

“Don’t eat so much:” how parent comments relate to female weight satisfaction

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Abstract

Purpose How will the words of a parent influence the adult weight of their daughter? This retrospective study evaluates how the recalled comments of parents made about the weight or eating habits of a daughter related to her adult BMI and satisfaction with her weight.

Method A nationwide cross-sectional survey was conducted with 501 young women ranging in age from 20 to 35 (age 26.8, SD 3.1; BMI 25.96, SD 6.2), who were asked to indicate their weight satisfaction, eating habits, and BMI along with their recall of the extent to which they recalled their parents making weight-related or eating-related comments about them as a young girl. Linear regression analyses were run to examine the relationship between parental comments and women’s weight satisfaction and BMI.

Results A woman’s dissatisfaction with her adult weight was only related to the extent she remembered her parents making any comments about her weight ($p < 0.01$), but not about how much she ate ($p < 0.05$)—even though both were positively related to her BMI ($p < 0.001$ and $p < 0.01$). Even among normal-weight young women with similar weights, those who recalled their parents commenting about their weight were more dissatisfied with their body weight ($p < 0.01$).

Discussion In this retrospective study, a parent’s comments about her childhood weight were related to her weight and body dissatisfaction as an adult. In contrast, comments about her eating habits were not significantly related to weight dissatisfaction.

Keywords Eating · Parenting · BMI-body mass index · Body weight · Weight perception · Weight satisfaction

Introduction

To help their children achieve an appropriate weight, and maintain good health, parents may encourage or discourage certain eating behaviors. Parents may also address food intake and weight among their children due to personal concerns about their own weight. Research on parental feeding styles has shown that controlling parental feeding styles (such as dictating what, when, where children are eating) are predictive of children’s inability to correctly regulate their own energy intake [1–3]. While some of these can be motivated by a parents concern with their own weight [4], such attention can contribute to restrained eating (a self-initiated attempt to restrict food intake) in the child [1, 5]. For women in particular, such early experiences might foreshadow the weight frustrations that follow many of them to adulthood [6, 7]. With females, what is not understood, however, is how a parent’s comments to a daughter might be related to their subsequent weight and eating behaviors as adults, independent of their parent’s preoccupation with their own weight.

In addition to directly commenting on what a child eats or what they weigh, parents can play a powerful role in shaping a child’s perceived norms, and this parental influence on behavior may extend beyond childhood [6].

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For instance, previous research has linked some parental behaviors—such as commenting about body size—with body image dissatisfaction in their grown adult children [7]. Parents also set a child's perceived norms around eating through modeling eating behaviors. Modeling can be a very powerful “unspoken” way that children receive messages about how they should be eating [8]. In one study, adolescents who saw their parents going on restrictive diets, reported questioning whether they too should be going on a diet, and whether it was normal to cut various foods or categories of food out of their diets [9].

A parent's comment about their daughter's food intake and weight, however, well-intended, may have long-term repercussions. This study offers some initial cross-sectional investigation as to how such recalled comments relate to their daughter's adult body mass index (BMI) and weight satisfaction.

Methods

To investigate this, 502 women were recruited to participate in a larger study on new food adoptions. Women were chosen to participate, because previous research has indicated that women are commonly the nutrition gatekeepers of a household, responsible for much of the food purchased and consumed in a household [10]. They were thought to best represent the eating habits of the general US population (non-vegetarian), and their families had lived in the US for at least two generations (to reduce variability in background). They were recruited from a national panel maintained by the MSR Group (Omaha, NE) in 2012. All participants provided written informed consent online before beginning the survey. The Institutional Review Board at the University approved the study.

The survey measures captured participant perceptions on parental influences on the participants' weight and eating behaviors. Parental concern and comments about participants' eating/weight behaviors were assessed using an exploratory seven-item survey. Questions were asked on a 9-point scales (1 = strongly disagree; 9 = strongly agree) and included: “How concerned was your mother/father about his/her weight?” “Did either parent often comment about you eating too much/too little?” “Did your mother/father comment often about your weight?” Because our interest is with the general comments a woman recalls her parents making, we created composite scores for parental comments by aggregating the comments of mothers and of fathers and averaging them. We also made a similar composite variable for parents' concern about their own weight. It is possible that parental comments may differentially affect a daughter's weight when provided about their daughter's eating habits, a health

behavior, versus their weight, a health outcome. Thus, we felt it was important to include parental comments on both weight and amount eaten. Also, we created a dichotomous variable to represent parental comments on participants' weight. Participants who reported the lowest amount of commenting (i.e., response of 2 on parental commenting composite item) were coded as 0; participants who reported more frequent commenting (i.e., responses >2 on parental commenting composite item) were coded as 1.

The larger survey also asked participants to state their height and weight, which were used to calculate the BMI of each participant. Although having verified heights and weights would have been preferred, self-reported heights and weights have been found to correlate with objectively measured heights and weights [11]. Calculating each participant's body mass index (BMI) allowed them to be categorized as being either normal weight (BMI > 25), overweight (25 > 30), or obese (30+). For some analyses, overweight and obese participants were combined into the same category. Finally, participants were asked how many pounds they would need to lose to be satisfied with their weight, which was used as a measure of weight satisfaction.

Before beginning statistical analyses, descriptive statistics were obtained to assess normality of the distributions and address outliers. There were no missing cases on any variable. To examine whether there were significant differences between normal and overweight participants on parental comment and concern variables, we performed *t* tests between the two subgroups of normal weight and overweight participants. We examined differences between non-overweight participants who reported little parental commenting on their weight versus more parental commenting.

To analyze whether several weight-related variables of participants were associated with parental weight concerns and comments, we performed a series of four linear regressions. The independent variables remained the same in each of the four regressions and included parental concern about their own weight, frequency of parental comments on participants' weight, frequency of parents commenting that participants ate too much, and frequency of parents commenting that participants ate too little. Age, race/ethnicity, and education (years of college) were included as covariates in regression analyses. There were four dependent variables of interest including “BMI,” “participants' weight satisfaction,” “participants' concern about their own weight,” and “attention participants paid to calories.” Lastly, because BMI was an independent predictor of several of our dependent variables, it was also included in the regressions for “participants' weight satisfaction,” “participants' concern about their own weight,” and “attention participants paid to calories.”

Table 1 Mean differences in childhood weight- and eating-related comments between normal- and overweight females

		Full sample (<i>n</i> = 501)	Normal weight female (<i>n</i> = 269)	Overweight/obese female (<i>n</i> = 230)	<i>t</i> test (1497)
Parental factors					
Parent commented on daughter's weight ^a	M	6.58	5.63	7.70	−5.47**
	SD	4.32	3.84	4.61	
Parent was concerned about their own weight ^a	M	9.50	9.06	10.01	−2.88*
	SD	3.68	3.42	3.92	
Parent commented about daughter eating too much ^a	M	2.79	2.36	3.29	−4.61**
	SD	2.30	2.05	2.48	
Parent commented about daughter eating too little ^a	M	2.86	3.35	2.28	5.24**
	SD	2.34	2.50	2.00	
Participant characteristics					
BMI	M	25.96	21.65	31.00	−25.66**
	SD	6.17	2.01	5.57	
Weight satisfaction	M	21.42	8.07	37.07	−15.20**
	SD	25.64	11.12	28.90	
Satisfactory weight (current—satisfy)	M	132.55	119.31	149.94	−14.77**
	SD	16.3	8.3	24.19	
Age	M	26.8	26.6	27.02	−1.57
	SD	3.13	3.21	3.03	
Years of college					
% Less than 4		6	3	9	0.91
% Equal to 4		73	76	70	
% Greater than 4		21	21	21	
Race					
% Caucasian		43	48	36	−0.60
% Black		27	23	33	
% Hispanic		25	22	29	
% Other		5	7	2	

* $p < 0.01$, ** $p < 0.001$ ^a 1 = Strongly disagree, 9 = strongly agree

Results

As Table 1 indicates, the 501 females who completed the surveys had an average age of 26.8 (SD = 3.13, with a range from 20 to 35 years) and a mean BMI of 25.96 (SD = 6.17 with a range from 16.34 to 57.58). The mean number of pounds participants wanted to lose before they would be satisfied with their weight was 21.42 (SD = 25.64).

Results from *t* tests between subsamples of normal (BMI < 25) and overweight (BMI > 25) participants showed that those daughters who were normal weight recalled their parents being less concerned with their own personal weight than those who were overweight [9.06 vs. 10.01; $t(1497) = -2.88$, $p < 0.01$]. Additionally, those daughters who were of normal weight recalled that their parents were less prone to making weight-related comments compared to those who were overweight [5.63 vs.

7.70; $t(1497) = -5.47$, $p < 0.001$], and less likely to make comments about eating too much [2.36 vs. 3.29 SE = 0.16; $t(1497) = -4.61$, $p < 0.001$].

Among the 271 normal weight participants, 173 recalled low levels of parental comments on weight, and 98 reported higher levels. Even among these normal-weight populations, the resulting differences in adult weight satisfaction were significant [$t(1269) = -2.62$, $p < 0.01$]. For example, with two normal-weight adult women, if one had recalled her parents making comments about her weight, she was 8.2-lbs more dissatisfied with her weight than a similar woman who did not recall her parents making comments about her weight. There were no significant differences between these groups on attention paid to kcals.

Linear regression analyses indicated that parental comments on daughter's weight and comments on their daughter eating too much were significant predictors of adult BMI (see Table 2). Specifically, the more parents

commented on participants' weight [$B = 0.34$, $t(493) = 4.37$, $p < 0.001$], and the more parents commented on participants eating too much [$B = 0.38$, $t(493) = 2.61$, $p < 0.01$], the higher was their adult daughter's BMI. Parents commenting that participants ate too little was a negative significant predictor of BMI, such that the more parents commented that participants were eating too little, the lower the participant's adult BMI was [$B = -0.83$, $t(493) = -7.72$, $p < 0.001$].

Parental concern about their own weight was not a significant predictor of their daughter's adult BMI. A daughter's weight satisfaction was significantly negatively related to whether she recalled her parents commenting on her weight [$B = 0.70$, $t(492) = 3.07$, $p < 0.01$ —the more parents commented, the more dissatisfied she was with her weight. Parental concern about their own weight, and parents commenting on participants eating too much or too little were not significantly related to participants' weight satisfaction. Participants' concern about their own weight was significantly associated with the weight concerns they believed their parents had about themselves [$B = 0.12$, $t(492) = 4.77$, $p < 0.001$]. That is, the more concern parents had about their own weight, the more concern their daughters had about their weight. Parental comments about weight and eating were not significant predictors of participants' concern about their weight. Lastly, attention participants paid to calories was significantly predicted by parents' concern about their own weight [$B = 0.095$, $t(492) = 3.03$, $p < 0.01$]. Therefore, participants who had parents who were concerned about their own weight also reported paying more attention to calories. Parental comments were not significant predictors of attention paid to calories by participants.

General discussion

Daughters who are dissatisfied with their own weight are more likely to recall their parents making comments about her weight as a young girl. Interestingly, this is true even if the daughter is a normal-weight adult. More generally, given previous research on parental modeling [8], it is not surprising that a parent's concern with their own weight (as recalled and perceived by their daughter) was also associated with an adult daughter's concern about her own weight and the attention she paid to calories. This is consistent with research that shows that some of the habits established in childhood often track into adulthood [12].

While it is possible that concern with weight and attention to calories can reach an unhealthy level if taken to extreme levels—and can result in a higher BMI over time for some [13]—these are not entirely maladaptive behaviors. Monitoring, including tracking calories, is an effective

means to control weight [14]. Additionally, individuals who are concerned with their weight may engage in other healthy weight-control activities, such as practicing portion control and engaging in physical activity, that allow them to maintain a lower BMI.

Recalled parental comments about a young daughter's weight are related to both her adult BMI and her weight satisfaction. Specifically, it is notable that daughters who reported that their parents commented on their weight tended to have higher BMIs and reported that they needed to lose more weight to be happy. Due to the cross-sectional nature of the current study, causality cannot be inferred. Additionally, it is unclear from the current survey the nature of the parents' comments with regards to weight (i.e., they may have commented that the individual weighed too much or too little). What is clear is that participants recalled that weight was a concern of their parents.

What is clear is that an adult woman's recalled perceptions of the comments her parents made about her weight as a girl, are not associated with healthy adult BMI or her weight satisfaction. Our subgroup analyses are congruent with results from the full sample, in that those who were overweight reported recalling significantly more parental comments about their weight than those who were normal weight. The relationship between a parent's weight-related comments and an individual's satisfaction with their own weight is an important finding, as it adds a quality of life factor to the BMI findings. In particular, individuals were less satisfied with their current weight (as indicated by their desire to lose more pounds to be happy with their weight), even when controlling for BMI.

Limitations and future research

Intervention studies that randomized the comments that parents make to young daughters about either their weight or their eating habits thankfully do not exist. Analyzing cross-sectional data is one speculative way to understand how recalled parent comments may relate to subsequent weight and weight concerns. Still, it is not causal, and it suffers from measurement errors that make the exact estimate of weight changes difficult to make. That is, performing a longitudinal study could better illuminate the causal relationship between parental concern/comments and an adult child's BMI. As with any retrospective study involving self-reports, there is likely to be some noise in the recall and reporting of some of the more perceptual questions. For instance, these women were asked to report how frequently their parents commented about their weight, which involves their subjective perception of parental comments.

Table 2 Associations of parental concerns and comments with daughters' weight-related variables

	Participants' BMI ^a	Participants' weight satisfaction ^b	Participants' concern about their own weight ^b	Attention participants paid to kcals ^b
<i>R</i> ² of the model	<i>R</i> ² = 0.21, <i>F</i> (7, 493) = 18.89, <i>p</i> < 0.001	<i>R</i> ² = 0.64, <i>F</i> (8, 492) = 108.65, <i>p</i> < 0.001	<i>R</i> ² = 0.22, <i>F</i> (8, 492) = 17.24, <i>p</i> < 0.001	<i>R</i> ² = 0.04, <i>F</i> (8, 492) = 2.59, <i>p</i> < 0.01
Parents concerned about their own weight				
B	0.11	−0.15	0.12	0.10
SE	0.07	0.21	0.03	0.03
<i>t</i>	1.56	−0.75	4.77	3.03
<i>p</i> value	0.12	0.45	<0.001	<0.01
Parents commented on participants' weight				
B	0.34	0.70	0.05	−0.02
SE	0.08	0.23	0.03	0.03
<i>t</i>	4.37	3.07	1.73	−0.47
<i>p</i> value	<0.001	<0.01	0.08	0.64
Parents commented on participants eating too much				
B	0.38	−0.71	0.06	0.07
SE	0.14	0.41	0.05	0.06
<i>t</i>	2.61	−1.73	1.15	1.14
<i>p</i> value	<0.01	0.09	0.25	0.26
Parents commented about participants eating too little				
B	−0.83	0.31	0.07	0.08
SE	0.11	0.32	0.04	0.05
<i>t</i>	−7.72	0.98	1.79	1.55
<i>p</i> value	<0.001	0.33	0.08	0.12
BMI				
B	N/a	3.28	0.10	−0.004
SE	N/a	0.13	0.02	0.02
<i>t</i>	N/a	25.85	0.29	−0.21
<i>p</i> value	N/a	<0.001	<0.001	0.83
Age				
B	0.16	0.005	0.01	0.03
SE	0.08	0.23	0.03	0.03
<i>t</i>	1.95	0.02	0.34	0.93
<i>p</i> value	0.052	0.98	0.74	0.36
Education				
B	0.06	0.25	0.01	0.14
SE	0.22	0.62	0.08	0.09
<i>t</i>	0.27	0.41	0.10	1.47
<i>p</i> value	0.79	0.69	0.92	0.14
Ethnicity				
B	−0.01	−0.41	−0.04	−0.06
SE	0.23	0.66	0.08	0.10
<i>t</i>	−0.05	−0.62	−0.50	−0.58
<i>p</i> value	0.96	0.53	0.62	0.57

Values in bold represent significant findings

^a Controlled for ethnicity, education, and age

^b Controlled for ethnicity, education, age, and BMI

Although previous studies have found perceptions of parental weight pressure to impact children's eating/weight behaviors [1], the results of this study may have been different if a more objective measure of parental commenting had been used. The nature of the current study did not allow for further investigation of parental concern about their own weight and the possible impact on daughters' weight perceptions. However, these preliminary results suggest that this may be an important moderator, and there are likely other relevant variables that could moderate the relationships suggested here, such as, cooking practices in the home, rules surrounding food, food availability, and so on. Last, the study included only female participants up to the age of 35. While acknowledging that there is increasing bias and measurement error with time, future studies could investigate the impact of parental comments on the BMI of older women, and such studies might also investigate the impact on males.

Different parents can have different influences on different daughters. Some may identify more with a mother, and others might respond better to a father. To avoid speculating about family dynamics, the objective of this exploratory cross-sectional study was to be able to make general conclusions about how the comments of parents, in general, might influence their daughter as a young adult. There are a wide range of other comments that would be useful to examine in the future, including the comments of siblings, friends, or even weight-related comments in the context of bullying.

While a person's perception of their parents' concern with their own weight is important, parents' reports of actual concern about their own weight should be included in future studies, because their reporting may be biased by an adolescents' own weight concern [4]. Similarly, when participants were asked if they recalled their parents commenting about their weight, there was no distinction made as to what type of comment they made. Nonetheless, the power of this general question suggests that a high score on this question is a strong potential proxy for who concerned or how salient the issue of weight was in that household.

Future research directions may include an objective assessment of parental concerns and comments, and individuals' food quantity. Additional measures of individual psychological characteristics and other health- and weight-related behaviors may also enrich current study results, and they can build on some of the more exploratory measures used in this study. Longitudinal studies that capture parent/child dynamics surrounding weight concerns and eating comments and how these may impact adults' BMI, weight satisfaction, and other aspects of health are necessary to further explore the apparent relationships in this study.

Conclusion

There appears to be a relationship between how concerned an adult woman is about her weight and what comments she recalls her parents making to her as a young girl. Whereas comments on her weight or how much she ate, both relate to her adult BMI, only the former relates to her adult weight dissatisfaction. Interestingly, even girls who grew up to be of normal weight may be dissatisfied with their weight if they remember a parent commenting on their weight as a young girl.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Research involving human participants and/or animals All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent Informed consent was obtained from all individual participants included in the study.

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