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“Just Three More Bites”: An Observational Analysis of Parents’ Socialization of Children’s Eating at Mealtime

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Abstract

The objective of this study was to describe comprehensively the structure and process of the childhood mealtime environment. A socioeconomically-diverse sample of 142 families of kindergarteners (52% females) was observed at dinnertime using a focused-narrative observational system. Eighty-five percent of parents tried to get children to eat more, 83% of children ate more than they might otherwise have, with 38% eating moderately to substantially more. Boys were prompted to eat as often as girls and children were prompted to eat as many times in single-as in two-parent households. Children were very rarely restricted in their mealtime intake. High-SES parents used reasoning, praise, and food rewards significantly more often than low-SES families. Mothers used different strategies than fathers: fathers used pressure tactics with boys and mothers praised girls for eating. Future research should examine the meanings children ascribe to their parents’ communications about food intake and how perceived parental messages influence the development of long-term dietary patterns. Interpreted alongside the evidence for children’s energy self-regulation and the risk of disruption of these innate processes, it may be that parents are inadvertently socializing their children to eat past their internal hunger/satiety cues. These data reinforce current recommendations that parents should provide nutritious foods and children, not parents, should decide what and how much of these foods they eat.

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Keywords

Parental Processes; Children's Eating Socialization; Observational Analysis; Mealtime; Socioeconomic Status; Family Structure; Mothers; Fathers; Child Sex/Gender

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Although theorists have posited that lessons learned at mealtime (e.g., “clean your plate”) may influence dietary patterns and weight status throughout the lifespan (e.g., Faith, Scanlon, Birch, Francis & Sherry, 2004), little is known about parents' socialization of their children's eating in the *mealtime* environment. Undoubtedly, gains have been made in recent years in our understanding of parents' influences on children's food environment. An unstructured mealtime environment, for example, is more likely to be characterized by television viewing during meals (Videon & Manning, 2003) and by consumption of foods high in fat and sugar (Coon, Goldberg, Rogers, & Tucker, 2001). In addition, several cross-sectional studies have suggested that the frequency of family meals is positively associated with consumption of healthier foods (e.g., Neumark-Sztainer, Hannan, Story, Croll, & Perry, 2003). Suggesting the need for further research, however, is a recent study that found no relation between frequency of family meals and 1-year incidence of becoming overweight (Tavares et al., 2005).

Parental strategies to control children's eating behaviors also may be related to children's energy intake and/or weight (Faith et al., 2004). Research has focused largely on two strategies: parental feeding restriction and pressure/prompting to eat. In middle-class, two-parent, European-American families, maternal report of restriction of children's access to snack foods high in fat and sugar was consistently found to be positively associated with children's intake of similar foods in the laboratory setting (e.g., Fisher & Birch, 1999). This finding, however, does not appear to hold for racially/ethnically diverse samples (Robinson, Kiernan, Matheson, & Haydel, 2001; Spruijt-Metz, Lindquist, Birch, & Fisher, 2002). Notably, the Child Feeding Questionnaire (CFQ; Birch et al., 2001), which was used in these self-report studies, focuses on restriction of snack foods and, as such, is likely more sensitive to the strategies parents use to influence children's between-meal snacking rather than parental influence on children's mealtime intake. Also of note, the CFQ has not been validated against naturalistic home observations of parenting behavior. The upshot is that we know little about parents' use of restriction as a feeding strategy in the mealtime environment.

Observational studies of the home mealtime environment have been rare, have used small samples, and have focused almost exclusively on the relation between “parental prompts/pressure to eat” and children's intake and/or weight. These studies almost uniformly report positive associations (e.g., Klesges et al., 1983), as do laboratory observations (Drucker, Hammer, Agras, & Bryson, 1999) and questionnaire studies (Spruijt-Metz et al., 2002). These studies, however, make no differentiation among prompts in terms of variation in parents' affective style and/or message content. We know little, therefore, about the specific types of prompts that parents may employ in their management of children's eating and of attendant variations in child eating response. Parenting theory posits that a parenting strategy will vary in its functional significance depending on the affective context of its use (e.g., Grolnick, 2003).

In sum, a close look at what is known about parents' socialization of children's eating in the mealtime environment reveals a rudimentary and fragmented picture, with research accruing piecemeal, compromised by methodological limitations. If we are to investigate the family socialization processes that have been implicated in the tracking of childhood dietary habits

(e.g., Singer, Moore, Garrahe, & Ellison, 1995), and design effective family interventions aimed at addressing those eating behaviors that are likely to promote overweight, a necessary prerequisite is a veridical understanding of the social and behavioral phenomena that unfold between parent and child within the home mealtime environment (e.g., Faith, Johnson, & Allison, 1997). Such basic information is central to the formulation of an empirical model of the development of adaptive and maladaptive eating patterns and would be not only of heuristic value but also of practical value (Hill, Rogers, & Blundell, 1995). The literature currently lacks such information (e.g., Faith et al., 2004).

In the present study, we used naturalistic home observational data of a large sample of families with kindergarten-aged target children to describe comprehensively the childhood mealtime environment and to examine several related issues not previously addressed in the literature. A primary objective was to identify empirically the full range of strategies that parents used in the childhood mealtime environment, and their relative use of these strategies.

Of the gaps in this literature, and given known socioeconomic (SES) and sex differences in prevalence of eating disorders and obesity (e.g., American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders, 2000; Wang, 2001), it is perhaps most striking that we know so little about the associations among family sociodemographic characteristics, the structural conditions of the mealtime environment, and parent-child processes within that context. As such, we also examined whether there were SES differences in the structure and process of the mealtime environment.

There is also very little research on potential moderators and covariates of parents' socialization of children's eating in the childhood mealtime environment, such as parent/child sex and single parenthood. Research has focused almost exclusively on maternal socialization of children's eating behaviors; and single parenthood, though implicated (Strauss & Knight, 1999), has not been examined directly in relation to child-feeding strategies. In this study, we examined whether fathers and mothers differed in the style and strategies they used to socialize eating behavior in sons relative to daughters. We also examined whether single parenthood was related to the structure of, and processes that operate within, the mealtime environment.

In sum, the primary goals of the present study were to: (1) describe the structure of the childhood mealtime environment; (2) identify empirically the range of strategies that parents use to influence children's eating, the relative use of each strategy, and children's eating response; and (3) examine sociodemographic variations in structure and strategy use.

Method

Overview

We used data from the Child Development Project (CDP), a multi-site, longitudinal study designed to develop and test an empirical model of the development of antisocial behavior. Details of the CDP are fully described elsewhere (Dodge, Bates, & Pettit, 1990). In brief, a diverse community sample of 585 children and their parents were recruited in 1987-1988 when children were approximately age 5. At baseline, a sub-sample of children was selected for observation in their homes based on stratification according to children's scores on the aggression scale of the mother-completed Child Behavior Checklist (Achenbach & Edelbrock, 1983). Equal numbers of families with a child high, medium, and low in mother-reported aggression were randomly selected for the observation sample. Families were observed for two two-hour sessions and observations were planned to include children's dinnertime. A focused-narrative observational system (Pettit & Bates, 1990; Pettit, Bates, & Dodge, 1993) was used to record the target child's social interactions with family members. In this system, observers are trained in writing detailed narrative accounts that describe episodes of family interactions.

For the CDP, the narrative records were coded to examine associations between family interaction patterns and children's conduct problems. For the present study, we developed a new coding system to examine parents' socialization of children's eating at mealtime.

Sample

This study was approved by the Institutional Review Boards of all institutions involved. Informed consent was obtained for all participants. Parents provided consent for children. The sample used in the present study were the 142 families who were observed during a period that included the target child's dinnertime (130 were observed twice; 12 observed once). Family SES for this sample was distributed across the five Hollingshead (1979) categories as follows: I (highest) = 24%; II = 38%; III = 17.6%; IV = 14%; V = 6.4%. Of the children in this subsample, 52% were female; 88% were European American and 12% were African-American; 27% were from single-parent households (26% were single mothers). Mothers of 141 (99%) and fathers of 98 (69%) of the children were present during the observations.

Procedure

Childhood mealtime observations—Families were observed on two occasions for a total of four hours and paid \$20 for their participation. Observations were timed to include the target child's dinnertime. It was requested that all family members be present at home during the observation, and to remain within their home and yard. Family members were expressly told to follow their usual routines, that observers were present to observe the target child, and to ignore the observer as much as possible.

Observer training—Observers were doctoral students and social service professionals, trained for reliability and cultural sensitivity. Observer training included analysis of family interaction using video recordings of non-participating families. Trainees were paired with experienced observers for a minimum of four practice home visits. Observers, blind to family information, were trained to write detailed narratives of all social transactions involving the target child. Upon completion of each observation, the observer added clarifying field notes. Narratives were typed within 24 hours of the observation.

Development of coding system and coding of mealtime transcripts—We employed modified qualitative analytic procedures (Strauss & Corbin, 1998) to develop the new coding system. First, core categories of the coding system were derived from an exhaustive review of the extant literature. Thus, the basis of this coding system essentially constitutes *a priori* categories not derived from this sample. A substantial number of variables (e.g., family meals, mealtime television viewing, parental prompts to eat, food restriction, food rewards) have been implicated in the development of obesity, albeit largely from maternal self-report data. We then randomly selected observational narratives from 20 of the 142 families who were observed (40 narratives) and examined and interpreted these data by conducting a detailed line-by-line analysis of mealtime-relevant sections. We used this method to verify and supplement the core categories, and items within these categories.

To ensure coder reliability, a comprehensive coding manual (available upon request) was prepared consisting of coding guidelines; definitions of categories, items, and ratings; and examples. To refine the coding system, two trained coders coded a random subset of narratives until a criterion of 95% inter-rater agreement was achieved. Narratives were then coded in random order by a coder blinded to the aims of the study. To assess reliability, the narratives for 25% of families, or 35 families, were selected randomly and coded independently by two coders.

Measures

Demographic variables—Demographic data were collected from mothers during interviews the summer before children started kindergarten. Family SES was measured using the Hollingshead Four-Factor Index of Social Status, which is calculated as a function of job category and parental education level (Hollingshead, 1979). The resulting continuous SES variable can be re-coded as a 5-category ordinal variable. Family structure was coded as single-parent or two-parent (if married or living with a partner). Additional demographic data included race/ethnicity of child, and parent and child gender.

Mealtime structure variables—The structure of the mealtime environment comprised the following five variables: (1) meal location (coded as dining room/kitchen, living room, or other); (2) child mealtime television viewing (coded as yes/no); (3) parent present while child is eating (yes/no); (4) family eats together (yes/no); and (5) child's mealtime activity level, such as playing/walking/moving around during the meal (yes/no).

Mealtime process variables—Mealtime process variables included the following categories of variables: (a) the type of strategies parents used to influence children's eating; (b) child eating response (i.e., eating compliance, eating refusal); and (c) parents' socialization of children's mealtime etiquette.

Parental strategies—We identified nine parental strategies as follows:

1. Neutral prompts: Use of a matter-of-fact tone; simply telling child to eat. No explanation, no promises/threats (e.g., "Don't forget to eat your meat.").
2. Pressure/Demand to eat: Tone brusque, rude, bullying. Parent insists, demands, scolds, threatens, yells at the child to eat (e.g., "When I say eat, you eat!").
3. Reasoning: Use of a rationale to get child to eat but choice is child's (e.g., "Want to try the beans? I made them the way you like them.").
4. Food reward: Use of food as a reward/bribe/bargain to get child to eat (e.g., "If you eat three more bites of meat, you can have a popsicle.").
5. Praise: Approval of child's eating (e.g., "You ate all your chicken, good job!").
6. Food restraint/portion control: Restriction of how much of a food child eats (e.g., "No more potatoes.").
7. Threat to withhold food: Threat to withhold a desired food if child does not eat (e.g., "If you don't finish your peas, no brownie!").
8. Threat to withhold play privileges: Threat to withhold a desired non-food item or activity if child does not eat (e.g., "You don't eat, you don't get to ride your bike.").
9. Offer of play rewards: Use of non-food item or activity as a reward/bribe/bargain to get child to eat (e.g., "If you eat your salad, you can go to Sally's to play.").

A count was made of each type of strategy that a parent used, coding separately for mothers and fathers. Frequency of use of each strategy was calculated as sums of maternal and paternal use of that strategy. Scores were averaged across observations (single-observation scores were used for the 12 families that were observed at mealtime once only). In addition, we coded (yes/no) whether the parent allowed the child any input over the course of the meal about the amount of food the child wanted served to him or her.

Child eating response—A count was made of each time the child complied with a parental attempt to get him or her to eat, refused to eat, or sought approval for eating. The frequency of

children's eating compliance or refusal in response to a particular parental strategy and the frequency of child requests for parental approval for eating were averaged across observations. In addition, the overall amount that children ate during the course of the entire meal in direct response to parental attempts to get them to eat was estimated using a 4-point rating (0 = no more, 1 = a little more/a few bites; 2 = some more/a moderate amount; 3 = quite a bit more/a substantial amount).

Mealtime etiquette—This item was a single rating of the number of times parents attempted to socialize children in any of the following appropriate mealtime behaviors (i.e., table manners, speaking in turn, assisting with mealtime set-up and cleanup) and was coded as none (0 times), low (1 time), medium (2-3 times), or high (more than 3 times) and also averaged across observations.

Reliability—Interrater reliability was calculated for each of the mealtime structure and process variables separately. Kappa coefficients were uniformly very high. Across observations, kappas for structure and process coding categories ranged from 0.93 to 1.00.

Results

Mealtime Structure

As Table 1 shows, in 86% of the families, parents were present in the room while their children ate dinner; 74% of parents actually dined with their children, seated at a table in either the kitchen or dining room. About one in five children (20%) were allowed to watch television while they ate. Families were asked to follow their normal routines. Whereas 38% of the children exhibited some level of mealtime play/activity, 62% exhibited negligible play/activity during the meal. Consistent with other studies, family SES was strongly associated with all aspects of mealtime structure except children's activity levels, with low-SES families less likely to eat together or to eat in the dining room or kitchen area, and more likely to have the television on during mealtime. These data show, in addition, that single- and two-parent families differed significantly on all aspects of mealtime structure, with single-parent families less likely to eat together and children more likely to play around during their meals and to be allowed to watch television.

Mealtime Process: Parental Strategies

In 78% of families ($n = 111$), parents served children their food, without child input into how much of a food the child may have wanted.

Types of strategies and frequency of use (See Table 2)—Parents used a variety of strategies to influence children's eating. There was also variation in the number of attempts (range 0-15, $M = 3.22$, $SD = 3.30$). At least one attempt was made in 85% ($n = 121$) of families.

Parents tended to use neutral prompts (e.g., "Don't forget to eat your meat.") and pressure to eat (e.g., "When I say eat, you eat!") most often, with reasoning (e.g., "Try the green beans, I made it the way you like it.") used next in frequency. Other strategies to get children to eat more (e.g., praise, offers of food rewards, threats to withhold food/play rewards) or to eat less (i.e., restraint/portion control) were used relatively infrequently. Only a small number of parents attempted to restrict either amount of food (13%) or type of food (6%); in no case were restrictive strategies used more than once per mealtime.

Within-family mother-father differences in strategy use—We used paired t-tests to look at differences between mothers and fathers within two-parent families (see Table 2 for means). Mothers were significantly more likely than fathers to use neutral prompts ($\Delta = 0.28$,

$t = 2.59, p < 0.01$), reasoning ($\Delta = 0.20, t = 2.56, p < 0.01$) and praise ($\Delta = 0.13, t = 3.09, p < 0.005$). In addition, the average number of strategies mothers used per meal was higher than that of fathers ($\Delta = 0.83, t = 2.99, p < 0.005$).

Differences in strategy use between married/partnered mothers and single mothers—As presented in Table 2, single mothers averaged 3.43 prompts per meal, which was significantly higher than strategy use by either mothers or fathers individually in two-parent families, and slightly higher than the total number of strategies by both mothers and fathers combined in two-parent families ($M = 3.13, SD = 3.11$). However, single mothers did not differ markedly from mothers in two-parent families except in their use of neutral strategies, which they used significantly more often ($t = 2.28, p < 0.05$).

Differences in strategy use by sex of child and parent—Across families, parents did not differ significantly in the overall number of attempts to influence boys versus girls, nor were there differences by parent sex (e.g., mothers did not make significantly more attempts to influence daughters versus sons). However, mothers praised girls when they ate ($M = 0.22, SD = 0.39$) significantly more often than they did boys ($M = 0.08, SD = 0.23; t = 2.51, p < 0.01$), and fathers used pressure tactics to get boys to eat ($M = 0.48, SD = 1.09$) four times as often as they did for girls ($M = 0.12, SD = 0.28; t = 2.21, p < 0.01$). Mothers were also significantly more likely to offer play rewards to girls to get them to eat ($M = 0.07, SD = 0.23$) than to boys ($M = 0.02, SD = 0.08; t = 2.05, p < 0.05$). Overall, girls were praised more than twice as often as boys (Girls: $M = 0.27, SD = 0.45$; Boys: $M = 0.11, SD = 0.28; t = 2.49, p < 0.001$).

Relation of SES and single and two-parent family structure to strategy use—In higher-SES families, parents were more likely to use reasoning (Mantel-Haenzel $\chi^2 = 10.0, p < 0.001$), praise ($\chi^2 = 5.89, p < 0.05$), and food rewards ($\chi^2 = 4.59, p < 0.05$) than in lower SES families. Higher SES was not associated with a greater number of prompts to eat overall but was associated with more attempts to restrict food portion size ($\chi^2 = 4.52, p < 0.05$). Parents in single- and two-parent households (i.e., mother and father combined) did not differ significantly in their use of any specific strategy or in total number of strategies used.

Mealtime Process: Child Eating Response

Child eating compliance, eating refusal, and approval-seeking—Children complied with parental efforts to influence their eating about twice (1.9 times) per meal on average, and defied or ignored parents' efforts approximately once (1.27 times) on average. Twenty-three percent (23%) of children sought parental approval at least once for having eaten. In response to parental control strategies, 2% of children ate substantially more, 35.5 % ate moderately more, 41.5% ate a few bites more, and 17% ate no more than they otherwise might have.

As Table 3 shows, children's compliance with parental strategies was most highly associated with neutral prompts. Compliance was also significantly associated with all other parental strategies except attempts to control portion size and threats to withdraw food or play privileges. Children's refusal to eat was most highly correlated with pressure tactics and threats to withdraw play privileges, but refusal was also significantly associated with reasoning and offers of play rewards. Several strategies (pressure, reasoning, and offer of play rewards) were significantly positively associated with both compliance and non-compliance, as was the total number of strategies used. Overall rates of compliance and non-compliance were modestly correlated with each other ($r = .20, p < .05$).

Relation of child sex, SES, and single and two-parent family structure to child behaviors—There were no significant SES or family structure (single- or two-parent)

differences in the frequencies of children's responses to any of the parental strategies or in children's approval-seeking for having eaten. However, there were sex differences in children's mealtime behaviors: girls sought approval for eating significantly more often than boys (Girls: $M = 0.30$, $SD = 0.22$; Boys: $M = 0.08$, $SD = 0.51$; $t = 3.44$, $p < 0.001$), and boys exhibited significantly more instances of eating refusal than girls (Girls: $M = 0.93$, $SD = 1.25$; Boys: $M = 1.68$, $SD = 2.43$; $t = 2.02$, $p < 0.05$).

Socialization of mealtime etiquette—On average, parents were rated as low-moderate in the frequency of their attempts to socialize children's mealtime etiquette ($M = 2.1$, $SD = 1.5$; range = 0 to 5.5). Family SES was significantly related to socialization of mealtime etiquette ($F_{1,136} = 2.67$, $p < 0.05$), with higher-SES families making more frequent attempts to do so. There were no significant differences by single-versus two-parent households or sex of child in levels of etiquette socialization.

Discussion

The results of this study strongly suggest that, regardless of SES, marital status, or sex of child, the overriding mealtime goal of the majority of parents of young children is to get children to eat more during meals. Of note, few parents sought to restrict their children's mealtime intake: It may be that current research on parental food restriction (e.g., Fisher & Birch, 1999) applies largely to snack foods. Parents, moreover, were quite successful in their goal of getting children to eat more food, with over a third of children eating moderately to substantially more than they might otherwise have. This finding is of particular importance given that children appear to have an innate capacity to regulate their energy intake (Fox, Devaney, Reidy, Razafindrakoto, & Ziegler, 2006) and further, that this capacity can be disrupted when children subvert their internal cues of hunger and satiety in favor of external cues such as parents' feeding control strategies (Birch, McPhee, Shoba, Steinberg, & Krehbiel, 1987).

In this study, we differentiated among parental strategies (e.g., neutral prompts, pressure/demand, reasoning, food rewards, threats). We found that children's response indeed varied as a function of the affective and contextual qualities of the strategy, as is posited by current parenting theory (e.g., Grolnick, 2003). Parents' use of neutral prompts, food rewards, and praise was significantly associated with child eating compliance whereas parental threats to withdraw play privileges were associated with child refusal. Curiously, parental pressure to eat, reasoning, and offer of play rewards were significantly associated with both compliance and refusal. It may be that children tend to comply early during a meal in response to hunger cues (essentially eating the amount that they would have eaten without parental prodding), with some children refusing to eat when they feel full and other children overriding their satiety cues and continuing to eat in response to parental control. Although the study was useful in identifying the range of strategies parents use, it suggests that future research should identify when during the mealtime process a type of strategy is used.

As in other developmental domains (e.g., Pettit, Brown, Mize, & Lindsey, 1998), mothers take the lead over fathers in socializing children's eating behavior, making significantly more attempts to get children to eat. Although there were no differences in parents' overall attempts to get boys to eat relative to girls or in attempts to restrict girls' eating relative to boys, differences were observed in the *types* of strategies mothers and fathers used with girls as compared to boys. Perhaps due to differential male/female expectations (e.g., males 'should' eat more, females are pickier eaters), fathers tended to pressure boys to eat whereas mothers tended to praise girls for eating. Girls were more likely to seek parental approval for eating and were also more likely to be eating compliant. These observed sex differences in eating compliance may mean that young boys are more likely to respond to internal appetitive cues rather than external parental demands whereas young girls, socialized to please, are more likely

to subvert their internal hunger and satiety cues and comply. More generally, however, these findings may have implications for understanding the linkages between perceived pressures from parents and the development of disordered eating patterns, especially in girls (McCabe & Ricciardelli, 2005). This study holds implications for future research regarding the meanings children ascribe to their parents' communications about food intake, and how perceived parental messages influence the development of long-term dietary patterns.

There were also several notable sociodemographic differences in mealtime structure and in the types of strategies parents used. Consistent with research on general parent discipline (e.g., Grant et al., 2003), high-SES parents were more likely than low-SES and single parents to have an organized mealtime environment and to use reasoning, rewards, and praise to get children to eat. High-SES parents were also more likely to attempt to restrict children's portion sizes. Single mothers made as many total attempts to get children to eat as compared to mothers and fathers from two-parent families combined. Perhaps compensating for the lack of available support from fathers, single mothers may essentially assume the 'work' of two parents.

The limitations of this study include limitations inherent in the use of data intended to address other empirical issues. No data were available, for example, on possible predictors of mealtime structure and process (e.g., parent/child weight) and the only child outcome data that could be culled from the narratives was an estimate of how much children ate in response to parental influence. A further limitation is that observational data, with its many advantages, also hold potential risks. One such risk is that the presence of a researcher may have altered the families' behavior to some degree, potentially compromising results (Bakeman & Gnisci, 2006).

In addition, the data used here were collected in 1987-1988 and may not strictly reflect present-day family mealtime structure and process. However, the National Health and Nutrition Examination Survey II (1976-1980) and III (1988-1994) and the Nationwide Food Consumption Survey conducted over the same periods (Centers for Disease Control and Prevention, 2006; Nielsen, Siega-Riz, & Popkin, 2002) show dramatic increases in snacking, portion size, fast food consumption and, not coincidentally, in the prevalence of overweight in children over the course of the 1980s. The present study offers a unique opportunity for a more complete picture of the childhood mealtime environment from a period when secular changes in key dietary behaviors, resulting in epidemic levels of obesity for all ages, were already well-established.

In summary, it appears that many parents may be socializing their children to eat past their innate satiety cues. This is alarming particularly in light of our increasingly sedentary lifestyle. Possible parent motivations may include concern that their children will otherwise lack proper nutrition or the belief that they must socialize the amount of food children 'should' eat at mealtime. These findings, considered alongside other recent research, serve to reinforce recommendations for parent interventions (e.g., Birch & Fisher, 1998; Fox et al., 2006). Parents must be informed that: (1) children are innately capable of energy self-regulation and can recognize and respond to their internal hunger and satiety cues; (2) external cues (e.g., parental control) can potentially disrupt the innate ability to recognize and respond to internal cues; (3) parental responsibility primarily lies in providing nutritious foods and determining when to serve these foods; (4) children should be allowed to choose which and how much of a selection of healthy foods they eat; and (5) using food as a reward or threat likely imbues certain foods (e.g., desserts) with special value.

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Table 1
Mealtime Structure by Family SES and by Single- v. Two-Parent Family

SES Category (n = 141)	Meal in kitchen/ dining room	Mealtime television viewing	Family eats together	Parents present in room	Child plays, moves, walks about
I (n = 34)	100%	7%	97%	100%	32%
II (n = 54)	98%	6%	87%	94%	27%
III (n = 25)	92%	22%	78%	92%	44%
IV (n = 19)	67%	41%	44%	83%	45%
V (n = 9)	89%	33%	0%	22%	44%
χ^2	13.10 *	13.55 *	42.57 *	28.46 *	1.21
Single parent (n = 37)	80%	30%	53%	74%	51%
Two parent (n = 101)	97%	11%	87%	95%	33%
χ^2	10.78 *	7.27 *	16.55 *	12.50 *	3.74 *
All families	93%	20%	74%	86%	38%

NOTE: Variables were coded 0 (no at both meals) or 1 (yes at both meals). Hollingshead categories were created from continuous scores assessing parent education and occupation. Categories IV and V include semi-skilled and unskilled workers and unemployed. Categories I – III include all others.

* = p < .05

Table 2

Means And Frequencies Of Strategy Use: Overall, By Mother And Father In Two-Parent Families, And By Single Mothers

Type of Strategy		Times strategy used per meal M (SD)	% Parents Using Strategy
Neutral prompts (e.g., "Don't forget to eat your meat.")	Overall (by family)	0.95 (1.21)	60%
	Mothers (two-parent family)	0.61 (0.95)	46%
	Fathers (two-parent family)	0.39 (0.74)	32%
	Mothers (single-parent family)	1.04 (1.04)	70%
	Single Mothers		
Pressure/Demand to eat (e.g., "When I say you eat, you eat!")	Overall	0.92 (1.66)	45%
	Mothers	0.51 (0.93)	37%
	Fathers	0.31 (0.84)	24%
	Single Mothers	1.19 (2.37)	40%
	Single Mothers		
Reasoning (e.g., "Want to try the beans, I made them the way you like them.")	Overall	0.56 (1.03)	40%
	Mothers	0.42 (0.80)	40%
	Fathers	0.26 (0.60)	26%
	Single Mothers	0.50 (0.93)	30%
	Single Mothers		
Offer of food rewards (e.g., "If you eat three more bites of your meat, you can have a popsicle.")	Overall	0.17 (0.49)	30%
	Mothers	0.14 (0.35)	20%
	Fathers	0.16 (0.44)	18%
	Single Mothers	0.23 (0.53)	19%
	Single Mothers		
Praise (e.g., "You ate all your chicken — good job!")	Overall	0.20 (0.38)	24%
	Mothers	0.17 (0.35)	22%
	Fathers	0.07 (0.23)	9%
	Single Mothers	0.14 (0.28)	22%
	Single Mothers		
Food restraint (portion control) (e.g., "No more potatoes.")	Overall	0.09 (0.25)	13%
	Mothers	0.05 (0.19)	9%
	Fathers	0.03 (0.15)	6%
	Single Mothers	0.11 (0.29)	13%
	Single Mothers		
Threat to withhold food (e.g., "If you don't finish your peas, no brownie.")	Overall	0.10 (0.37)	10%
	Mothers	0.04 (0.17)	6%
	Fathers	0.09 (0.38)	8%
	Single Mothers	0.05 (0.20)	8%
	Single Mothers		
Threat to withdraw play privileges (e.g., "You don't eat, you don't get to ride your bike.")	Overall	0.08 (0.37)	8%
	Mothers	0.02 (0.13)	4%
	Fathers	0.03 (0.13)	7%
	Single Mothers	0.15 (0.65)	4%
	Single Mothers		
Offer of play rewards (e.g., "If you eat your salad, you can go to Sally's to play after.")	Overall	0.06 (0.24)	8%
	Mothers	0.05 (0.20)	8%
	Fathers	0.03 (0.14)	4%
	Single Mothers	0.03 (0.11)	5%
	Single Mothers		
Average of all strategies per meal	Overall	3.22 (3.30)	--
	Mothers	2.02 (2.29)	--
	Fathers	1.38 (1.88)	--
	Single Mothers	3.43 (3.90)	--
	Single Mothers		

NOTE: The mean number of family-level strategies across all families is presented in the "Overall" category. The group Ns were as follows: All families, N = 141; Mothers from two-parent families, n = 101; Fathers from two-parent families, n = 88; Single mothers, n = 37.

Table 3
Correlation of Parental Strategies with Children's Eating Compliance and Eating Refusal

Type of Strategy	Correlation of Frequency of Use and Child Eating (n = 117)	
	Eating compliance	Eating refusal
Neutral prompts	.65*	.16
Pressure/Demand to eat	.39*	.67*
Reasoning	.32*	.23*
Offer of food rewards	.27*	.09
Praise	.31*	.05
Food restraint (portion control)	-.04	-.06
Threat to withhold food	.13	.14
Threat to withdraw play privileges	.09	.67*
Offer of play rewards	.28*	.18*
Average of all strategies per meal	.69*	.63*

NOTE: * = $p < 0.05$