating addiction hypothesis argue that differential addictive
137
138 potential of “addictive” foods is attributable to cognitive and behavioural factors, rather than
139
140 food substances themselves (Hebebrand et al., 2014).

143
144 Third, addictive-like eating has been conceptualized as a subtype of binge eating disorder
145
146 (BED). Descriptions of addictive-like eating often include the cardinal symptom of BED:
147
148 episodes of binge eating, or eating unusually large amounts of food with concomitant loss of
149
150 control, as well as significant distress (Davis, 2013). Researchers have found substantial yet
151
152 incomplete overlap in symptoms and prevalence between addictive-like eating and BED (Cassin
153
154 & von Ranson, 2007; Davis et al., 2011; Gearhardt et al., 2012; Imperatori et al., 2016). For
155
156 example, among 72 obese adults who met YFAS criteria for food addiction, Davis and
157
158 colleagues (2011) found that only 50% met BED criteria. Individuals with addictive-like eating
159
160 who do not meet BED criteria may still experience elevated rates of eating pathology with
161
162 associated distress, weight cycling, impulsivity, depression, and anxiety (Gearhardt, Boswell, &
163
164
165
166
167
168

White, 2014; Ivezaj, White, & Grilo, 2016). The fact that not all individuals with addictive-like eating meet BED criteria makes it difficult to conceptualize addictive-like eating solely as a subtype of BED, as it overlooks approximately 50% of those with addictive-like eating. Also inconsistent with this perspective are the elevated rates of addictive-like eating found among individuals with other recognized eating disorders, such as anorexia nervosa and bulimia nervosa (Imperator et al., 2016).

Fourth, Davis (2013) and Vainik, Neseliler, Konstabel, Fellows, and Dagher (2015) have posited that both addictive-like eating and BED may represent points on a transdiagnostic spectrum of overeating or uncontrolled eating. This spectrum ranges in severity from mild, occasional hedonic overeating, to frequent overeating, binge episodes, BED, and, at the most severe end of the spectrum, "food addiction" (Davis, 2013; Vainik et al., 2015). The Reward-based Eating Drive scale (RED-13) was developed by Mason et al. (2017) to measure severity of addictive-like eating across this spectrum, an operationalization which sidesteps the problem of comorbidity and incomplete diagnostic overlap.

Fifth, the construct of addictive-like eating may represent the pathologizing of normative hedonic overeating and therefore hold no clinical utility (Finlayson, 2017). Reward pathway activation in the brain in response to food cues is often greater in individuals with higher YFAS scores (Gearhardt et al., 2011). However, Finlayson (2017) has argued the activation of reward pathways occurs in response to foods with high energy density because of an evolved preference for these foods due to enhanced survival value in food-scarce environments. Thus the activation of these pathways is a normal brain response and does not denote pathology. In fact, because reward pathways are activated by many adaptive behaviours, Finlayson (2017) has argued that this activation is insufficient to either confirm or refute the food addiction hypothesis.

225
226
227 The topic of addictive-like eating has generated much research (Meule, 2015). However,
228 findings and interpretations of these findings have often conflicted (Lacroix et al., 2018),
229 highlighting the lack of (and need for) a universal understanding and definition of addictive-like
230 eating. Quantitative and neuroscience research undoubtedly improve our understanding of
231 addictive-like eating, but do not capture individuals' experiences of these eating patterns. For
232 example, if questionnaires have been designed based on questionable or invalid a priori
233 assumptions about addictive-like eating, resulting prevalence estimates may be of limited value.
234 Qualitative research is essential to move toward a valid and clinically meaningful definition of
235 addictive-like eating.
236
237

238
239
240
241
242
243
244
245
246
247 Qualitative studies to date have identified many important themes, such as a loss of
248 control over food intake (van Ostrand, 2015; Ruddock, Dickson, Field, and Hardman, 2015),
249 frequent food cravings (Ruddock et al., 2015; Malika, Hayman, Miller, Lee, and Lumeng, 2015),
250 eating for psychological rather than physiological reasons, increased weight, and problems with
251 specific foods (Ruddock et al., 2015). Symptoms of tolerance and withdrawal, however, were
252 less commonly described, possibly due to participants misunderstanding these terms. Cullen et
253 al. (2017) found that, although most participants accepted the "food addict" label and many said
254 they were more likely to seek treatment if their eating problems were labelled as an addiction,
255 some rejected it, reasoning that this label could lead to adverse consequences such as
256 internalizing "addict" stereotypes.
257
258
259
260
261
262
263
264
265
266

267
268 These qualitative studies have helped characterize individual experiences of addictive-
269 like eating and identify key features, such as loss of control. However, to our knowledge, no
270 qualitative study has yet been conducted with the goal of investigating competing
271 conceptualizations of addictive-like eating, such as the substance-based "food addiction" and
272
273
274
275
276
277
278
279
280

behavioural “eating addiction” hypotheses. Furthermore, through their recruitment procedures, some studies may inadvertently have ensured that the results aligned with specific conceptualizations of addictive-like eating, or only characterize certain subtypes of addictive-like eating. For example, Van Ostrand (2015) recruited participants from a 12-step support group, Food Addicts in Recovery Anonymous, and excluded participants who did not have YFAS-defined food addiction, thus making it likely that participants’ conceptualizations would be consistent with the food addiction hypothesis. Similarly, Ruddock et al. (2015) studied self-perceived “food addicts,” rather than recruiting people who identified as addicted to eating. Cullen et al. (2017) provided participants with a definition of food addiction, implicitly supporting a substance-based food addiction perspective. Furthermore, many qualitative studies have primarily studied women (e.g., Malika et al., 2015; Van Ostrand, 2015) or individuals with obesity and overweight (e.g., Cullen et al., 2017). Considering that addictive-like eating is not specific to these populations (Imperatorii et al., 2016), qualitative research with men as well as individuals with lower body mass indices (BMIs; kg/m²) is necessary to examine a wider range of experiences with addictive-like eating.

The present study investigated experiences of addictive-like eating among both women and men with diverse BMIs who felt addicted to specific foods, eating behaviours, or both. Importantly, we explored two dominant hypotheses of addictive-like eating. We had two primary research questions: (1) How do individuals who feel addicted to food or eating conceptualize and describe their addictive-like eating? (2) Are descriptions of addictive-like eating consistent with a substance use disorder, a behavioural addiction, both conceptualizations, or neither?

Method

Participants

Participants were recruited from the following two sources.

Undergraduate Research Participation System (RPS). Psychology students were provided with course credit for participating in this study through the RPS pool of a Canadian university. Student RPS users completed a pre-screen measure at the beginning of the semester to assess eligibility. Participants who reported that they felt addicted to food, eating, or both were eligible and invited to participate. There were no exclusion criteria. We included participants based on their own identification with food and/or eating addiction rather than based on a YFAS diagnostic cut-off because we wanted to avoid conflating addictive-like eating with either measure, and felt it was important to include people who may experience sub-threshold symptoms. We believed that using self-identification with food and/or eating addiction alone would allow us to better investigate what addictive-like eating is *and* what it is not.

Community sample. To reach a wider variety of individuals, participants were recruited from a free online classified advertising service, *kijiji.ca*. An ad was posted seeking individuals who felt addicted to food or eating. We also advertised the study identically on our research lab website. Community participants were entered into a lottery to win a \$50 gift card.

Pre-screen Measures

Potential participants completed demographic information including their age, weight and height, gender, ethnicity, income, and employment status. Participants also completed the following questions and questionnaires to assess eligibility and to describe the sample.

The following four questions were administered to assess self-perceived experiences with food and/or eating addiction: 1. How often do you overeat? a) More than once a week, b) Once a week, c) Once a month, d) Less than once a month, e) I never overeat; 2. Have you ever felt addicted to food or eating? a) Yes, to one or more particular foods (or types of foods), b) Yes, to

393 eating (it doesn't matter much what food in particular), c) Yes, to both food and eating, d) No; 3.
394
395
396
397 If yes, have you felt addicted to food or eating within the past 12 months? a) Yes, to food, b)
398
399 Yes, to eating, c) Yes, to both food and eating, d) No; 4. If you have ever felt addicted to food,
400
401 please list which foods or types of foods (If not applicable, leave empty).
402
403

404 **Yale Food Addiction Scale 2.0.** Food addiction symptoms were assessed using the
405
406 YFAS 2.0 (Gearhardt, et al., 2016). This scale includes 35 items on the frequency of food-related
407
408 symptoms. Questions focus on the past 12 months and are rated on an eight-point scale ranging
409
410 from "Never" to "Every day." Each question corresponds to a DSM 5 Substance-Related and
411
412 Addictive Disorders (SRAD) symptom criterion (e.g., tolerance, craving, withdrawal) or clinical
413
414 impairment/distress; a symptom is scored as present when participants positively endorse at least
415
416 one of the questions that maps onto it. The symptoms are then totalled to yield a "diagnosis" of
417
418 mild (2-3 symptoms + impairment and/or distress), moderate (4-5 symptoms + impairment
419
420 and/or distress), or severe (6 or more symptoms + impairment and/or distress) food addiction, as
421
422 well as a continuous symptom count ranging from 0 to 11. The possible range of scores is listed
423
424 in Table 1. The YFAS 2.0 has demonstrated evidence of internal consistency, and convergent,
425
426 discriminant, and incremental validity (Schulte & Gearhardt, 2017; Carr, Catak, Pejsa-Reitz,
427
428 Saules, & Gearhardt, 2017).
429
430

431 **Eating Disorder Examination – Questionnaire (EDE-Q).** Eating disorder
432
433 psychopathology was assessed using the EDE-Q 6.0 (Fairburn & Beglin, 2008). This 33-item
434
435 self-report measure focuses on the previous 28 days and invites responses using seven response
436
437 options regarding degree of agreement or frequency of certain symptoms. Items assess dietary
438
439 restraint, eating, weight and shape concern, as well as frequency of behaviours such as binge
440
441 eating, compensatory behaviours, and compulsive exercise. The scale has four subscales
442
443
444
445
446
447
448

(Restraint, Eating Concern, Shape Concern, and Weight Concern), and a total score based on the average of the subscales. Higher scores indicate greater eating disorder psychopathology. The possible range of scores is listed in Table 1. The EDE-Q has demonstrated evidence of good internal consistency (Luce & Crowther, 1999) and construct validity (Mond, Hay, Rodgers, Owen, & Beumont, 2004).

Table 1

Descriptive Statistics for Pre-Screen Measures (N=10)

	Mean	Minimum	Maximum	SD	Possible score range
YFAS Symptom Count	6.90	3.00	10.00	2.78	0 -11
EDE-Q					
Global Score	2.94	0.23	5.25	1.58	0-6
Restraint	2.40	0.00	5.20	1.98	0-6
Eating Concern	2.38	0.40	4.80	1.39	0-6
Shape Concern	3.92	0.50	6.00	2.06	0-6
Weight Concern	3.04	0.00	5.20	2.00	0-6

Note. SD = Standard deviation. YFAS = Yale Food Addiction Scale 2.0 (Gearhardt et al., 2016);

EDE-Q = Eating Disorder Examination Questionnaire 6.0 (Fairburn & Beglin, 2008).

Procedure

Ethics approval was obtained from the University of Calgary Conjoint Research Ethics Board. All individuals who expressed interest in the study completed above questionnaires online after completing informed consent, and if eligible, were subsequently interviewed using a semi-structured interview guide. The interview guide included standardized questions to initiate

discussion, which are listed in Table 2. Follow-up questions varied depending on the content of the interview. Interviews were audio-recorded and transcribed for data analysis.

Table 2

Interview Guide.

Topic of Discussion	Sample questions*
1. Description of personal experience	<ul style="list-style-type: none"> "You said that you feel addicted to [food and/or eating] - tell me more." "Do you think that you are addicted to (specific foods/types of foods), or do you think it is the <i>behaviour</i> of eating that is addicting?" "How would you know if you were <i>not</i> addicted to [food/eating/both]?"
2. Definitions	<ul style="list-style-type: none"> "How would you define [food addiction/eating addiction]?" "Many people experience cravings for certain foods. What do you think is the difference between normal cravings and [food/eating addiction]?" "What is it that makes you think you are addicted to [food/eating/both]?"
3. Impairment	<ul style="list-style-type: none"> "Has your experience with [food/eating addiction] interfered with your daily life? How so? (emotionally, socially, occupationally)"
4. Coping	<ul style="list-style-type: none"> "How have you been coping with [issues surrounding food/eating addiction]?" "Do you have suggestions for other people who are coping with similar issues with food or eating?"

* The complete guide may be requested from the authors.

Thematic analysis is a form of qualitative data analysis in which the researcher sorts each statement made by the participants into categories until clear patterns of meaning begin to form (Braun & Clarke, 2006). In accordance with Braun and Clarke's (2006) guidelines, our thematic analysis consisted of three stages, which were revisited recursively. In the first stage, the first author transcribed each interview, then read the transcripts. This stage allowed the researcher to notice initial ideas and concepts (Braun & Clarke, 2006). The second and third stages consisted

of coding and theme development. The software NVivo Version 11 (QSR International) was used as an organizational tool to code the data. A short phrase, called a code, was selected to summarize each comment made by each participant. These codes became categories for related ideas, and related categories were grouped into distinct experiences and ideas, called themes.

Results

Demographics and Pre-Screen Considerations

Eight interviews were conducted in person, and two were conducted by phone. Interview duration ranged from 15 to 52 minutes, with a mean duration of approximately 45 minutes. The 15-minute interview was an outlier and was retained despite its short length due to many valuable experiences described concisely by the participant. Two men and two women were recruited from the university RPS, two men and two women were recruited from *Kijiji.ca*, and two women were recruited from the laboratory website. Data collection concluded after the tenth participant, when the data were deemed to have reached theoretical saturation, the point at which the data becomes 'saturated' with valuable answers and patterns start to repeat themselves (Guest, Bunce & Johnson, 2006).

Participants' ages ranged from 18 to 58 years ($M = 28.6$ years, $SD = 14.7$) and their mean BMI was 23.7 kg/m^2 (range = 17.4 to 33.4 kg/m^2), calculated from self-reported height and weight. According to BMI weight classes (World Health Organization, 2019), one participant was underweight, six participants were in the normal weight range, one participant was overweight, and two participants were obese. Eight participants identified their ethnicity as Caucasian, one as Filipino, and one as Hispanic. Seven participants indicated their marital status was single, two as married, and one as a common law relationship. Half of participants were students employed part-time or full-time; in addition, one was employed full-time, two were

unemployed, one was unemployed and looking for work, and one was unemployed and receiving disability compensation. One participant did not disclose their income; the median household income of the remaining participants was \$150,000 (range = \$30,000 - \$400,000).

Descriptive statistics for pre-screen measure scores are displayed in Table 1, and each participant's score summary, along with their pseudonym, is presented in Table 3. Five individuals reported that they felt addicted to food but not eating, and five individuals reported that they felt addicted to both food and eating. Participants who felt addicted to food but not eating identified specific foods that drove their addiction, which included potato chips, candy, and calorie-dense foods such as meat and cheese. Individuals who reported feeling addicted to both food and eating indicated preferences for the same types of foods, but placed less importance on the specific foods, instead describing an urge to eat *any* food that was immediately available. Some participants reported experiencing episodes of binge eating in which they would eat a large quantities of food in one sitting, whereas others described addictive-like eating in which they would graze on preferred foods throughout the day. Sixty percent of the sample received a YFAS diagnosis (see Table 3). Two female participants disclosed spontaneously that they had been diagnosed with eating disorders in the past. One of these participants reported being in recovery from anorexia nervosa, and had recently been experiencing recurrent episodes of binge eating. The other participant stated she had previously been hospitalized for severe anorexia nervosa, and at the time of her interview, reported she was experiencing bulimia nervosa.

Table 3

Participant pseudonyms, demographics, and pre-screen scores

Participant	Age	BMI (kg/m ²)	YFAS score	EDE-Q Total score
John	22	24.4	7 (severe)	3.43
Ben	27	25.9	5 (no YFAS diagnosis)	2.03
Adam	19	22.8	4 (no YFAS diagnosis)	0.23
Jane	21	18.6	9 (severe)	3.71
Emily	20	21.6	10 (severe)	3.74
Sally	58	30.9	10 (severe)	4.65
Anne	53	33.4	7 (no YFAS diagnosis)	3.06
Kelly	30	17.4	10 (severe)	5.25
Mary	18	19.7	4 (moderate)	2.38
Mike	18	22.3	3 (no YFAS diagnosis)	0.89

Definitions

Participants struggled to define addictive-like eating². A student named John, expressed difficulty defining addiction when asked what his life would look like if he were *not* addicted to food: *"Well... what's 'addicted', right?"* Nevertheless, all participants provided some definition of addictive-like eating. The definition provided by Ben was representative of most definitions provided by the participants: *"I would say... [food addiction] is treating food inappropriately, but I guess the real tipping point is where you lose control and it's actually a real health problem, you're actually risking things for it."* Adam explained, *"[Food addiction consists of] uncontrollable urges. I guess fulfilling the habit of going through and eating these certain foods or food every single day."*

Themes

Based on participants' responses, we identified four themes, displayed in Figure 1.

Social Environment. The first theme described participants' perceptions of how past and current social environments affected the development and maintenance of addictive-like eating. This theme, which was touched upon by all participants, contained two sub-themes.

² For the sake of consistency with natural language, during interviews we used the term 'food addiction' to describe addictive-like eating.

729
730
731 *Current social environment.* Despite differences in their social environments, all
732
733 participants reported their eating attitudes and behaviours were influenced by the people around
734
735 them. All participants described feeling shame about their eating habits and fear of judgment
736
737 from others, which often led to social consequences. For John, this shame lead him to conceal his
738
739 overeating: "...I'll come home, if I do a bad drive-thru night... all the garbage goes immediately in
740
741 the garbage... So it's like, 'oh, done, dealt with, no evidence.'" When asked why, he said: "I'd
742
743 rather not have it discussed... they're not really going to persuade me [not to overeat], but... why
744
745 do they need to know?" For Jane, overeating was prioritized over socializing, leading to feelings
746
747 of isolation: "It makes you feel like it's breeding loneliness almost, like you'd just rather be alone
748
749 and eat this kind of food than actually go and hang out with people outside to make yourself feel
750
751 better."
752
753

754
755 *Past social environment.* This sub-theme pertained to participants' perceptions that their
756
757 social environments during their childhood had impacted their eating behaviours. Six participants
758
759 mentioned the role of parents' attitudes towards eating and food in the formation of eating habits
760
761 and, eventually, in the development of addictive-like eating behaviours. Jane said: "I think [food
762
763 addiction] is an environmental by-product of your parents' eating habits, or where you grew up
764
765 and what was acceptable in your household." Emily described the influence of her family's
766
767 eating behaviours on her own periods of dieting followed by binges: "[Dieting] was
768
769 everywhere... my parents, my aunties and uncles, my grandparents... they all went on [diets]... I
770
771 think it was very easy to make it look normal." Jane also described the influence her mother's
772
773 dysfunctional eating attitudes and behaviours had on the food that was available in her home:
774
775 "Junk food is always in the house, because as soon as [my mom] gets off work, that's what she
776
777 goes to." In Jane's case, an interaction appeared to exist among social influences on Jane's
778
779
780
781
782
783
784

785
786
787 eating, the specific foods that contributed to her desire to eat, and the availability of food at
788
789 home.
790

791 **Situational Cues.** The second theme encompasses situational contributions to the
792 development and maintenance of addictive-like eating behaviour. Specifically, participants
793 described situations that they believed triggered addictive-like eating. For example, Sally
794 mentioned that she was aware of addictive urges in certain contexts, and found herself overeating
795 at home as well when she was doing something sedentary: "...[It happens] in the evening,
796 watching TV....not doing anything in particular, a sedentary action of some sort. Something
797 where I'm not keeping busy, my hands aren't busy." Sally would give herself permission to
798 overeat in specific contexts: "If any vacation is coming up, I think, 'Oh, when I go on that
799 vacation, I'm having this, this, this and this.'" Anne also described frequent urges to eat specific
800 foods in certain situations, such as when arriving at home. Anne explained: "Even if I'm not
801 hungry, when I arrive at home, I have to eat. And... when I go to a party, I arrive [home from the
802 party] at eleven or whatever... and most of the time I'm full, because of good food, but I have to
803 eat. I arrive at home, and I have to eat." Later in the interview, Anne began to share insight into
804 this behaviour: "... I can control myself outside of my house, but at home, I can't... nobody will
805 judge me... outside, I'm too scared to be judged to overeat." Anne explained that she associated
806 being at home with feelings of safety and comfort, as it brought back happy memories of being
807 with her grandmother as a child. It appeared that the people in her home environment and the
808 associations she made with the context of her home would trigger specific emotions and feelings,
809 which in turn made her feel more comfortable and appeared to trigger an urge to eat, despite not
810 feeling hungry.
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840

841
842
843 **Persistent Cognitions.** The third theme includes several aspects of cognition which all
844 participants described as having important influences on the development and maintenance of
845 their addictive-like eating behaviour.
846
847
848

849 *Preoccupation with food.* The first sub-theme encompasses persistent thoughts about
850 food, and participants' perceived inability to ignore these thoughts until they acted on the urges
851 and ate the food in question. Sally put it quite simply: "*I think about food all the time,*" whereas
852 Kelly explained how she perceived the difference between typical cravings and thoughts
853 associated with a "real" food addiction: "*I feel like cravings will eventually go away, but that*
854 *addiction of it, it doesn't go away, it just- almost gets worse, right? The longer you wait, the*
855 *worse that... craving is.*"
856
857
858
859
860
861
862
863

864 *Loss of control.* All ten participants conceptualized their addictive-like eating as a loss of
865 control, which Anne put concisely: "*I eat without control, I guess.*" Emily described it when
866 defining food addiction: "*I think [a food] addiction is distressing, and it's not so much that you*
867 *feel like eating something, and you're controlling that emotion, it's more like you have to eat*
868 *something.*" Furthermore, participants often placed the locus of control on the food rather than on
869 themselves. Anne described this phenomenon as follows: "*The food [controls] me, I don't*
870 *[control] the food,*" and Jane said something similar when asked what she thought life would be
871 like if she were *not* addicted to food: "*I wouldn't be controlled by certain foods [even] if they*
872 *were offered in front of me.*"
873
874
875
876
877
878
879
880
881
882
883

884 *Awareness of consequences.* Finally, all participants thought persistently about the
885 consequences of their preoccupation with food. One direct consequence of being preoccupied
886 with food was that their perceived addiction would often interfere with daily responsibilities.
887
888
889
890
891
892
893
894
895
896

897
898
899 *I'm thinking about food, it kind of occupies my mind instead of being able to focus... so I kind of*
900 *leave studying for a while and go and do that instead, even if I'm not hungry."*
901
902

903
904 **Impact of Weight.** The fourth theme encompassed actual or anticipated weight gain and
905 its perceived impact on health, body image, and level of distress.
906

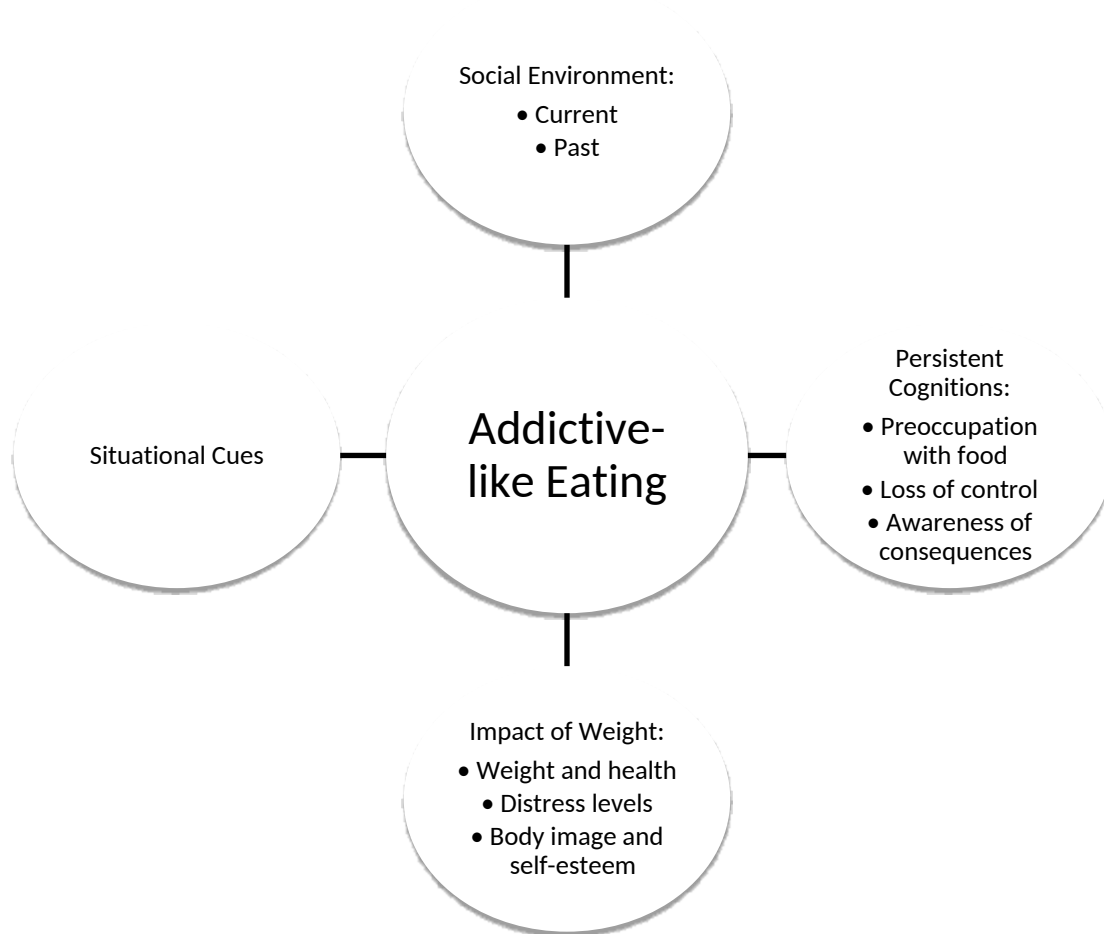
907
908 *Weight and health.* Participants often mentioned the negative short-term and long-term
909 effects of poor eating habits on the body. For example, John explained the immediate negative
910 physical consequences from binge eating: *"You eat that much food, you feel terrible. It's not*
911 *good food."* All participants described distress because of their awareness of long-term
912 consequences such as possible negative impact on their physical health. Mary said: *"I'm thinking*
913 *about my long-term health and how [my overeating] would affect me in the future, so that's*
914 *definitely a huge [source of distress]."* Awareness of the physical consequences of overeating
915 was insufficient to prevent participants from engaging in the behaviour, as John explained: *"It*
916 *starts out as you enjoy doing it, you know that midway through you're not going to be enjoying it*
917 *anymore, and you know that after you're not going to enjoy it...but you end up doing it anyway."*
918
919

920
921 *Distress levels.* Weight gain was discussed in each interview, and appeared to dictate
922 participants' levels of distress. For example, eight of ten participants perceived weight gain as an
923 ongoing consequence of addictive-like eating, which resulted in high levels of distress. Their
924 discussion of distress centered on weight gain rather than eating behaviours. Jane discussed this
925 idea in the context of a competitive athletic community in which she frequently compared her
926 weight to those around her: *"...Everyone is so thin who I hang out with in that community, and*
927 *they're always preaching how much they weigh... and you compare yourself all the time to your*
928 *peers, so... I feel like I could even be a better person if I just stopped [eating the way I do.]"*
929
930
931
932
933
934
935
936
937
938
939
940
941
942
943
944
945
946
947
948
949
950
951
952

953
954
955
956
957
958
959
960
961
962
963
964
965
966
967
968
969
970
971
972
973
974
975
976
977
978
979
980
981
982
983
984
985
986
987
988
989
990
991
992
993
994
995
996
997
998
999
1000
1001
1002
1003
1004
1005
1006
1007
1008

Those participants who did not perceive weight gain as an ongoing consequence of their eating habits were less inclined to describe severe distress. This was the case for two male participants. Mike, a student, described his relationship with weight in relation to his eating habits: *"I've never really had a problem with weight. So I kind of just have gone through my whole life and really been able to eat whatever I want, or how much I want."* Earlier on, he explained that he is not often distressed by his urges to overeat: *"I acknowledge that there are most likely consequences, but it's harder to acknowledge them when they're not visible."* Ben described something similar when asked if he felt distressed about his addictive-like eating, *"I wouldn't say distressing-I'm not worried I'm going to die or have a heart attack... but I'm definitely aware that it's not the healthiest choice, and I know in the long term it will have consequences."* Later on in the interview, Ben explained that it does not become an addiction until there are visible risks, *"I would never call a high school kid who eats a lot of junk food an addict, because they can get away with it... but if it was a morbidly obese fifty year old and they weren't able to take the steps to change the eating habits... I would say it's an addiction."* The distress and emotions surrounding addictive-like eating often resulted in a vicious cycle of overeating: participants would overeat in response to emotions resulting from previously overeating. For example, Kelly explained: *"I think a food addiction needs to have a positive and negative aspect to it, where it initially makes you feel good, or initially you feel better, and then you feel worse about it after, but then that makes you do it again, because you feel worse."* Participants described an inability to escape their pattern of addictive-like eating, as Jane stated, *"... You've tried so many times to get off of it, and it's not working so, why do you just keep on with it?"*

1009
1010
1011 *Body image and self-esteem.* In addition, perceived weight gain caused by addictive-like
1012 eating behaviour impacted participants' body image and self-esteem. Jane explained,
1013
1014
1015 *"...[Addictive-like eating] really brings your self-esteem down,"* and discussed her habit of
1016
1017 comparing her body size and shape to those around her, including the men in her life. *"You*
1018 *would never want your boyfriend to fit in the same size jeans as you, that's so embarrassing, so*
1019 *it's another stress to make sure that you're always the thinner one... It's rationally stupid to think*
1020 *that, but emotionally it's definitely there."*
1021
1022
1023
1024
1025
1026
1027
1028



1056 *Figure 1.*

1057
1058
1059
1060 **Discussion**
1061
1062
1063
1064

1065
1066
1067
1068
1069
1070
1071
1072
1073
1074
1075
1076
1077
1078
1079
1080
1081
1082
1083
1084
1085
1086
1087
1088
1089
1090
1091
1092
1093
1094
1095
1096
1097
1098
1099
1100
1101
1102
1103
1104
1105
1106
1107
1108
1109
1110
1111
1112
1113
1114
1115
1116
1117
1118
1119
1120

The present qualitative study explored two conceptualizations of addictive-like eating in a sample of men and women with a range of BMIs. Consistent with our recruitment strategy, all participants perceived themselves to be addicted to specific types of food, and half reported they were addicted to eating as well. Participants' descriptions of addictive-like eating focused on cravings for specific foods or types of foods, the social environment, situational cues, persistent cognitions, and the impacts of weight. Thus the development and maintenance of addictive-like eating may involve the interaction of specific food properties with contextual, behavioural, and individual influences. This observation suggests that, in this sample, addictive-like eating is best described by characteristics of both substance use and behavioural addiction frameworks.

Substance Use Perspective and Behavioural Addiction Perspective

All participants in our sample self-identified as experiencing a "food" addiction, and described cravings for specific, energy-dense foods, such as candy, chips, meat, and cheese. Past research has illustrated that highly processed foods, with added fats and/or refined appear to be most related to addictive-like eating behaviour (Schulte, Smeal, & Gearhardt, 2017). No participants described feeling addicted to foods that were unprocessed and low in both refined carbohydrates and fats, which is congruent with a substance-use hypothesis of addictive-like eating. Equivalently, several participants described specific situations in which they engaged more often in addictive-like eating behaviours. This finding is congruent with research illustrating that people can form learned associations between particular situations and the consumption of "addictive" foods, leading to future consumption of these foods when they are in a comparable setting or subjective state (Troisi & Gabriel, 2011). Individuals coping with a substance use disorder may also experience these learned associations when they encounter an environmental cue associated with the substance (Anton, 1999). Thus, the types of foods and

1121
1122
1123 situational nature of the overeating patterns that participants described may be interpreted as
1124
1125 consistent with both the substance-based “food addiction” and behavioural “eating addiction”
1126
1127 perspectives.
1128

1129
1130 Based on participants' responses, we propose this working definition: *Addictive-like*
1131
1132 *eating is characterized by persistent and uncontrollable urges to overeat typically energy-dense*
1133
1134 *foods, either through episodes of binge eating or grazing throughout the day. These*
1135
1136 *uncontrollable urges to eat are precipitated and maintained by social, situational, and food-*
1137
1138 *related cues. Addictive-like eating may be associated with substantial distress, particularly when*
1139
1140 *it is accompanied by experienced or anticipated weight gain. An important caveat to this*
1141
1142 definition is that it describes participants' perceived experiences and conceptualizations of a
1143
1144 construct whose clinical utility has yet to be established. We elaborate on this important task
1145
1146 below.
1147

1148 1149 **Relationship of Addictive-Like Eating to BED**

1150
1151 Our findings echo past research that has found substantial but incomplete overlap
1152
1153 between addictive-like eating and BED (Gearhardt et al., 2012; Cassin & von Ranson, 2007).
1154
1155 Some participants in the present study described their addictive-like eating behaviour as
1156
1157 overeating similar to binge eating episodes, whereas others described their addictive-like eating
1158
1159 behaviour as grazing throughout the day without binge eating episodes. Our participants tended
1160
1161 to emphasize the urges felt prior to overeating, in contrast to binge-eating episodes involving a
1162
1163 loss of control over eating. Although we did not conduct diagnostic interviews, the EDE-Q
1164
1165 results suggest that many of our participants did not meet BED criteria. Only one participant's
1166
1167 EDE-Q results suggests they may have met criteria for BED, as they specified almost daily
1168
1169 episodes of out-of-control binge eating. Many participants described grazing patterns and binge
1170
1171
1172
1173
1174
1175
1176

1177
1178
1179 eating that occurred infrequently or intermittently, less often than required for a diagnosis of
1180
1181 BED (i.e., binge eating episodes averaging at least once a week for three months; APA, 2013).
1182
1183 Nonetheless, these participants described impairment and distress associated with overeating and
1184
1185 weight gain. This finding is consistent with previous research that has found similarly elevated
1186
1187 levels of self-reported eating pathology, impulsivity, depression, and anxiety, as well as elevated
1188
1189 BMI and history of weight cycling, among individuals who met YFAS criteria for food addiction
1190
1191 yet did not meet BED criteria, compared to people with BED (Gearhardt et al., 2016; Ivezaj et
1192
1193 al., 2016).
1194

1195
1196 However, statistical prediction of distress and pathology beyond recognized eating
1197
1198 disorder diagnoses is not sufficient to establish the clinical utility of addictive-like eating. It has
1199
1200 been proposed that before the introduction of a new clinical entity, there must be empirical
1201
1202 demonstration of clinical utility, i.e., that advantages outweigh potential negative consequences
1203
1204 (First et al., 2004). The scope and severity of negative consequences of adopting the food
1205
1206 addiction hypothesis are largely unknown. For example, preliminary research has suggested that
1207
1208 there may be consequences for food intake (e.g., by leading to dietary restriction; Ruddock,
1209
1210 Christiansen, Jones, Robinson, Field, & Hardman, 2016) and stigma (e.g., by reducing self-
1211
1212 blame and internalized weight stigma, or by exacerbating weight stigma; Reid, O'Brien, Puhl,
1213
1214 Hardman, & Carter, 2018), but long-term impacts are unknown. On the other hand, it is unknown
1215
1216 whether assessing and identifying addictive-like eating leads to demonstrable improvements in
1217
1218 areas of clinical importance enumerated by First et al. (2004), such as symptom severity,
1219
1220 functioning, or the prevention of negative outcomes. Additional research is required to establish,
1221
1222 quantify, and weigh potential benefits against potential harms.
1223
1224
1225
1226
1227
1228
1229
1230
1231
1232

1233
1234
1235
1236
1237
1238
1239
1240
1241
1242
1243
1244
1245
1246
1247
1248
1249
1250
1251
1252
1253
1254
1255
1256
1257
1258
1259
1260
1261
1262
1263
1264

Impact of Weight on Distress. As discussed in the fourth theme, participants' distress was focused largely on weight gain rather than the addictive-like eating pattern itself or the negative health consequences often associated with weight gain. Some participants reported distress associated with health concerns, but most participants discussed their fear of weight gain in reference to the way they looked compared to those around them. Participants who did not anticipate or experience weight gain tended to describe lower levels of distress surrounding their addictive-like eating. This trend was most apparent in the men in our sample, who typically described less fear of weight gain as well as lower levels of distress. These results would lead us to hypothesize that distress may occur in response to addictive-like eating in cases where it is accompanied by greater eating pathology. Alternatively, distress may occur with addictive-like eating only when individuals experience or anticipate weight gain, and when weight gain is distressing, perhaps partly a function of gender. Other sources of distress might include experienced or anticipated health consequences, thin-ideal internalization, experiences and perceptions of weight stigma, and/or centrality of weight to self-concept.

1265
1266
1267
1268
1269
1270
1271
1272
1273
1274
1275
1276
1277
1278
1279
1280
1281
1282
1283
1284
1285
1286
1287
1288

An important next step is to empirically investigate these hypotheses through quantitative methods. For example, it would be helpful to further explore the links among distress associated with addictive-like eating, aesthetic aspects of weight gain, and potential health risks associated with weight gain. Lacroix et al. (2019) examined addictive-like eating qualitatively in a clinical sample and found that participants discussed serious health consequences they experienced that were associated with their weight gain, such as sleep apnea and high cholesterol, in addition to aesthetic concerns. Considering that the present sample emphasized aesthetic aspects of weight gain as their primary concern, future quantitative studies should examine larger samples with variability in levels of addictive-like eating severity to determine how much variance in

1289
1290
1291 distress/impairment from addictive-like eating is accounted for by weight-related aesthetic
1292
1293 concerns compared with weight-related health concerns. If distress and impairment are driven by
1294
1295 body image concerns and weight-related health consequences, these features may warrant greater
1296
1297 emphasis in assessment and treatment.
1298
1299

1300 It is also important to determine the influence of addictive-like eating itself on distress
1301
1302 and impairment, above and beyond the influence of body image and health concerns. One
1303
1304 possibility is that the cognitive and behavioural symptoms of addictive-like eating have little
1305
1306 impact beyond the distress associated with resulting weight concerns. This possibility would be
1307
1308 consistent with the argument that the construct of addictive-like eating pathologizes the
1309
1310 functioning of normal homeostatic processes to regulate food intake (Finlayson, 2017).
1311
1312 Specifically, this argument holds that when these homeostatic processes operate in societies with
1313
1314 abundant food environments and where the thin ideal prevails, distress may occur, but this
1315
1316 distress would be a result of environmental mismatch, rather than pathology within the
1317
1318 individual. The possibility that the cognitive and behavioural symptoms of addictive-like eating
1319
1320 may have little impact beyond weight gain concerns is consistent with both the substance use
1321
1322 disorder and the behavioural addiction perspectives. For example, a smoker is not necessarily
1323
1324 distressed by the smoking itself, but instead may be driven to quit by fear of health-related
1325
1326 consequences. Similarly, a gambler may not be distressed by the gambling itself, but instead may
1327
1328 be distressed by financial consequences. However, evidence suggests it is possible to be fit and
1329
1330 fat, as supported by data from the Healthy at Every Size treatment paradigm (e.g., see Hsu,
1331
1332 Buckworth, Focht, and O'Connell, 2012), whereas it is difficult to be a smoker and avoid
1333
1334 smoking-related health risks, or a gambler and avoid financial loss, which suggests direct
1335
1336
1337
1338
1339
1340
1341
1342
1343
1344

parallels are difficult to draw. Future research should seek to decompose the sources of distress to better inform assessment and treatment.

Strengths, Limitations, and Future Research

This study generated a working definition of addictive-like eating based on qualitative interviews with ten individuals. A major strength of this study is that, in designing the methodology and collecting data, we aimed as much as possible to refrain from aligning ourselves with existing hypotheses regarding the nature of this construct. Specifically, we included individuals who self-identified as having food addiction, or both food and eating addiction, reducing the likelihood that our results would be biased toward either of these perspectives. As we coded themes and interpreted our results, we considered multiple perspectives on addictive-like eating as possible explanations for our findings. Another important strength of our study is that our recruitment procedures were designed to include a diverse sample of individuals mirroring the diversity of people who may experience addictive-like eating. The inclusion of men and women, individuals with a wide range of BMIs, and who exhibited both binge eating and grazing patterns, permitted the comparison of addictive-like eating descriptions among these subgroups. Through these comparisons, our findings reaffirmed the critical importance of clarifying the boundaries between addictive-like eating and BED, and produced important insights related to the importance of weight and gender in experiences of addictive-like eating.

The present study is not without limitations. First, this study employed a qualitative research design involving a sample of just ten individuals. It is inappropriate to generalize these results to other populations, although they may inform the generation of hypotheses regarding the nature of addictive-like eating. Second, although we sought to recruit individuals who felt

addicted to eating and not food, we failed to do so, despite previous research indicating that 10% of 580 students endorsed addiction to eating (vs. 30% to food and 9% to both food and eating; von Ranson et al., 2015). Future research should investigate the attitudes of those who feel addicted to eating. Third, the majority (80%) of our participants were Caucasian, and more than two-thirds were students. The data may have become saturated at only ten participants due to the relatively homogenous sample in terms of ethnicity and age, rather than due to a lack of novel responses. Considering potential cultural influences on perceptions of addictive-like eating, future research should strive to include participants from a wider range of ages, ethnicities, cultural backgrounds, and demographic groups. Fourth, one author coded and analyzed the data. Although we attempted to avoid the introduction of bias into the interpretation of the data, it is impossible to completely avoid this possibility, especially with only one coder. Finally, although we refrained from aligning ourselves with any one perspective on addictive-like eating and considered multiple interpretations of our findings, complete theoretical neutrality is impossible for any researcher to achieve, particularly in the context of polarizing debate. For this reason, we call for additional original qualitative and quantitative research as well as replications by independent investigators to guard against experimenter allegiance effects (Lacroix et al., 2018).

Future qualitative and quantitative research involving clinical and non-clinical populations may clarify whether addictive-like eating contributes incremental clinical utility beyond existing eating disorder diagnoses, and whether the eating pattern itself explains distress beyond what is experienced as a function of anticipated or experienced weight gain. Future research could also clarify further the role of specific types of food in the development of addictive-like eating behaviour, as suggested by Schulte, Potenza, and Gearhardt (2018).

1457
1458
1459
1460
1461
1462
1463
1464
1465
1466
1467
1468
1469
1470
1471
1472
1473

Importantly, themes generated by the present study, such as the impact of social and situational cues, do not appear to be captured by existing scales designed to assess addictive-like eating such as the YFAS 2.0 (Gearhardt et al., 2016), Addiction-like Eating Behaviour Scale (AEBS; Ruddock, Christiansen, Halford, and Hardman, 2017), and RED-13 (Mason et al., 2017), suggesting a potential need for further scale development or refinement. It would be useful for quantitative research to study the themes generated by the present study in larger samples, especially the importance of perceived weight gain to individuals' levels of distress.

1474 **Conclusion**

1475
1476
1477
1478
1479
1480
1481
1482
1483
1484
1485
1486
1487
1488
1489
1490
1491
1492
1493
1494
1495
1496
1497
1498
1499
1500
1501
1502
1503
1504
1505
1506
1507
1508
1509
1510
1511
1512

The results of this study yielded a working definition characterizing addictive-like eating among our participants. This definition includes uncontrollable urges to overeat due to influences from both external factors and the food itself. Participants' descriptions of these external factors were organized into four themes, including past and present social environments, situational cues, persistent urges to overeat, and perceptions of weight and health. Although participants described certain types of food which would reliably lead them to overeat, our results also emphasize the importance of factors other than food in the development of addictive-like eating. We conclude that the phenomenon of addictive-like eating is not readily captured by existing substance use or behavioural addiction frameworks; instead, characteristics of both were present in individual conceptualizations of addictive-like eating. Although participants' descriptions of addictive-like eating were similar to symptoms of BED, the two constructs do not appear equivalent. Additional research is needed to determine whether addictive-like eating has incremental clinical utility over and above recognized eating disorders, weight gain, and obesity, and to investigate whether the themes which emerged from the present study also characterize addictive-like eating in other samples.

References

- American Psychiatric Association. (2000). Diagnostic and statistical manual of mental disorders (4th ed., text rev.). Washington, DC: Author.
- American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Anton, R. F. (1999). What is craving. *Alcohol Research and Health*, 23(3), 165-173.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101. doi:10.1191/1478088706qp063oa
- Carr, M. M., Catak, P. D., Pejsa-Reitz, M. C., Saules, K. K., & Gearhardt, A. N. (2017). Measurement invariance of the Yale Food Addiction Scale 2.0 across gender and racial groups. *Psychological Assessment*, 29(8), 1044-1052. doi:10.1037/pas0000403
- Cassin, S. E., & von Ranson, K. M. (2007). Is binge eating experienced as an addiction?. *Appetite*, 49, 687-690. doi:10.1016/j.appet.2007.06.012
- Cullen, A. J., Barnett, A., Komesaroff, P. A., Brown, W., O'Brien, K. S., Hall, W., & Carter, A. (2017). A qualitative study of overweight and obese Australians' views of food addiction. *Appetite*, 115, 62-70. doi:10.1016/j.appet.2017.02.013
- Davis, C. (2013). Compulsive overeating as an addictive behaviour: overlap between food addiction and binge eating disorder. *Current Obesity Reports*, 2, 171-178. doi:10.1007/s13679-013-0049-8
- Davis, C., Curtis, C., Levitan, R. D., Carter, J. C., Kaplan, A. S., & Kennedy, J. L. (2011). Evidence that 'food addiction' is a valid phenotype of obesity. *Appetite*, 57, 711-717. doi:10.1016/j.appet.2011.08.017

- 1569
1570
1571 Davis, C., & Carter, J. C. (2009). Compulsive overeating as an addiction disorder. A review of
1572 theory and evidence. *Appetite*, *53*, 1-8. doi:10.1016/j.appet.2009.05.018
1573
1574
1575 Fairburn, C. G., & Beglin, S. J. (2008). Eating disorder examination questionnaire (EDE-Q 6.0).
1576 In C. G. Fairburn (Ed.), *Cognitive behavior therapy and eating disorders* (pp. 309e313).
1577 New York: Guilford Press.
1578
1579
1580
1581
1582 Finlayson, G. (2017). Food addiction and obesity: unnecessary medicalization of hedonic
1583 overeating. *Nature Reviews Endocrinology*, *13*, 493-498. doi:10.1038/nrendo.2017.61
1584
1585
1586 First, M. B., Pincus, H. A., Levine, J. B., Williams, J. B. W., Ustun, B., & Peele, R. (2004).
1587 Clinical Utility as a criterion for revising psychiatric diagnoses. *American Journal of*
1588 *Psychiatry*, *161*(6), 946-954. doi:10.1176/appi.ajp.161.6.946
1589
1590
1591
1592 Gearhardt, A. N., Boswell, R. G., & White, M. A. (2014). The association of “food addiction”
1593 with disordered eating and body mass index. *Eating behaviors*, *15*, 427-433.
1594
1595
1596
1597 Gearhardt, A. N., Corbin, W. R., & Brownell, K. D. (2009). Preliminary validation of the Yale
1598 Food Addiction Scale. *Appetite*, *52*, 430-436. doi:10.1016/j.appet.2008.12.003
1599
1600
1601 Gearhardt, A. N., Corbin, W. R., & Brownell, K. D. (2016). Development of the Yale Food
1602 Addiction Scale Version 2.0. *Psychology of Addictive Behaviours*, *30*, 113.
1603
1604
1605
1606
1607 Gearhardt, A. N., Davis, C., Kuschner, R., & D. Brownell, K. (2011). The addiction potential of
1608 hyperpalatable foods. *Current Drug Abuse Reviews*, *4*, 140-145.
1609
1610
1611
1612 Gearhardt, A. N., White, M. A., Masheb, R. M., Morgan, P. T., Crosby, R. D., & Grilo, C. M.
1613
1614 (2012). An examination of the food addiction construct in obese patients with binge
1615 eating disorder. *International Journal of Eating Disorders*, *45*, 657-663.
1616
1617
1618
1619
1620
1621
1622
1623
1624

- 1625
1626
1627 Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment
1628
1629 with data saturation and variability. *Field Methods, 18*, 59-82.
1630
1631 doi:10.1177/1525822X05279903
1632
1633
1634 Hebebrand, J., Albayrak, Ö., Adan, R., Antel, J., Dieguez, C., de Jong, J., ... & van der Plasse, G.
1635
1636 (2014). "Eating addiction", rather than "food addiction", better captures addictive-like
1637
1638 eating behaviour. *Neuroscience & Biobehavioural Reviews, 295-306*.
1639
1640 doi:10.1016/j.neubiorev.2014.08.016
1641
1642
1643 Hsu, Y. T., Buckworth, J., Focht, B. C., & O'Connell, A. A. (2013). Feasibility of a Self-
1644
1645 Determination Theory-based exercise intervention promoting Healthy at Every Size with
1646
1647 sedentary overweight women: Project CHANGE. *Psychology of Sport and*
1648
1649 *Exercise, 14*(2), 283-292.
1650
1651
1652 Imperatori, C., Fabbriatore, M., Vumbaca, V., Innamorati, M., Contardi, A., & Farina, B.
1653
1654 (2016). Food Addiction: Definition, measurement and prevalence in healthy subjects and
1655
1656 in patients with eating disorders. *Rivista di Psichiatria, 51*(2), 60-65.
1657
1658 doi:10.1708/2246.24196
1659
1660
1661 Ivezaj, V., White, M. A., & Grilo, C. M. (2016). Examining binge-eating disorder and food
1662
1663 addiction in adults with overweight and obesity. *Obesity, 24*, 2064-2069.
1664
1665
1666 Lacroix, E., Oliveira, E., de Castro, J. S., Cabral, J. R., Tavares, H., & von Ranson, K. M.
1667
1668 (2019). "There is no way to avoid the first bite": A qualitative investigation of addictive-
1669
1670 like eating in treatment-seeking Brazilian women and men. *Appetite, 137*, 35-46.
1671
1672
1673 Lacroix, E., Tavares, H., & von Ranson, K. M. (2018). Moving beyond the "eating addiction"
1674
1675 versus "food addiction" debate: Comment on Schulte et al.(2017). *Appetite*.
1676
1677
1678
1679
1680

- 1681
1682
1683 Long, C. G., Blundell, J. E., & Finlayson, G. (2015). A Systematic Review of the Application
1684
1685 And Correlates of YFAS-Diagnosed 'Food Addiction' in Humans: Are Eating-Related
1686
1687 'Addictions' a Cause for Concern or Empty Concepts?. *Obesity Facts*, 8, 386-401.
1688
1689 doi:10.1159/000442403
1690
- 1691
1692 Luce, K. H., & Crowther, J. H. (1999). The reliability of the Eating Disorder Examination-Self-
1693
1694 Report Questionnaire Version (EDE-Q). *International Journal of Eating Disorders*,
1695
1696 25(3), 349-351. doi:Doi 10.1002/(Sici)1098-108x(199904)25:3<349::Aid-
1697
1698 Eat15>3.0.Co;2-M
1699
- 1700
1701 Malika, N. M., Hayman, L. W., Miller, A. L., Lee, H. J., & Lumeng, J. C. (2015). Low-income
1702
1703 women's conceptualizations of food craving and food addiction. *Eating Behaviours*, 18,
1704
1705 25-29. doi:10.1016/j.eatbeh.2015.03.005
1706
- 1707
1708 Mason, A. E., Vainik, U., Acree, M., Tomiyama, A. J., Dagher, A., Epel, E. S., & Hecht, F. M.
1709
1710 (2017). Improving assessment of the spectrum of reward-related eating: the RED-
1711
1712 13. *Frontiers in psychology*, 8, 795.
- 1713
1714 Meule, A. (2015). Back by Popular Demand: A Narrative Review on the History of Food
1715
1716 Addiction Research. *The Yale Journal of Biology and Medicine*, 88, 295-302.
- 1717
1718 Mond, J. M., Hay, P. J., Rodgers, B., Owen, C., & Beumont, P. J. V. (2004). Validity of the
1719
1720 Eating Disorder Examination Questionnaire (EDE-Q) in screening for eating disorders in
1721
1722 community samples. *Behaviour Research and Therapy*, 42(5), 551-567.
1723
1724 doi:http://dx.doi.org/10.1016/S0005-7967(03)00161-X
1725
- 1726
1727 Potenza, M. N. (2008). Review. The neurobiology of pathological gambling and drug addiction:
1728
1729 An overview and new findings. *Philosophical Transactions of The Royal Society B*
1730
1731 *Biological Sciences*, 363, 3181-3189. doi:10.1098/rstb.2008.0100
1732
1733
1734
1735
1736

- 1737
1738
1739 Reid, J., O'Brien, K. S., Puhl, R., Hardman, C. A., & Carter, A. (2018). Food addiction and its
1740
1741 potential links with weight stigma. *Current Addiction Reports*, 1-10. doi:10.1007/s40429-
1742
1743 018-0205-z
1744
- 1745
1746 Ruddock, H. K., Christiansen, P., Halford, J. C., & Hardman, C. A. (2017). The development and
1747
1748 validation of the Addiction-like Eating Behaviour Scale. *International Journal of*
1749
1750 *Obesity*, 41, 1710-1717. doi:10.1038/ijo.2017.158
1751
- 1752
1753 Ruddock, H.K., Christiansen, P., Jones, A., Robinson, E., Field, M., & Hardman, C.A. (2016).
1754
1755 Believing in food addiction: helpful or counter-productive for eating
1756
1757 behavior? *Obesity*, 24, 1238-43.
- 1758
1759 Ruddock, H. K., Dickson, J. M., Field, M., & Hardman, C. A. (2015). Eating to live or living to
1760
1761 eat? Exploring the causal attributions of self-perceived food addiction. *Appetite*, 95, 262-
1762
1763 268. doi:10.1016/j.appet.2015.07.018
1764
- 1765
1766 Schulte, E. M., & Gearhardt, A. N. (2017). Development of the Modified Yale Food Addiction
1767
1768 Scale Version 2.0. *European Eating Disorders Review*, 25(4), 302-308. doi:doi:
1769
1770 10.1002/erv.2515
- 1771
1772 Schulte, E. M., Potenza, M. N., & Gearhardt, A. N. (2018). Specific theoretical considerations
1773
1774 and future research directions for evaluating addictive-like eating as a substance-based,
1775
1776 food addiction: Comment on Lacroix et al.(2018). *Appetite*, 130, 293-295.
1777
1778 doi:10.1016/j.appet.2018.06.026
- 1779
1780 Schulte, E. M., Potenza, M. N., & Gearhardt, A. N. (2017). A commentary on the “eating
1781
1782 addiction” versus “food addiction” perspectives on addictive-like food
1783
1784 consumption. *Appetite*, 115, 9-15.
1785
1786
1787
1788
1789
1790
1791
1792

- 1793
1794
1795 Schulte, E. M., Smeal, J. K., & Gearhardt, A. N. (2017). Foods are differentially associated with
1796
1797 subjective effect report questions of abuse liability. *PLoS One*, *12*(8), e0184220.
1798
1799
1800 Troisi, J. D., & Gabriel, S. (2011). Chicken soup really is good for the soul: “Comfort food”
1801
1802 fulfills the need to belong. *Psychological Science*, *22*(6), 747-753.
1803
1804 Vainik, U., Neseliler, S., Konstabel, K., Fellows, L. K., & Dagher, A. (2015). Eating traits
1805
1806 questionnaires as a continuum of a single concept. Uncontrolled eating. *Appetite*, *90*, 229-
1807
1808 239. doi:10.1016/j.appet.2015.03.004
1809
1810 Van Ostrand, G. (2015). *Why some women eat too much: A qualitative study of food-dependent*
1811
1812 *women*. Walden University.
1813
1814 von Ranson, K. M., King-Hope, M., & Tuschen-Caffier, B. (2015). *Developing a measure of*
1815
1816 *eating addiction*. Paper presented at the Eating Disorders Research Society annual
1817
1818 meeting, Taormina, Italy.
1819
1820
1821 World Health Organization. (2019). Body mass index - BMI. Retrieved from
1822
1823 <http://www.euro.who.int/en/health-topics/disease-prevention/nutrition/a-healthy->
1824
1825 [lifestyle/body-mass-index-bmi](http://www.euro.who.int/en/health-topics/disease-prevention/nutrition/a-healthy-lifestyle/body-mass-index-bmi)
1826
1827 Ziauddeen, H., & Fletcher, P. C. (2013). Is food addiction a valid and useful concept?. *Obesity*
1828
1829 *Reviews*, *14*, 19-28. doi:10.1111/j.1467-789X.2012.01046.x
1830
1831
1832
1833
1834
1835
1836
1837
1838
1839
1840
1841
1842
1843
1844
1845
1846
1847
1848

2019-06

Conceptualizing addictive-like eating: A qualitative analysis

Paterson, Carley

Elsevier

<https://doi.org/10.1016/j.appet.2019.104326>

© This manuscript version is made available under the CC-BY-NC-ND 4.0 license <https://creativecommons.org/licenses/by-nc-nd/4.0/>

Downloaded from UNB Scholar