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Low-Income Women's Conceptualizations of Emotional- and Stress-Eating

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Abstract

Emotional- and stress-eating have been proposed as risk factors for obesity. However, the way that individuals conceptualize these behaviors is not well understood and no studies have employed a qualitative approach. We sought to understand how women conceptualize emotional- and stress-eating. Sixty-one low-income women from South-central Michigan with young children (ages 2–5 years) participated in either a focus group or individual semi-structured interview during which they were asked about their conceptualizations of eating behaviors among adults and children. Responses were transcribed and the constant comparative method was used to identify themes. Identified themes included that emotional- and stress-eating are viewed as uncommon, severe, pitiable behaviors that reflect a lack of self-control and are highly stigmatized; that when these behaviors occurred among children, the behaviors resulted from neglect or even abuse; and that bored-eating is viewed as distinct from emotional- or stress-eating and is a common and humorous behavior with which participants readily self-identified. Future research and interventions should seek to develop more detailed conceptualizations of these behaviors to improve measurement, destigmatize emotional- and stress-eating and potentially capitalize on the strong identification with bored-eating by targeting this behavior for interventions.

Keywords

emotional-eating; stress-eating; bored-eating; low-income; women; preschool-aged children; obesity; overweight

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Introduction

Obesity has become a worldwide epidemic, and is particularly problematic in the United States. As of 2012, the prevalence of overweight or obesity in the United States was 69% among adults and 23% among preschool-aged children (ages 2–5 years; Ogden, Carroll, Kit, & Flegal, 2014). Overeating in response to negative emotions and stress has been proposed as a contributor to obesity (Adam & Epel, 2007). Consuming foods high in sugar and fat affects the hypothalamic-pituitary-adrenal axis, resulting in calming effects that are believed to be a biological mechanism underlying emotional- or stress-eating (Dallman, 2010; Dallman, Pecoraro, Akana et al., 2003). Several recent or ongoing trials have sought to address emotion regulation or stress coping as a target for obesity prevention in women and children on the premise that such interventions would reduce stress-eating (Brotman et al., 2012; Daubenmier et al., 2011; Miller et al., 2012). Given this intervention focus, it is increasingly important to ensure that the construct is being measured as intended.

A number of features of questionnaire measures in the current literature lead to uncertainty as to whether the constructs of emotional- or stress-eating are being captured in the same way that researchers conceptualize them. Two of the most commonly used questionnaire measures – the Dutch Eating Behavior Questionnaire (DEBQ; van Strien, Frijters, Bergers, & Defares, 1986) and the Emotional Eating Scale (EES; Arnow, Kenardy, & Agras, 1995) – were not developed from qualitative work with the general population. Several concerns are raised in regards to the item development for these scales. First, these items were primarily compiled from previous questionnaires developed in the 1960s – an era where the socioeconomic pressures and demands on individuals were different than they are today. In addition, obesity was much less common and the food environment much less obesogenic. Furthermore, these items were based on clinical experiences working with treatment-seeking individuals, often with binge eating disorder, which raises questions regarding whether they are capturing the constructs in the current general population as intended.

Although the DEBQ and EES have shown high endorsement of emotional- and stress-eating, correlation of self-reported emotional-eating on these measures with observed responses to stress elicitation protocols in the laboratory has been inconsistent, with some studies finding associations (e.g., Adriaanse, de Ridder, & Evers, 2011; O'Connor, Jones, Conner, McMillan, & Ferguson, 2008; Oliver, Wardle, & Gibson, 2000) and others not (e.g., Evers, de Ridder, & Adriaanse, 2009; Evers, Stok, & de Ridder, 2010; O'Connor & O'Connor, 2004). Others have also recently called into question the validity of current questionnaire-based conceptualizations of emotional eating in the literature (Domoff, Meers, Koball, & Musher-Eizenman, 2013).

Many existing questionnaires also combine the concepts of emotional-, stress-, and/or bored-eating into a single subscale (e.g., Cahill, Freeland-Graves, Shah, Lu, & Klohe-Lehman, 2009; Geliebter & Aversa, 2003; Schlundt, Hargreaves, & Buchowski, 2003; van Strien et al., 1986), when boredom may in fact be a quite different construct experientially and functionally (Bench & Lench, 2013). In short, even though these questionnaires are used very often, there is no literature that establishes how respondents understand the questions.

To our knowledge, no studies have employed a qualitative approach to understanding how emotional- or stress-eating are conceptualized.

Conceptualization of Emotional- or Stress-Eating among Low-Income US Populations

An additional limitation to interpretation of the current literature is the relatively homogenous samples in which formative work has been completed. In the United States, obesity is more common among low-income populations (Dalenius, Borland, Smith, Polhamus, & Grummer-Strawn, 2012; Drewnowski & Specter, 2004), which tend to experience high levels of stress (Ennis, Hobfoll, & Schröder, 2000; Evans & English, 2002) and have greater access to calorie-dense foods (Darmon & Drewnowski, 2008; Drewnowski, 2010). Although emotional- or stress-eating may be very salient for these populations, most questionnaire measures were developed among middle-to-upper-income, primarily White European samples (e.g., de Lauzon et al., 2004; Epel, Lapidus, McEwen, & Brownell, 2001; Oliver & Wardle, 1999; Oliver et al., 2000; van Strien et al., 1986). Whether low-income US populations interpret emotional- or stress-eating as intended on these questionnaires is unclear.

Conceptualization of Emotional- or Stress-Eating in Children

Two recent studies have described links between stress and eating behavior in children (Francis, Granger, & Susman, 2013; Lumeng et al., 2014), but there are few available questionnaire measures of emotional- or stress-eating in children. The Children's Dutch Eating Behavior Questionnaire (van Strien & Oosterveld, 2008) generates an Emotional Eating subscale and the Children's Eating Behavior Questionnaire (CEBQ, Wardle, Guthrie, Sanderson, & Rapoport, 2001) generates Emotional Overeating and Emotional Undereating subscales. Both scales, however, lump emotional-, stress-, and bored-eating together, and the factor structure of the CEBQ Emotional Eating subscale has not always been replicable (Sparks & Raditz, 2012). In addition, endorsement of emotional- or stress-eating in children by parental or child self-report has been low in a number of studies (Lumeng et al., 2014; Rollins et al., 2011; van Strien & Oosterveld, 2008; Wardle et al., 2001). How parents conceptualize emotional- or stress-eating in children is not well understood.

Goal of Current Study

Given the lack of clarity regarding the conceptualization of emotional- or stress-eating in the current literature and low endorsement of items directly addressing these types of behaviors on questionnaire measures, we sought to understand how women conceptualize emotional- and stress-eating. To our knowledge, there are no published qualitative studies addressing how individuals conceptualize these eating behaviors. Given that these behaviors may be particularly important to obesity risk among low-income populations, we conducted this work with low-income women. Furthermore, bored-eating has been combined with emotional- and/or stress-eating in existing questionnaire measures; thus, we also sought to better understand whether and how this behavior is viewed as similar to or distinct from emotional- and/or stress-eating.

Methods

Women with children aged 2 to 5 years inclusive were invited to participate in a study about children's eating behaviors through their child's Head Start program, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) offices, and community centers located in South-central Michigan. The preschool age range was selected for several reasons. This is a developmental period during which parents continue to retain significant control over how children are fed and over the development of children's eating behavior (Birch & Fisher, 1998). Attitudes towards healthy eating and other health-related habits begin to take shape during this period (Saunders, 2007) and the preschool years have been described as an important time for food preference formation (Skinner, Carruth, Wendy, & Ziegler, 2002). Most studies of children's eating behavior and women's beliefs about feeding children have focused on this age range (Faith, Scanlon, Birch, Francis, & Sherry, 2004). Despite this substantial literature, emotional- or stress-eating has been understudied in preschool-age children.

Inclusion criteria were that women were English-speaking and of low socioeconomic status, defined by eligibility for Medicaid, WIC, or Head Start and an education level < 4-year college degree. Medicaid is the social health care program for children with a family income less than 160% of the federal poverty line (Centers for Medicare & Medicaid Services, 2014). WIC is a supplemental food and nutrition education program for families with young children and an income less than 185% of the federal poverty line (United States Department of Agriculture Food and Nutrition Service, 2014). Head Start is a federal preschool program for children living in families with an income less than 100% of the federal poverty line (Administration for Children and Families Early Childhood Learning and Knowledge Center, 2007). In summary, all participants were eligible for United States social programs for low-income families.

At enrollment, participants reported their race and ethnicity, date of birth, highest level of education attained, height and weight to calculate body mass index (BMI), their marital and employment statuses, and the date of birth of the focal child. Women participated in either a focus group or semi-structured individual interview with a trained interviewer focused on their conceptualizations of several eating behaviors in adults and children. This study was approved by the University of Michigan institutional review board. Participants provided written informed consent and were compensated via a \$20 Visa gift card for their time. In addition, we also provided participants a meal, transportation, and childcare as needed.

Nine focus groups (n = 31 participants) and 43 individual interviews were conducted by a doctoral-level research psychologist trained in appropriate interview administration for research purposes. We conducted a mix of focus groups and individual interviews based on our hypothesis that these approaches may have yielded different themes if the topic was sensitive and women did not feel comfortable sharing their views in a group setting. Subsequent analysis did not find this to be the case, however, and both methodologies were combined for presentation in this report. All sessions were conducted privately in a room at a local community center well-known to the participants. The interviewer followed a guide

developed by 3 of the authors (a social psychologist, a developmental psychologist, and a developmental and behavioral pediatrician).

After obtaining written informed consent, each session began with the interviewer explaining, “The main purpose of this focus group/interview is to get your opinions about the eating behaviors of children between the ages of 2 and 5-years-old (afterwards referred to as ‘preschool-aged children’).” Focus group size ranged from 2 to 6 women. On average, the focus group sessions lasted just under an hour ($M = 0:52:17$; range = $0:33:12 - 1:19:10$), while the interviews lasted just over one-half of an hour ($M = 0:35:40$; range = $0:12:51 - 1:39:01$). This report describes responses to the open-ended questions and probes displayed in Table 2. The questions and probes designed to assess the differences and similarities among emotional-eating, stress-eating, and bored-eating occurred near the middle of the session after a series of questions about women’s thoughts on the possibility of preschool-aged children being overweight or obese and if they viewed overweight and obesity among preschool-aged children in their community as being an issue.

We digitally audio-recorded all focus groups and individual interviews and transcribed them verbatim with identifiers removed. A second transcriptionist reviewed all transcripts for accuracy. The transcript data were systematically analyzed using the constant comparative method (Glaser, 1964). Four independent readers (2 who did not participate in data collection, 1 who recruited participants for data collection, and 1 who collected the data) read the same transcripts. After independently generating themes and identifying supporting quotes from the transcripts, the readers then met and reviewed the identified themes. Collaborative discussion allowed evaluation of possible biases among readers as perceptions and interpretations of interviews were checked and alternative approaches to interpreting and grouping the data were considered. Many of the identified themes required further specification, or were thought to be more appropriately integrated into a single unified theme. After the initial identification of themes, readers continued to review the remainder of the interviews to determine whether the initially identified themes were valid, adequately detailed, and appropriately grouped into subthemes.

Results

Mean age of participants was 29.6 years ($SD = 7.7$ years; range, 18–55 years). The mean age of the focal child was 3.5 years ($SD = 0.9$ years). Additional demographic information is presented in Table 1.

Six primary themes were identified by the authors and are described below, with the number of respondents endorsing each theme noted. Specific quotes were selected from participant responses to further illustrate the primary themes from a range of different viewpoints. Additionally, these quotes provide concise summaries of each theme. The weight status and race/ethnicity of the speaker are denoted following each quote.

Theme 1: Emotional-eating and stress-eating are usually considered the same construct, though few women endorsed eating more when they are emotional or stressed. When the constructs are considered different, they are differentiated by the belief that emotional-eating

is linked with eating more than usual, while stress-eating is linked with eating less than usual.

As mentioned in 6 of the 9 focus groups and in 31 of the 43 interviews, most women believed emotional-eating and stress-eating were different terms for the same construct. Women in 8 of the 9 focus groups and in 31 of the 43 of the interviews believed that this type of eating is hedonically urgent and serves to help someone feel better, calm down, or soothe discomfort. Most women felt that although other people might overeat in response to emotion or stress, they themselves tend to undereat instead, as mentioned in 5 of the 9 focus groups and in 23 of the 43 interviews.

“Sometimes certain people [overeat in response to emotion or stress]...not me. If I’m upset I won’t eat all day! And when I’m stressed I don’t eat; I don’t feel like eatin’.” (normal weight, Black).

“That’s how it is for me like, when I’m depressed or stressed out, I don’t have an appetite at all! I don’t wanna eat...When I’m stressed out like I just don’t have an appetite. I don’t feel like eating anything. I don’t know why it’s like that.” (obese, White).

“I’m not a depressed eater. If I’m, you know, feelin’ kinda down in the dumps I don’t really have much of an appetite; you know? I don’t wanna sit up there and eat a bunch of stuff. I just, you know, I’m like ‘I just really don’t have an appetite right now’ if I’m stressed...depending on the type of stress I’m under; you know? So I mean (pause), I’m not gonna say that I haven’t done nervous eating or that I haven’t over-indulged, but [when] I get stressed and upset, I don’t want to eat anything (laughs)! If I’m feeling, you know, sad and emotional, I really don’t wanna eat anything!” (obese, Black).

However, as mentioned in 5 of the 9 focus groups and in 12 of the 43 interviews, when women did view a distinction between emotional-eating and stress-eating, they reported that negative emotion leads to overeating while stress leads to undereating.

“Nine times out of 10, if I’m stressed I don’t eat. And then if I’m sad *and* stressed out I overeat.” (normal weight, White).

“If I’m stressed, I don’t even eat at all; like, I forget! But if I’m just depressed, I eat too much!” (overweight, Black).

“...I think I would see more of, um, someone bein’ upset or emotional about a situation eating more than I would a person stressed because a person stressed, usually they’re gonna wanna be movin’. They gonna wanna keep busy...they gotta go smoke a cigarette or they gotta, you know, they gotta do somethin’. They gotta be doin’ somethin’ to relieve the stress.” (obese, Black).

Theme 2: Emotional- and stress-eating occur as uncommon, extreme episodes in response to life-altering negative events, or occur among people who are out of control and pitiable.

Mentioned in 8 of the 9 focus groups, and in 29 of the 43 interviews, the women described emotional- or stress-eating as occurring in uncommon, infrequent, somewhat dramatic and extreme episodes – usually in response to traumatic, very bad, or life altering events.

“I was really depressed two years ago when my daddy died. I ate and ate and ate until I gained 50 pounds! I ate for a whole week – nothin’ but just eating all day – just would sit there and eat and just eat for no reason.” (overweight, Black).

“I overeat late at night, every night. I am very stressed out. This is the first time I’ve been a single parent. ... Their dad just went to prison so it’s like, I’m going through so much and it’s... everything is on my shoulders now no matter what; you know? If anything happens, it’s up to me; and nothing can happen to me because there’s no one else to take care of the kids. And, if anything were to happen with me, my kids would go to foster care! So, you know, it’s a really scary thing... I think that’s why I turn to food instead of just dealing with it...” (obese, White).

“Um, I’ve personally been stressed out with my daughter’s passing, because she did pass from SIDS... I’ve been under investigation and it’s been hard, so I know that I’ve overeat for sadness and because of stress – I’ve been very stressed. Until I get the 100% all clear [from the investigators] – and that could be like 8 weeks – I know that I’m really uptight and stressed and stuff. Money is stressing me out; I shut down my daycare because of, um, the whole investigation – while it’s happening. Um, so all of that type of stuff stresses me out and I know that I’ve gained like 10 pounds in two weeks; it’s horrible...” (obese, White).

As mentioned in 5 of the 9 focus groups and in 25 of the 43 interviews, emotional- or stress-eating was described as occurring among people who were pitiable or lacking self-control; it was framed as a behavior with a negative stigma.

“I have an adopted daughter – her boyfriend’s locked up – she’s got a 22-month-old child and everything else. She just found out she got somethin’ she wasn’t supposed to have from him. That girl sat and ate from 5 o’clock in the afternoon ‘til midnight. Non-stop. Just, I’m sittin’ there like – I tried to grab it away and she literally bit at my hand! (laughs)” (obese, Black).

“Um, I feel like if you already overweight and you stressed out then yeah; you probably gonna eat. Versus a person who isn’t overweight or who doesn’t always turn to food, then you might not eat, you know, too much when you stress out. And you got other things on your mind; you’re not thinking about eating no food! But, if you already big, why not eat another cookie (giggles)?” (obese, Black).

“My friend – my best friend – she’s [a] very, very emotional person and people, like, talk about her because she’s overweight. Like, she’s really heavy set and it just gets to her and she likes to eat a lot. I’ve been trying to tell her... she eats and eats and eats and eats stuff that’s not healthy. Like ice cream – a whole bucket of ice cream; she’d eat it. I feel bad for her though.” (overweight, Hispanic).

Theme 3: Bored-eating is different from emotional- or stress-eating; it is normative, common, socially acceptable and humorous.

Women in 4 of the 9 focus groups and in 20 of the 43 interviews viewed eating when bored as a distinct construct separate from emotional- or stress-eating.

“When I’m sad, I want sweets. When I’m not sad and I’m bored, I’ll just eat ramen noodles or a Pop-Tart or cereal. So I think the only difference would be that when you’re sad and depressed, you want something that’s gonna make you feel happier so...I think it’s whatever makes you feel good is what you eat when you’re depressed and when you’re bored, it’s just whatever’s in the fridge.” (normal weight, White).

“Um, I think you [overeate when bored] a lot more than you do if you’re stressed or emotional, ‘cause I mean...most of the time you don’t stress out every day or have an emotional breakdown every day...but you get bored every day.” (obese, Biracial).

Women in 6 of the 9 focus groups and in 34 of the 43 interviews described bored-eating as happening “all the time” and with a humorous tone, which was in contrast to how emotional- or stress-eating was described as occurring.

“I think that [bored-eating] happens all the time. Um, I mean I hang out with a friend every now and then – when we do play group – and we just...heat stuff up and we just sit there and just eat just ‘cause there’s nothing else to do.” (obese, White).

“That’s all the time! And I won’t even be hungry; it’s just ‘cause I’m bored! I just start eatin’ and I’ll be like, ‘Oh my stomach hurts! I shouldn’t of ate that!’ But it’s ‘cause you’re bored and it’s like, ‘Oh well; ain’t nothing else to do but feed my face.’” (obese, White).

“Oh yeah I’ve done that plenty of times. Just ‘cause boredom; there’s nothing else to do! ...Since you’re bored – you know most people bored watch TV and be like, ‘Oh that look good – I’m about to go down there and make that.’ That’s how that comes about... When you bored, you got a lot of time to sit and think, and when you sittin’ and thinkin’, you get creative sometimes or you resort to food; yeah, definitely.” (obese, Black).

“Me (laughs)! I overeat when I’m bored... (laughs) When I’m bored – like if I’m home alone – I eat (laughs). I ain’t even gonna lie about it...” (obese, Black).

Theme 4: In contrast to adults, preschool-aged children do not appear to experience enough negative emotion or stress to result in emotional- or stress-eating.

As mentioned in 6 of the 9 focus groups, and in 24 of the 43 interviews, the women did not believe that preschool-aged children could experience enough negative emotion or stress to inspire the need to emotional- or stress-eat.

“I guess kids are just too happy to be really stressed out and have the time to do that... I don’t know – like, kids stressing? Um, preschoolers? Um, I don’t know....” (normal weight, Black).

“...I didn’t know, like, little kids get stressed out... They might get upset and throw tantrums, but I think that’s a little too young. But, I could be wrong; I’m just – I don’t know... They get angry, but I don’t know about stressed.” (obese, Black).

“With my kids and most kids, I mean, they’re runnin’ around so much...they don’t even wanna eat their food – let alone overeat, you know? So it makes me think that a child that would be seeking, you know, comfort in food is uh, maybe something emotional goin’ on. And I don’t think that all children – that preschool children – really shouldn’t have too much emotional goin’ on. I mean, the big deal should be, you know, ‘Billy stole my ball,’ you know, or, ‘So and so pushed me!’ They’re not like us: where we got our adult feelings and thoughts and stresses and things like that.” (normal weight, White).

Theme 5: When preschool-aged children do stress eat, it is primarily due to severe triggers or is a function of bad parenting.

As mentioned in 7 of the 9 focus groups and in 23 of the 43 interviews, the women felt that preschool-aged children who do stress eat often do so in response to a lack of emotional support, neglect or even abuse.

“Yeah the neighbor kid, she’ll turn to food all the time... She don’t get no attention so she turns to food. She overeats all the time... I mean, she eats when she’s stressed out. Like, she’ll just sit there and eat and eat and eat and eat and eat all day long. I mean, it’s sad, it really is, but I mean, her mom don’t show her as much attention as she used to. So she turns to the food like it’s her comfort zone.” (obese, White).

“I think [preschool-aged children] overeat when they don’t feel secure. You know? When they don’t feel secure and when they don’t feel loved...because there’s an empty feeling. ‘Well, when I put something in my mouth my belly feels full,’ you know?” (obese, Black).

“A child that’s, you know, being abused, might eat too much to fill some kind of void... I don’t know. Or, if they’re neglected, they will eat too much to maybe make up for that attention, that lack of attention, by eating food. Or, if they’re abused, you know, [they may] use food to comfort them.” (normal weight, Black).

Women in 7 of the 9 focus groups and in 31 of the 43 interviews believed that “bad parenting” also led to emotional- or stress-eating in children through learned behavior. Specifically, the women attributed these behaviors to parents neglecting to teach children how to eat properly, modeling the behavior, or directly teaching the children to use food to cope with emotions or stress.

“If they have parents who are obese and eat and don’t care about the kids eating then they will more likely do the same. Like, if they, every time mommy comes home, and she sad and gets out a tub of ice cream, then they’re probably gonna do the same thing. [They’ll be] like, ‘I need a tub of ice cream too.’” (normal weight, Black).

“Um, my granddaughter gets stressed out ‘cause they call her names...and she was taught always turn to food, like donuts and snacks and candy and ice cream, cake; whatever she shouldn’t be eating she wants to eat...” (obese, White).

“I’m sure they can [overeate when they are feeling upset or emotional] but I’m not sure if that’s something learned or if that’s something just in them you know? ‘Cause I know kids do what they see, not really most of what you say; they do what they see.” (obese, Black).

As mentioned in 8 of the 9 focus groups and in 21 of the 43 interviews, the women also believed that “bad” parents used food to pacify their children when they were being unruly, rambunctious, or bothersome in general instead of using more appropriate parenting strategies.

“Um (pause) if they’re, if [preschool-aged children] are sad and um, mom don’t wanna hear the whining...they just give ‘em something just to quiet ‘em up or something.” (obese, Black).

“Moms give their child food because they want them out of their face... It’s crazy. I’m talking about the younger generation girls. You got some young girls that’s havin’ these kids and just will do anything – get a kid anything – just to tell ‘em to sit down and shut up!” (obese, Black).

Theme 6: Preschool-aged children will overeat in general, but especially when they are bored, unless their parents prevent them or stop them from doing so.

Women in 8 of the 9 focus groups and in 33 of the 43 interviews indicated that most preschool-aged children would overeat when bored, especially if their parents did not redirect them or stop them.

“‘Cause if they’re bored they start asking for snacks. All the time. And you know they’ve had plenty to eat. And they’re like, ‘Oh I’m bored’... I mean, I can’t even, you know, walk into the kitchen without getting asked for some food! Every time I walk into the kitchen, I’m asked for food and I’m like, ‘You just finished like two plates of food and you’re playing, and all of a sudden I’m in the kitchen, so now you want something!’ So I mean, I really think that that’s just a normal thing – that they ask for food especially if they know that there’s things out there that they like.” (normal weight, White).

“...It just depends on, honestly, whether or not their parents let them have that food all the time when they’re bored and how much they let them eat of it... We had an incident actually last night with my friend’s oldest – he got to stay up a little bit later than everybody else and he wanted a snack. He gets a whole bag of goldfish and a two liter of Mountain Dew at 8 o’clock at night – and we know he’s not hungry – but he just sat there and ate! All he was doing was watching cartoons and nothing else to do really.” (obese, White).

Discussion

This study identified several new conceptualizations of emotional- and stress-eating that have not previously been described in the existing literature. Specifically, low-income women viewed emotional- or stress-eating as uncommon, infrequent, and in response to only severe and life-altering life events. They viewed emotional- and stress-eating as similar constructs but felt that they overeat in response to emotion more commonly than they do in response to stress.

The low-income women in this sample felt that few children engage in emotional- or stress-eating, primarily because they believed that children rarely experienced sufficient negative emotion or stress to trigger these types of behaviors. Our results show substantial stigma around emotional- and stress-eating for both adults and children. When participants described emotional- and stress-eating in children, they viewed it as occurring only in the context of highly stressful life events or bad parenting – during which the parent either modeled such eating behaviors or directly taught their children to use food to cope.

Using food as a reward for behavior has been associated with increased preference for the particular food used as the reward (Birch, Zimmerman, & Hind, 1980). Thus, when parents reward behavior with palatable snack foods, they may be inadvertently increasing children's liking for those foods. This may be one route via which using food to regulate emotion or reward oneself following a difficult or stressful day becomes a learned behavior in children. Furthermore, modeling powerfully shapes children's eating behaviors (Birch, 1980; Frazier, Gelman, Kaciroti, Russell, & Lumeng, 2012; Lumeng, Cardinal, Jankowski, Kaciroti, & Gelman, 2008). Thus, children may learn these behaviors from adults who model using food to manage emotion or stress.

The descriptions of bored-eating stood in contrast to the descriptions of emotional- or stress-eating in that there was substantially less stigma associated with this behavior. Participants described, with amusement, the notion of bored-eating as a socially acceptable, everyday occurrence in which everyone – preschool-aged children included – engages to pass time and cope with being under-stimulated.

Our results provide some suggestion as to why there is generally low endorsement of emotional- or stress-eating among women describing the behavior of their children. First, women perceived the behavior as something relatively dramatic and uncommon that occurs only in response to severe and life-altering stressors. We propose that this conceptualization differs from how these behaviors are currently framed in the scientific literature, which presents emotional- and stress-eating as common and normative (Adam & Epel, 2007; Francis et al., 2013; Lumeng et al., 2014). Secondly, the substantial stigma associated with emotional- and stress-eating may contribute to social desirability bias in responding, particularly when responding to questions about their own children. Kalinowski and colleagues (2012) previously reported that low-income women frame childhood obesity as largely a result of neglectful or inept parenting, positing that in order to engage parents in childhood obesity prevention and treatment, it may first be important to reframe the causes. The same may be true for emotional- or stress-eating.

Our finding that bored-eating is viewed as a distinct construct from emotional- or stress-eating has several implications. First, most questionnaires (e.g., Arnow et al., 1995; Cahill et al., 2009; Geliebter & Aversa, 2003; Schlundt et al., 2003; van Strien et al., 1986) combine these constructs. Our results are consistent with the results of the one prior study investigating this question, which also suggested that these constructs may be more appropriately presented separately (Koball, Meers, Storfer-Isser, Domoff, Musher-Eizenman, 2012). In addition, our results highlight the salient nature of bored-eating, particularly among low-income populations. To our knowledge, there is a sparse literature investigating the biological underpinnings of boredom, although this is starting to be investigated (Merrifield & Danckert, 2014). Bored-eating also appears to be more common than eating in response to negative emotions or stress, at least among undergraduate students (Koball et al., 2012). We have been unable to identify any studies examining the prevalence of self-reported boredom across sociodemographic groups, and the current study is the first to examine bored-eating versus emotional- or stress-eating in low-income women. The possibility that bored-eating is a distinct construct with identifiable underlying biological mechanisms, that it is common in adults and children, and that the behavior may be modifiable, deserves further consideration in future research.

There were several limitations to our study. All participants self-reported their weight and height, which could call into question the accuracy of their calculated BMI. Given that BMI was not a primary focus or outcome variable in the current study, we elected to use self-reported as opposed to measured weight and height, as measurement may have made participants self-conscious during the focus groups and interviews. Although research has shown that participants generally tend to underestimate their weight and overestimate their height (e.g., Larsen, Ouwens, Engels, Eisinga, & van Strien, 2008), the degree of error in self-reported weight and height is relatively small (Stommel & Schoenborn, 2009). Additionally, an African American male moderator/interviewer conducted all of the focus groups and interview sessions, which may have contributed to some bias in responding. As with most qualitative studies, our sample size was small and the results may not be generalizable to populations with different characteristics. Strengths of this study include that it is the first, to our knowledge, to use a formative, qualitative approach to understand conceptualizations of emotional- and stress-eating.

Implications

Our findings have several implications for intervention. First, in order to develop effective interventions to address emotional- or stress-eating, reframing the behavior may be helpful. As the evidence base for biological mechanisms underlying this behavior grows (Dallman, 2010; Epel et al., 2001; Francis et al., 2013; Lumeng et al., 2014) even in response to seemingly mild stressors (Epel et al., 2001; Francis et al., 2013), reframing the construct of emotional- or stress-eating for the public such that it is understood as a common behavior that occurs in response to chronic, mild stressors may be valuable. In addition, further research explicating the underlying neurobiological mechanism may be helpful in reframing the current conceptualization of these behaviors as entirely under volitional control and representing a simple failure of self-control. Behaviors previously viewed as representing pure lapses of self-control are increasingly understood as being driven by biology and

neurophysiological differences between individuals (Berman et al., 2013; Casey & Caudle, 2013).

The intense stigma around obesity has been well-described (Puhl & Heuer, 2010) and the belief among low-income mothers that childhood obesity is due to neglectful or inept parenting has been reported (Kalinowski et al., 2012). Interventions that seek to address emotional- and stress-eating behaviors will need to attend to the stigma linked with these behaviors, as identified in the current study. Parents will be unlikely to acknowledge emotional- or stress-eating in their own children in the context of the current public framing of this behavior. Public health initiatives might consider including educational elements regarding emotional- and stress-eating as these behaviors occur in adults and children, with a goal of demystifying and destigmatizing these behaviors.

A relatively unexpected finding of this study was the salience of bored-eating among these low-income women, which we posit has unique and significant implications for intervention. Although boredom, and the increased likelihood to eat while bored, are two of the most frequently reported obstacles to weight loss (Corbalán, et al., 2009; Leon & Chamberlain, 1973) and weight loss maintenance (Hoerr, Nelson, & Essex-Sorlie, 1988), there is a dearth of empirical evidence on the link between boredom and weight-gain. To our knowledge, current obesity prevention and intervention programs do not include a substantial specific focus on bored-eating. Given that these populations readily endorsed and identified with the behavior, and it was not highly stigmatized, bored-eating may be a point for intervention. Additional work may first be needed to understand the underlying mechanism of bored-eating so that novel and effective intervention strategies can be developed. One straightforward strategy for addressing bored-eating may be to simply remove appealing, calorie-dense food from the home to the greatest extent possible. The easy availability of food increases consumption (Campbell, Crawford, Carver, Garnett, & Baur, 2007), and this may be particularly true in the case of bored-eating. Interventionists could focus on helping participants redirect their boredom to different, more engaging tasks, or to choose healthy snack food alternatives to consume when feeling bored. Finally, future developmental research should focus on developing questionnaires that capture the distinct constructs of emotional-, stress-, and bored-eating across different age groups and in different populations.

In summary, we found that emotional- and stress-eating are believed by low-income women to be uncommon, severe, pitiable behaviors that reflect a lack of self-control and are highly stigmatized. Similarly, women believed that when these behaviors occurred in children, the behaviors resulted from poor parenting, neglect or even abuse. In contrast, women viewed bored-eating as a common and humorous behavior with which participants readily self-identified. Future research and interventions should seek to develop more detailed conceptualizations of these behaviors to improve measurement perhaps via focus groups based on participant characteristics (e.g., race/ethnicity and/or weight status), destigmatize emotional- and stress-eating, and potentially capitalize on the strong self-identification with bored-eating by targeting this behavior for interventions.

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Highlights

- Emotional- and stress-eating were conceptualized as the same stigmatized construct.
- Parents believed that children typically do not eat to cope with emotion or stress.
- Emotional- or stress-eating in children was believed to be due to bad parenting.
- Bored-eating was conceptualized as distinct from emotional- or stress-eating.
- Bored-eating was viewed as humorous and common.

Table 1

Demographic Information of Study Participants (N = 61)

Characteristic	Value	%
Race/Ethnicity	Non-Hispanic Black	47.5
	Non-Hispanic White	44.3
	Hispanic/Latino	6.6
Age	18 – 27	53.9
	28 – 39	29.5
	40+	12.8
Education Level	Did not complete High School	9.8
	High School Diploma/GED	24.6
	Some College	54.1
	Associate's Degree	11.5
Body Mass Index	Normal (BMI < 25)	24.6
	Overweight (25 ≤ BMI < 30)	27.9
	Obese (BMI ≥ 30)	42.6
Marital Status	Single (Never Married)	49.2
	Committed Relationship/Engaged	21.3
	Married	19.7
	Separated/Divorced/Widowed	9.8
Employment Status	Not Employed Outside Home	52.5
	Part Time	23.0
	Full Time	23.0
Age of Focal Child (In Years)	2	11.5
	3	32.8
	4	37.7
	5	11.4

Table 2

Prompting Questions about Adult and Preschool-Aged Children Eating Behaviors in the Focus Groups and Semi-structured Interviews

Open-Ended Questions	Probes
“In adults, besides being hungry, what other things might encourage someone to eat or to want to eat?”	“What things, besides hunger, might encourage someone to overeat?”
	“Do you think people overeat when they are feeling upset or emotional?”
	“Do you think people overeat when they are stressed out?”
	“Do you think there is a difference between overeating when feeling upset/emotional and feeling stressed out?”
“Could you describe for me a time when you or someone you know overate because they were stressed?”	“How was this time different from a time where you or someone you know overate because they were feeling upset or emotional?”
“Could you describe for me a time when you or someone you know overate because they were feeling depressed?”	“How was this time different from a time where you or someone you know overate because they were feeling upset, emotional, or stressed?”
“Could you describe for me a time when you or someone you know overate because they were bored?”	“How was this time different from a time where you or someone you know overate because they were feeling upset, emotional, stressed, or depressed?”
“What are some reasons some preschool-aged children might want to eat, even when they are not hungry?”	
“Can some preschool-aged children ever overeat?”	“Besides hunger, what do you think might encourage a preschool-aged child to overeat?”
	Do you think some preschool-aged children overeat when they feel upset or emotional?
	Do you think some preschool-aged children overeat when they feel stressed out?
	Do you think there is a difference between overeating when feeling upset/emotional and feeling stressed out for preschool-aged children?
“Could you describe for me a time when your preschool-aged child or a preschool-aged child you know overate because they were stressed?”	“How was this time different from a time where they overate because they were feeling upset or emotional?”
“Could you describe for me a time when your preschool-aged child or a preschool-aged child you know overate because they were feeling depressed?”	“How was this time different from a time where they overate because they were feeling upset, emotional, or stressed?”
“Could you describe for me a time when your preschool-aged child or a preschool-aged child you know overate because they were bored?”	“How was this time different from a time where they overate because they were feeling upset, emotional, stressed, or depressed?”