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Do children with obesity have worse table manners? Associations between child table manners, weight status and weight gain

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ABSTRACT

Background: Children with obesity experience stigma stemming from stereotypes, one such stereotype is that people with obesity are "sloppy" or have poor manners. Teaching children "proper table manners" has been proposed as an obesity prevention strategy. Little is known about the association between children's weight status and table manners.
Objectives: To examine correlates of child table manners and to examine the association of child table manners with child obese weight status and prospective change in child body mass index z-score (BMIz).
Methods: Mother-child dyads (N = 228) participated in a videotaped laboratory eating task with cupcakes. Coding schemes to capture child table manners (making crumbs, chewing with mouth open, getting food on face, shoving food in mouth, slouching, and getting out of seat), and maternal attentiveness to child table manners, were reliably applied. Anthropometrics were measured at baseline and at follow-up two years later. Regression analyses examined the association of participant characteristics with child table manners, as well as the associations of child table manners with child obese weight status, and prospective change in BMIz/year.
Results: Predictors of poorer child table manners were younger child age, greater cupcake consumption, and greater maternal attentiveness to child table manners. Poorer child table manners were not associated with child obese (vs. not) weight status, but were associated with a prospective decrease in BMIz/year in children with overweight/obesity.
Conclusions: Obesity interventions to improve table manners may be perpetuating unfavorable stereotypes and stigma. Future work investigating these associations is warranted to inform childhood obesity guidelines around table manners.

1. Introduction

Children with obesity experience stigma, which can lead to serious emotional and physical health consequences (Puhl & Latner, 2007). One such stereotype is that people with obesity are "sloppy" or without manners when eating (Puhl & Heuer, 2009). Teaching children "proper" table manners has been a focus of some healthy feeding guidelines for parents (Academy of Nutrition and Dietetics, 2014) and caregivers (The Pennsylvania WIC Office, 2004; Steinhaus, 2010). Furthermore, a childhood obesity intervention (Salazar Vázquez et al., 2016), though only focused on slowed eating rate, taking smaller bites, and eating seated at a table, has used the frame of "manners" to describe their approach. This intervention is anchored in the evidenced based theory that slowed

Abbreviations: SEP, signifies Standardized Eating Protocol.

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or paced eating (decreased bite rate) as well as smaller bite sizes, allows for the satiety response to be activated before overeating has occurred, resulting in fewer calories consumed (Andrade, Greene, & Melanson, 2008; Zijlstra, de Wijk, Mars, Stafleu, & de Graaf, 2009). While evidence has shown that children with obesity have a faster eating rate than those without obesity (Fogel et al., 2017; Llewellyn, Van Jaarsveld, Boniface, Carnell, & Wardle, 2008), describing a slowed eating intervention in terms of "manners" may conflate the concepts and unintentionally perpetuate a negative stereotype of children with obesity having poor table manners. Outside of the association between child weight status and eating rate, little is known about the association of child table manners with child obesity.

Many studies have found associations between child eating behaviors in general and characteristics of the child and parent (Faith et al., 2004; Patrick & Nicklas, 2005; Rodgers et al., 2013; Savage, Fisher, & Birch, 2007). These child characteristics, such as sex, age, temperament (Haycraft, Farrow, Meyer, Powell, & Blissett, 2011), and weight status (Carnell & Wardle, 2007), have been associated with obesogenic child eating behaviors, but have not been examined with regard to table manners. Table manners may be influenced by a child's eating style, or general temperament. A child who is a picky eater may be more restrained in their interactions with food and may therefore have "better" table manners. Table manners may also reflect a child's general temperamental capacity for behavioral inhibition or surgency, which are key aspects of general temperament. A child with greater capacity to inhibit behaviors when expected may have better table manners, whereas a child with more a surgent temperament, characterized by greater impulsivity, approach behavior and enthusiasm, may eat with more zeal and therefore more messily. No studies to date have investigated the corellation of the dimensions of a child's temperament with table manners.

Parents are also encouraged to teach and promote child table manners (Academy of Nutrition and Dietetics, 2014), but it is unknown if parental efforts to guide their children in "proper" table manners (e.g., eating seated at a table, chewing with mouth closed, not making crumbs etc.) is effective for management of obesity, or if parenting behaviors are associated with child table manners. For example, it is unknown whether lax or laissez-faire parenting approaches are associated with children's table manners, eventhough such behaviors have been associated with obesity risk (Sleddens, Gerards, Thijs, Vries, & Kremers, 2011; Wake, Nicholson, Hardy, & Smith, 2007). In order to appropriately develop child obesity interventions focusing on shaping table manners, it is first essential to understand correlates of these behaviors. To our knowledge, no studies have observationally assessed table manners in children, nor parental attentiveness to child table manners.

While prior work (Ohkuma et al., 2015) has found people with obesity to have faster eating rates than those without obesity, no prior studies have examined whether people with obesity have poorer table manners in general than those without. Lastly, it is unknown if people with poorer table manners do indeed gain more weight, or become more obese over time. Testing these associations is important to evaluate the importance of targeting table manners in obesity interventions.

Therefore, the objectives of this study were two-fold. First, we sought to examine child and mother demographic and behavioral correlates of child table manners. A greater understanding of predictors of child table manners may help target interventions that seek to shape manners. Second, we sought to examine the association of child table manners with child obese weight status and prospective change in child body mass index z-score (BMIz).

2. Materials and methods

2.1. Study overview

Mother-child dyads (N = 228), (mean child age 70.9 months) participated in a videotaped standardized eating protocol (SEP) in a laboratory with chocolate cupcakes (described in detail below). Child table manners (see Table 1 for coding scheme) and mothers' attentiveness to child table manners were reliably coded from video segments. Mothers completed questionnaires. Anthropometrics were measured at baseline, and again approximately two-and-a-half years later.

2.2. Participants

Participants were a cohort of low-income mother-child dyads from south-central Michigan who participated in a longitudinal study into which they were recruited between 2009 and 2011 analyzing factors in children's risk of obesity. Recruitment methods for the original study are described in detail elsewhere (Pesch et al., 2016). The original study, which examined children's eating behaviors, invited families attending Head Start (a federally subsidized, free preschool program for low-income children) to participate. The cohort was followed longitudinally and invited to participate in this follow-up study, approximately two years later.

Exclusion criteria for the original study included children born at < 35 weeks gestational age, severe medical problems, food allergies, or serious neonatal complications. Mothers who did not speak English fluently and/or had a four-year college degree or more were also excluded. For the SEP, dyads also were excluded from participating if the mother or child developed a new food allergy since the original study.

A total of 238 dyads participated in the SEP. For this analysis, 10 dyads were excluded because of the following: 4 of the videos were too dark to see the child's behaviors, 5 of the videos had the child facing away from the camera or his/her face was cut out/blocked for the majority of the chocolate cupcake segment, and one had a protocol violation. The resulting sample consisted of 228 dyads.

For follow-up, 2.61 years (SD 0.57, range 1.48–3.98) later, the cohort was invited to participate in a follow-up study, during which the mother and child were weighed and measured. Of the original 228 participants who completed the SEP at baseline, 148 participated in follow-up.

The study was approved by the University of Michigan Institutional Review Board and informed consent was obtained by mothers, who were paid $60 to participate at baseline and an additional $20 for anthropometrics at follow-up.

2.3. Measures

2.3.1. Child table manners behaviors

Children's table manners behaviors were observationally measured during the SEP. The SEP protocol is described in detail elsewhere (Pesch et al., 2016; Radesky et al., 2015). In brief, the protocol examines a child's and mother's responses to various food types in a laboratory setting in order to lessen the amount of variability that can occur during home mealtime observations. The dyad was asked to fast for 2 h prior to the protocol. The mother and child were seated in a quiet room at a table and videotaped. A research assistant sequentially presented the child and mother with four different foods in individualized portions. The foods varied in terms of familiarity (familiar vs. unfamiliar) and dessert or vegetable: green beans (familiar vegetable), artichoke (unfamiliar

Table 1
Measures contributing to Child Table Manners Index (N = 228).

Table Manners Behavior	Definition	Variable type	N (%) or M (SD)	Range
Making crumbs	General amount of crumbs created by the child on the table, ranging from 0 (no visible crumbs) to 2 (many crumbs requiring moderate effort to clean up).	Categorical	0: 14 (54.0) 1: 76 (36.0) 2: 21 (10.0)	0–2
Food on face	Child gets visible cupcake on face or lips, ranging from 0 (no visible food on face or lips) to 2 (food is visible on face or lips for > 5 s).	Categorical	0: 70 (30.8) 1: 27 (11.9) 2: 130 (57.3)	0–2
Chewing with mouth open	Child chewing so that food in the oral cavity can be seen from at least 10 feet away (camera distance), ranging from (0) child never chews with mouth open, to 2 (consistent, child chews with mouth open throughout most of the video when eating or on more than 3 occasions for ≥ 3 s each).	Categorical	0: 72 (31.6) 1: 30 (13.2) 2: 126 (55.3)	0–2
Shoving food in mouth	Child pushes the cupcake voraciously into their mouth with his/her hand(s) taking multiple consecutive bites without breaking the contact between the cupcake and mouth.	Count	1.1 (1.7)	0–10
Slouching in chair	Child slouches in chair such that the top of both of his/her shoulders simultaneously crosses below the level of the table for ≥ 2 s.	Count	0.3 (0.8)	0–5
Getting up from table	The child gets out of his/her chair when both feet touch the floor and the child's body weight is not in the chair for ≥ 2 s.	Count	0.4 (0.8)	0–4

vegetable), cupcakes (familiar dessert), and halva (unfamiliar dessert). Dyads were invited to try each food if they wanted and were left alone for 4 min. This study focused on the videotaped segment during which the chocolate cupcakes were served to the mother and child. It was hypothesized that a familiar and palatable dessert such as cupcakes, which are both crumbly and sticky with a gooey filling, would elicit variability in child table manners, and specifically those that may be linked to obesity, such as voracious eating. The mother and child were served equal portion sizes of two cupcakes each (Hostess Chocolate Cupcakes, 104.96 ± 0.5 g). The cupcake portions were weighed before and after the protocol using a Scout® *Pro Balance* scale, and recorded by the research assistant.

A coding scheme (summarized in Table 1, full coding scheme available from the authors upon request) was developed to assess child table manners. Our definition of table manners was based on existent guidelines that recommend avoiding certain eating behaviors to treat or prevent obesity, as well as behaviors that have been described as associated with the stereotype of bad manners among people with obesity (Center for Disease Control and Prevention, 2015; Puhl & Heuer, 2009; Travers, 2012). Standard methodology for observationally capturing and coding children's eating behaviors was used (Pesch & Lumeng, 2017). The study team reviewed 20% of the videos to ascertain whether such behaviors were detectable in children. Our coding scheme captured six specific child behaviors: making crumbs, getting food on his/her face, chewing with his/her mouth open, shoving food into his/her mouth, slouching in his/her chair, and getting up from the table.

Two coders, both of whom were graduate students who had been raised in the United States, independently coded 30% of the video segments for these child table manners and reliability was calculated (ICC >0.80 or kappa >0.70) for all codes. After reliability was established, the remainder of the videos were coded by a single coder over a two-week period.

2.3.2. Child and mother characteristics

Child age and sex were reported by the mothers, who also reported their own age, education level, and race/ethnicity. Child and mother weights and heights were obtained using standardized procedures (Shorr, 1986). Body mass index (BMI) was calculated as weight in kilograms divided by height in meters squared. Child weight status was calculated using BMI for age and sex percentile using the United States Center for Disease Control and Prevention growth charts (Kuczmarski et al., 2000).

The amount of cupcake consumed by the child was also measured as a proxy for the child's enjoyment of the cupcake, as well as bite rate, given that all participants had a standardized amount of time in the SEP. Amount of cupcake eaten was measured by subtracting the post-protocol weight of the cupcakes from the pre-protocol weight.

The child's picky eating behavior was measured using the Child Eating Behavior Questionnaire Food Fussiness scale (Wardle, Guthrie, Sanderson, & Rapoport, 2001), a maternal report measure of child picky eating behavior (6 items, Cronbach's alpha = 0.91). Mothers answered items on a Likert scale (range = 1-5). Items were then averaged such that a higher score indicates greater child picky eating.

Dimensions of child temperament, defined as how a child approaches or reacts to the world, were measured using the Child Behavior Questionnaire (CBQ) (Rothbart, Ahadi, Hershey, & Fisher, 2001), a widely used and validated maternal report measure of child temperament. In this study we examined two subscales: CBQ Effortful Control (e.g., a child's ability to inhibit themselves from a behavior, maintain attention, resist distraction, 12 items, Cronbach's alpha = 0.76) and CBQ Surgency (e.g. a child's affinity for high impulsivity, pleasure and novelty seeking, high activity level, 25 items, Cronbach's alpha = 0.70). Mothers rated how well each item described their child on a 1 to 7-point scale, with higher scores indicating that the child exhibited more of the temperamental trait. Mean scores for each contributing item were calculated.

Parenting laxness was measured using the 11-item Parenting Laxness subscale (Cronbach's $\alpha = 0.81$) of The Parenting Scale (Arnold, O'Leary, Wolff, & Acker, 1993), a reliable and valid self-report questionnaire measure of dysfunctional parenting discipline practices. Mothers indicated their likelihood of using specific discipline strategies in different situations on a 1 to 7-point scale. Lower scores indicate a tendency to use a more effective strategy and higher scores indicate a tendency to use a less effective strategy. The Parenting laxness subscale score was calculated as the mean of contributing items, with a higher score reflecting more permissive parenting.

Lastly, we also developed a coding scheme to assess maternal attentiveness to her child's table manners during the SEP cupcake segment. Maternal attentiveness to child table manners was defined as the mother making comments, imperatives, or criticisms regarding the way in which her child was comporting themselves while eating the cupcake (i.e., “Sit up straight”, “Don't chew with your mouth open”, “Watch out, you are making such a mess!”). Two coders, who were not involved in coding the child table manners

behaviors, independently coded 20% of the videos for counts of maternal manners critiques, and reliability was established (ICC >0.80), after which the remainder of the videos were coded by a single coder.

2.4. Statistical analysis

For count variables, counts for each child table manners behavior were summed and stratified at the median. A score of 1 was given to children with values above the median for a given behavior, and 0 for values below the median. All categorical variables were dichotomized by collapsing the lower two categories for each behavior vs. the highest category for each behavior (0 or 1, vs. 2). A score of 1 was given to children with behaviors for categorical manners behaviors in the highest category, and a score of zero was given for children with scores in the lower category. These values were then summed across all six tables manners behaviors to create a child table manners index (range 1–6). Thus, a higher table manners index indicated poorer table manners. The decision was made to create a child table manner index, rather than examine each table manners behavior individually, following prior methodology (Sameroff, 1998; Tyrka et al., 2015) that has accounted for multiple "risk" behaviors as contributing to a single outcome. We first tested the unadjusted association between each participant characteristic and the table manners index using unadjusted linear regression. For the adjusted analysis of the association between characteristics of the child and mother and child table manners, we built a model predicting the child table manners index using multivariate linear regression. First, we entered the child demographic factors (child sex and child age) simultaneously into the model. We retained only those child factors that were statistically significant. Next we added child eating and temperament factors into the model (amount of cupcake eaten, child picky eating, CBQ Effortful Control, and CBQ Surgency), again retaining those that were statistically significant. We then added maternal demographic and anthropometric factors (highest level of education obtained and BMI). Again, we retained only those that were statistically significant. Lastly, we included maternal parenting variables into the model (parenting laxness and maternal attentiveness to child's table manners). Any variable that did not remain significant in this final model was then removed to create the most parsimonious final model.

To test whether table manners were associated with child obese weight status an adjusted logistic regression model was created, controlling for child sex and child age, with table manners index as the predictor for the child obese weight status (vs. not) outcome. Finally, to test whether table manners index, or other variables (child age, child sex, child picky eating behavior, maternal attentiveness to child table manners) were associated with prospective change in child BMIz per year, we stratified the sample by child weight status (underweight/normal weight, ($n = 89$) and overweight/obese ($n = 59$)), and two linear regression models were run for change in BMIz per year as the outcome in each group. A significance level of $p < .05$ was set for all models.

3. Results

Table 2 displays characteristics of the sample.

Unadjusted and adjusted associations of covariates with children's table manners are shown in Table 3. In the final model, poorer child table manners were associated with younger child age ($p < .001$), greater amount of cupcake consumed by the child ($p < .0001$) and more.

In logistic regression analysis, there was no association between table manners index and child obese weight status (OR 1.03, CI 0.81–1.31), controlling for child sex and age. When examining change in children's BMIz per year in the group of underweight and normal weight children, there was no association between child sex, child age, child picky eating or maternal attentiveness to child table manners or table manners index with BMIz change per year. However, in the group of children with overweight or obesity, poorer table manners index at baseline was associated with a decrease in child BMIz per year over the two-and-a-half-year period ($\beta = -0.12$, $SE = 0.05$, $p = .01$). There was no significant relationship between child sex, child age, child picky eating or maternal attentiveness to child table manners with BMIz change per year.

Table 2
Participant characteristics at baseline ($N = 228$).

	N (%) or mean (SD)
Child characteristics	
Sex (child is male)	113 (49.6)
Age (months)	70.9 (8.4)
Change in BMIz per year[a]	
Entire sample	0.01 (0.25)
Underweight/normal weight	0.03 (0.28)
Overweight/obese	−0.03 (0.19)
Child weight status:	
Obese	45 (19.7)
Overweight	47 (20.6)
Normal weight	133 (58.3)
Underweight	3 (1.3)
Amount of cupcakes consumed (g)	44.4 (27.7)
Child picky eating (CEBQ FF)	2.73 (0.74)
Child Temperament (CBQ)	
CBQ Effortful Control	4.7 (0.9)
CBQ Surgency	5.0 (0.8)
Mother characteristics	
Age (years)	31.3 (7.2)
Race/ethnicity	
White non-Hispanic	169 (74.1)
Black non-Hispanic	28 (12.3)
Hispanic, any race	16 (7.0)
Other (Asian, Pacific Islander, Native American etc)	15 (6.6)
Highest level of education achieved	
≤ High school diploma	107 (46.9)
> High school diploma	121 (53.1)
BMI	33.3 (9.3)
Laxness in parenting	2.6 (0.9)
Maternal attentiveness to child's table manners	1.5 (1.8)

CEBQ FF denotes Child Eating Behavior Questionnaire Food Fussiness scale, CBQ denotes Child Behavior Questionnaire.
[a] Between baseline and follow up, measured 2.5 years later, $N = 148$, underweight/normal weight $n = 89$, overweight/obese $n = 59$.

4. Discussion

This study observationally captured children's table manners and identified several predictors of poorer table manners, including younger child age, greater amount of cupcake eaten, and more maternal attentiveness to her child's table manners. In addition, this study found that child obese weight status was not associated with table manners. Furthermore, we found that child table manners were inversely associated with change in BMIz over time in children with overweight or obesity, meaning that children with "worse" table manners had decreasing BMIz over time. This is the first study, to our knowledge, to test these associations.

With regard to predictors, the association of younger child age with poorer table manners is expected given that younger children have had less time to learn the social mores around eating, and may not have developed the fine and gross motor skills needed to control crumbs and/or use utensils (Gisel, 1988). Eating more of the cupcake was also associated with poorer table manners. Greater

Table 3
Multiple linear regression model testing the association of child and mother characteristics with table manners index [a] (N = 228).

	Unadjusted	Adjusted [b]
	β Estimate (Standard Error)	β Estimate (Standard Error)
Child demographics		
Sex (female vs. male)	−0.49 (0.18)*	–
Age (months)	−0.04 (0.01) **	−0.04 (0.01)**
Child eating behaviors and temperament		
Amount cupcake eaten	0.02 (0.003)**	0.02 (0.003)**
Child picky eating	−0.09 (0.14)	–
CBQ Effortful Control	−0.14 (0.11)	–
CBQ Surgency	−0.18 (0.13)	–
Mother demographics/anthropometrics		
Highest level of education obtained	−0.06 (0.07)	–
BMI	−0.003 (0.01)	–
Maternal parenting and behaviors		
Laxness in parenting	0.02 (0.10)	–
Maternal attentiveness to child's table manners	0.18 (0.05)**	0.20 (0.05)**

CBQ denotes Child Behavior Questionnaire.
Maternal attentiveness to child's table manners ($p < .0001$).
*$p < .05$, **$p \leq .001$.
[a] Higher table manners index signifies poorer table manners behaviors in the child.
[b] Variables added in a stepwise fashion with only the statistically significant variables retained at each step and in the final model.

consumption may be a marker of eating rate (bites per minute), or bite size (grams per bite), which have both been found in prior literature to predict greater caloric intake (Andrade et al., 2008; Zijlstra et al., 2009). Amount of cupcake consumed may also be a marker for the child's enjoyment of this specific type of food; it may be that children who have high food enjoyment may "forget" their manners while eating quickly if they become excited by the food. It may also be that children who were hungrier ate more cupcake and did so with poorer table manners. Contrary to our hypotheses, child picky eating behavior was not associated with child table manners measured in this study. It may be that child picky eating behavior could be associated with other eating behaviors considered by some to be poor table manners that were not measured in this study (e.g., spitting out food, pushing food around plate with a fork, remarking that the food tastes bad, etc.). Finally, maternal attentiveness to her child's table manners was associated with poorer child table manners. This may indicate that these mothers were actively trying to shape their child's eating behavior with regard to manners. Of particular note, lax parenting was not associated with poorer table manners. This may call into question the recommendation that parents should broadly teach children good table manners for weight control or obesity prevention, as children's table manners may not necessarily be influenced by parental reminders and critiques, although eating more slowly may indeed be helpful to decrease caloric consumption. The relationship between child table manners and parental attentiveness to child table manners may also be bidirectional. Other work has recommended that parents not overly critique their children's table manners, as this may be viewed as nonresponsive feeding. Instead, parents should support the development of eating skills and attend to child cues (Power et al., 2015; Sigman-Grant, Christiansen, Branen, Fletcher, & Johnson, 2008). Future work should examine this longitudinally, as well as examine the differential use of mother's comments about their children's table manners based on maternal affect.

The finding that children with obesity did not have poorer table manners than children without obesity is important for several reasons. First, it calls into question the validity of the stereotype and stigma surrounding obesity and table etiquette. As previously mentioned, although evidence exists supporting the association between obesity and increased eating rate, our results demonstrate that other broader table manners are not associated with child obese weight status. Secondly, the fact that there was no difference in table manners between children with and without obesity is important for obesity interventions focusing on broad table manners, as other behaviors may be more productive to focus on such as creating a positive mealtime emotional climate, or sensitively guiding children towards increased fruit and vegetable consumption.

It is notable that poorer table manners at baseline were associated with a decrease in child BMIz per year over time in children with overweight or obesity. There are several possible explanations for this finding. First, it may be that children with poorer table manners are less food-focused in general, therefore predisposing them to lower overall caloric intake throughout the day. Alternatively, these children may be more food-focused, and less satiety-responsive but may have mothers who recognize these traits and are therefore intervening in other areas to promote healthier weight gain. It may also be that these children had higher activity levels (represented in the table manners index by getting up from the table, or slouching in their chair), and therefore may have been expending additional calories throughout the day. Another possibility is that children with poorer table manners are less efficient in their eating, and overall consumption of calories, which may lead to decreased consumption. It is also notable that maternal attentiveness to child table manners was not associated with a change in BMIz per year. Taken together, these findings call into question the utility of mothers focusing on improving a child's broad table manners with the intent of improving their weight status. Given that poorer table manners were not associated with child obese weight status, and in fact, were associated with a decrease in BMIz per year in children with overweight and obesity, it may in fact be beneficial for parents to allow their children with poorer table manners to continue to eat in this fashion, as it may be protective against further weight gain. It should be noted that while promoting broad table manners may not be an effective intervention for child obesity, there are other benefits to children learning "proper" table manners including cleanliness, sanitation and sociability. Futhermore, there is evidence towards promoting slowed eating rate and decreased bite size as an intervention for child obesity (Salazar Vázquez et al., 2016), which we argue should be considered as separate behaviors from broadly defined table

manners.

Limitations of this study include that participant behaviors during the SEP may be influenced by the laboratory environment and therefore may be less ecologically valid than an assessment in a free-living environment (Pesch & Lumeng, 2017), specifically children may have been more prone to poorer table manners and mothers may have been more prone to being attentive to their child's table manners. Furthermore, bite rate was not captured in this study, which is an important predictor of caloric intake (Andrade et al., 2008) and obesity (Fogel et al., 2017; Llewellyn et al., 2008), although amount eaten may be used as a proxy. Lastly, this study only examined children's behaviors that are often considered good table manners by Western standards (Visser, 2015). Future studies should examine the longitudinal associations of children's table manners and weight gain in a naturalistic environment and in other cultures.

5. Conclusions

In summary, this study found that children with obesity did not have poorer table manners than children without obesity. To the contrary, this study found that in children with overweight or obesity, having poorer table manners was associated with a decline in their BMIz per year from ages 5–7 years. The stereotype that children with obesity have poorer table manners was not supported by current findings. Obesity interventions that focus on improving table manners may be unintentionally perpetuating a stereotype and stigmatizing children with obesity and their parents.

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Appendix A. Supplementary data

Supplementary data related to this article can be found at https://doi.org/10.1016/j.appet.2018.01.021.

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