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Breast-feeding through the first year predicts maternal control in feeding and subsequent toddler energy intakes

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Abstract

Objective—Current recommendations for infant feeding encourage breast-feeding through the first year. This research was conducted to evaluate associations among breast-feeding, maternal control of child feeding, and the dietary intake of toddlers during the second year of life. In particular, we sought to determine whether breast-feeding through the first year and subsequent toddler intake was mediated via maternal control of child feeding.

Design/subjects—Fifty-five white infants and their mothers were monitored longitudinally from age 12 or 13 months to age 18 months.

Main outcome measures—Breast-feeding through the first year and maternal control in infant feeding were evaluated as predictors of energy intake at age 18 months.

Statistical analyses performed—Regression analysis was used to evaluate predictors of toddler energy intake at age 18 months. A mediation model tested if the relationship between breast-feeding and infant intake was mediated by maternal control in feeding.

Results—Breast-feeding through the first year was associated with higher toddler energy intakes at age 18 months through its influence on maternal control in feeding. Mothers who breast-fed their infants for at least 12 months used lower levels of control in feeding. Lower levels of maternal control in feeding were associated with higher toddler energy intakes. The highest energy intakes among children aged 18 months were observed among taller and leaner toddlers.

Applications/conclusions—Our findings suggest that breast-feeding through the first year may have an effect on children's energy intake by shaping mothers' child-feeding practices. These findings may be used by clinicians to assist parents in making informed decisions about choice of infant-feeding method and to provide anticipatory guidance regarding infant-feeding style when initiating dietary diversity.

The decisions parents make about feeding their infants have both immediate and longer-term consequences on the child's growth and development. It has been shown that human milk confers advantages with respect to infants' general health, especially reduced infectious disease and chronic digestive disease. The American Dietetic Association position statement on the promotion of breast-feeding advocates exclusive breast-feeding for 4 to 6 months, and breast-feeding with weaning foods for at least 12 months (1). The American Academy of Pediatrics also recommends breastfeeding through the first year, stating: "Exclusive breastfeeding is ideal nutrition and sufficient to support optimal growth and development for approximately the first 6 months afterbirth...It is recommended that breastfeeding continue for at least 12 months, and

thereafter for as long as mutually desired” (2, p 1036). Furthermore, the decision to breast-feed or formula-feed initiates different trajectories with respect to longer-term growth, health, and development (1–4).

Our research investigated whether breast-feeding through the first year predicted maternal control of infant feeding. We also considered whether toddler energy intakes at age 18 months were predicted by prolonged breast-feeding or maternal control in feeding. In particular, we investigated whether the association between breast-feeding at 12 or 13 months and toddler dietary outcomes during the second year were attributable, in part, to mothers’ infant-feeding practices and beliefs arising from the breast-feeding experience.

To our knowledge, the effects of mothers’ child-feeding practices on their children’s food intake during the first and second years of life have not been investigated. There is evidence, however, that by the preschool period, mothers’ child-feeding strategies serve as important determinants of food intake (5). In particular, highly controlling feeding strategies are negatively associated with children’s ability to adjust intake in response to the energy content of foods (6,7). There is also evidence that high levels of maternal control over what and how much children eat are associated with greater adiposity in children and with children’s heightened responsiveness to and increased intake of palatable foods (8,9).

1. Children should always eat all the food on their plates.
2. Children should be strongly reprimanded for playing or fiddling with their food.
3. Parents have to be especially careful to make sure their children eat enough.
4. Generally children should only be permitted to eat at set mealtimes.
5. A child who doesn’t finish all of the rest of their dinner should not get dessert.
6. Children often have to be strongly encouraged to eat things they don’t like because those foods are often good for them.
7. A tasty snack is one of the best ways to reward children.
8. A child who eats something that is good for him, that he doesn’t like too much, should then be given something he likes in return.
9. Offering a tasty dessert after a meal is an especially good way to get children to eat foods that are good for them.
10. Parents have to be sure their children do not eat too much.
11. Does your child usually finish all the food they are given with no difficulty, even when they are not particularly full?

Child-feeding questionnaire given to assess maternal control in feeding (7)^{a,b}. Items 1 through 10 have a 7-point response scale where 1 =strongly disagree and 7=strongly agree; item 11 has a 7-point response scale where 1 =very rarely and 7=almost always. Item responses were expressed as standardized scores.

^aItems 1–10 have a 7-point response scale, from strongly disagree to strongly agree; item 11 has a 7-point scale, from very rarely to almost always.

^bItem responses were expressed as standardized scores.

Beginning in the first half of the second year of life, a dramatic transition from a predominately milk-based diet takes place. By age 18 months, a modified adult diet is consumed. Opportunities for parental control over children’s eating are altered during this transition

period. Initially, when the child is consuming an exclusive milk diet, parents control whether the child is breast-fed or formula-fed, and whether human milk or cow's milk formula is consumed; they can also control the timing of feedings. As the child makes the transition to a more adult diet, parents also determine what foods will be offered. During this same period, however, young children become more independent and strive for greater autonomy and control over a variety of areas in their lives, including eating. In general, as the child develops, the balance of control between parents and children begins to shift, with parents relinquishing control and children assuming increased control of their eating. At any point in development, however, there are large individual differences across mother-infant dyads in the balance of control, and the extent to which children control their own food intake, including the timing of meals and what and how much is eaten (see Satter [10] for further discussion).

The choice to breast-feed may be an important factor affecting the balance of control in feeding across mother–infant pairs. Infants eat primarily to satisfy energy needs and are responsive to the energy density of their diet (11). For example, infants will adjust the volume of milk consumed to maintain a relatively constant energy intake, consuming more diluted than concentrated formula preparations. Given infants' ability to control their energy intake, Fomon (11) argues that an advantage of breast-feeding is that the mother cannot readily assume control and intervene in infant feeding—the breast-feeding mother cannot monitor how much the infant is consuming. Therefore, the quantity of milk consumed by the breast-fed infant is primarily under the infants' control. This observation was supported by subsequent research demonstrating that among breast-fed infants, the volume of a feeding was not limited by milk availability (12). For the breast-fed infant, a feeding is likely to be terminated when the infant's sucking rate slows or stops, and the mother assumes that the infant is satiated. For formula-fed infants, however, feeding duration and intake may be more closely aligned with maternal feeding decisions based on visual cues regarding the amount of milk remaining in the bottle. Formula-feeding mothers may have routine control over the volume of milk consumed by encouraging the infant to continue to feed until the bottle is empty.

Breast-feeding experience may also provide a basis for more lasting beliefs and attitudes regarding the extent to which infants can and should regulate intake. Fomon (13) argues that breast-feeding may promote parenting that facilitates infants' control and moderation of intake, where feeding occurs in response to internal cues signaling hunger and satiety. In contrast, formula-feeding may promote parenting that involves a greater degree of control over child feeding. Thus, mothers who breast-feed may adopt an approach to child-feeding that affords the child more opportunities for sharing control of food intake, whereas formula-feeding mothers may maintain a higher degree of control over children's eating.

The purpose of this research was to determine associations among breast-feeding, maternal control of child-feeding, and toddlers' dietary intake during the second year of life. In particular, we explored whether breast-feeding at 12 or 13 months of age predicted mothers' control in infant feeding and ultimately toddlers' energy intake at age 18 months. Maternal control of feeding was evaluated as a mediator of the relationship between breast-feeding through the first year and toddler energy intakes at age 18 months. National demographic data have revealed that both the choice of an infant-feeding method and parenting practices are confounded by socioeconomic status, especially maternal education (14). Thus, we investigated these issues using a predominately white, middle class, well-educated sample. We also statistically controlled for maternal education and infant weight, length, and gender.

SUBJECTS AND METHODS

Subjects

Participants were 55 (24 female, 31 male), non-Hispanic white 12- to 13-month-old infants and their mothers living in central Pennsylvania. On average, mothers were in their early 30s (mean age=33±0.07 years) and well educated (mean years of education=16±0.41). Birth records (Metromail Corporation, Lombard, Ill) and birth announcements from local newspapers were used to identify infants at 11 to 12 months of age at the time of enrollment. Potential participants were recruited using a letter of invitation and follow-up phone call. Criteria for inclusion were the following: birth weight >2,500 g; no congenital abnormalities or prenatal complications; no hospitalization or use of micronutrient supplementation during the 6 months before the study; current weight, length, and head circumference within the 10th and 90th percentiles of the National Center for Health Statistics reference standards (15); and absence of chronic illness. Parents of infants provided written consent for their own as well as their infants' participation. All procedures were reviewed and approved by the Institutional Review Board, Office for Regulatory Compliance, Pennsylvania State University, University Park.

Measures

Overview—Participants were enrolled when the infants were aged 12 or 13 months. Mothers provided demographic information and completed a child feeding questionnaire at the initiation of the study. Two questions on breast-feeding experience were asked: if they had ever breast-fed their infant, and if they were currently breast-feeding at the time of enrollment in the study. Breast-feeding through the first year was coded as a dichotomous variable, with 1=mothers who breast-fed at least 12 months, and 2=mothers not breast-feeding at least 12 months. Infant dietary and anthropometric data were collected monthly during home visits for a 6-month period (12 or 13 to 18 months of infant age) by a trained staff member. Infants' dietary intake records were collected ±10 days from the day of the month on which the infant was born.

Maternal control in feeding—Maternal control in child feeding was measured using the control scale of the child feeding questionnaire (7). This questionnaire was adapted from Costanzo's and Woody's parent interview (16) to assess the extent of parent control in child-feeding beliefs and behaviors. As shown in the Figure, items focus on the extent to which parents should control the timing of meals, as well as on what foods are provided and how much children should eat. Items on the control scale used a 7-point Likert-type response scale. Items were composited using principal components analysis and expressed as standardized scores, with high scores indicating a high level of maternal control in feeding. In this sample, the internal consistency of these items, as measured by Chronbach's α , was 0.74. In previous research, scores on the control scale have been positively associated with children's adiposity and negatively associated with their ability to self-regulate energy intake (7).

Dietary records—Three-day dietary records, with 2 weekdays and 1 weekend day reported, were used to assess toddlers' dietary intake at monthly intervals. Mothers were trained in methods and procedures for keeping accurate dietary records. Each mother received training on how to estimate portion sizes common for young children using food models (NASCO, Nutrition Consulting Enterprises, Framingham, Mass) and utensils. Additionally, a sample food record with details on food preparation, food additions, and brand names was provided to facilitate and standardize the recording process. Trained study personnel collected the dietary records for meals eaten at day-care facilities. All food and beverages consumed and recorded on complete food records were analyzed using the Minnesota Nutrition Data System (NDS) (Version 2.6, Nutrition Coordinating Center, University of Minnesota, Minneapolis, Minn. Nutrient database version 8A, food database version 23, 1994; database completeness: 0%

missing data for energy; 3% estimated data for energy). Energy, macronutrient, and micronutrient intakes were calculated as the mean of the 3-day food records.

Anthropometric measurements—Weight and height measurements were taken each month, from 12 or 13 to 18 months of infant age, using standardized procedures (17). Recumbent length of a child was measured to the nearest 0.05 cm using a pediatric length board (Ellard Instrumentation and Ross Laboratories Div. of Abbott Laboratories, Columbus, Ohio). Weight of the unclothed infant was taken with electronic scales (Detecto Scale Co, Webb City, Mo) that were routinely calibrated using standard weights and were accurate to within 5 g. Weight and height data were used to calculate weight (kg)/length(cm). Toddlers' weight and height measurements at 18 months were converted to percentile values to evaluate the relative growth status of the sample using age- and gender-appropriate reference data (15). Triceps and subscapular skinfold measurements were obtained using a Lange skinfold caliper (Cambridge Scientific Industries, Cambridge, Md). Results are shown in Table 1.

Statistical Analyses

Fifty-one of 55 mothers provided information regarding control in child feeding. Univariate statistics were generated for all variables. Associations between children's energy intake at age 18 months and their anthropometric measurements were evaluated. Regression models were used to identify maternal predictors of toddler energy intake at 18 months as well as predictors of maternal control in feeding. All models are presented with standardized regression weights. Regression models examining maternal predictors of toddler energy intake at 18 months included infant gender and length at 18 months to adjust for variance in the outcome attributable to these influences. Maternal education, infant gender, and infant weight at 12 or 13 months were used as control variables in models examining predictors of maternal control in feeding because of their association with both parenting style and breast-feeding (16). Control variables are not shown in the final models (Table 2 through Table 4) unless indicated as significant predictors. The variance explained by the model R^2 includes the contribution of control variables. Regression techniques described by Barron and Kenny (18) were used to determine whether maternal control in feeding mediated relationships between breast-feeding at age 12 or 13 months and toddler energy intake at age 18 months.

RESULTS

Of the 55 infants who completed the study, 11 were formula-fed, 44 were breast-fed for some period, and 14 of 55 infants were still being breast-fed at 12 or 13 months. Table 1 provides the descriptive statistics for toddler energy intake at 18 months and growth measurements. Reported toddler energy intakes at 18 months were $1,104 \pm 270$ kcal for boys and $1,009 \pm 198$ kcal for girls. Energy intakes for boys and girls were, on average, 96% and 92% respectively of Average Energy Allowances for children 1 to 3 years of age (102 kcal/kg) (19) and were approximately 16% and 23% lower than the 1,312 kcal reported for children between 1 and 2 years of age in the Continuing Survey of Food Intake by Individuals 1994–1996 (20). Toddlers' weight and length percentile values at age 18 months indicated that mean growth status was consistent with age- and gender-appropriate reference values (15).

Relationships Between Toddler Energy Intake and Anthropometries at 18 Months

Toddler energy intakes at age 18 months were positively associated with mean length from 12 or 13 to 18 months ($r = .33, P < .01$), and negatively associated with mean skinfold measurements from 12 or 13 to 18 months ($r = -.29, P < .05$). In contrast, energy intake at age 18 months was not associated with mean weight from 12 or 13 to 18 months ($r = .17, P = .22$). Taken together, taller and leaner toddlers tended to have the highest energy intakes at 18 months of age.

Toddlers' weight, length, and sum of skinfold values at age 18 months, however, were not directly related to breast-feeding through the first year (data not shown).

Predictors of Toddler Energy Intake at 18 Months

Table 2 presents predictors of toddler energy intake at age 18 months, adjusting for length at age 18 months and gender. Length at age 18 months and gender explained 11% of the variance in toddler intakes at age 18 months. Breast-feeding through the first 12 months predicted toddler intakes at 18 months of age. Mothers who reported breast-feeding at 12 or 13 months tended to have toddlers with higher energy intakes at age 18 months ($\beta=.27$, $P<.05$; model $R^2=.19$). In this model, breast-feeding through the first year explained 8% unique variance in toddler energy intakes at age 18 months. Maternal control in feeding predicted energy intakes at 18 months of age. Lower levels of maternal control in feeding were associated with higher toddler energy intakes at 18 months ($\beta=-.44$, $P<.01$; model $R^2=.26$). In this model, maternal control in feeding explained 15% unique variance in toddler energy intakes at age 18 months.

Predictors of Maternal Control In Feeding

Table 3 presents regression models evaluating predictors of maternal control in feeding adjusting for infant weight at age 12 or 13 months, gender, and maternal education. Infant gender and maternal education were weak predictors of maternal control in feeding. Infant weight at 12 or 13 months predicted maternal control in infant feeding; lower infant weights were associated with lower levels of maternal control in feeding ($\beta=.30$, $P<.05$; model $R^2=.15$). Controlling for infant weight, breast-feeding through the first year predicted maternal control in feeding. Women breast-feeding at 12 or 13 months tended to report lower levels of maternal control in feeding ($\beta=-.36$, $P<.01$; model $R^2=.27$).

Maternal Control as a Mediator of the Relationship Between Breast-feeding and Infant Energy Intakes

Tables 2 and 3 establish relationships between predictor (breastfeeding), outcome (toddler energy intake), and mediator (maternal control in feeding) variables. Data presented in Table 4 indicate that the relationship between breast-feeding and toddlers' energy intake at age 18 months was attributable to the presence of maternal control in feeding. Breast-feeding positively predicted energy intake at age 18 months ($\beta=.27$, $P<.05$). The strength of the regression weight for breastfeeding decreased to nonsignificance ($b=.20$) when maternal control was added to the regression equation. Maternal control, however, remained a good predictor of energy intake at age 18 months in this regression equation ($\beta=-.36$, $P<.01$). As a result, maternal control was identified as a mediator of the relationship between breast-feeding and toddler energy intake at age 18 months (18).

DISCUSSION

Current recommendations to breast-feed through the first year of life reflect a wealth of research indicating numerous health benefits of breast-feeding for both mother and child (1,2). The main findings of this research provide evidence that breast-feeding through the first year has a beneficial effect on infant-feeding style and children's food intake that persists beyond breast-feeding into the toddler period. In this study, breast-feeding at 12 or 13 months was associated with lower levels of maternal control in feeding. This relationship was observed when maternal education was taken into account, ruling out an influence that is thought to be closely aligned with choice to breast-feed as well as parenting style (14). In turn, lower levels of maternal control were associated with higher levels of toddler energy intake at age 18 months. Energy intakes at 18 months tended to be the highest among taller and leaner toddlers. The positive relationship between breastfeeding at 12 or 13 months and toddler energy intake during the second year of life was mediated by the influence of maternal control in feeding. This finding

suggests that breastfeeding at 12 or 13 months may have continued effects on dietary intakes into the second year of life. In particular, breast-feeding through the first year may promote maternal beliefs and child-feeding behaviors that acknowledge the infant's ability to regulate intake. These beliefs and behaviors may afford children repeated opportunities for shared control of their food intake during a period in which eating patterns emerge and a modified adult diet is established.

From a developmental perspective, early patterns of mother–infant give-and-take during feeding may serve as the basis for establishing who controls what and when and how much is eaten. Breast-feeding provides repeated opportunities for mothers to offer a feeding to their infants while allowing the infant to assume control over the amount of milk consumed. As a result of this experience, breast-feeding through the first year may establish a greater degree of maternal responsiveness to infant cues as well as a shared mother–infant responsibility for the regulation of intake throughout the first year. From their work on differences in feeding behavior between breast- and bottle-fed infants, Wright et al (21) conclude that “Far less control over the course of the feeding is exerted, or indeed possible, for the breast-feeding mother” (p 18). These authors contend that such early exchanges in mother–infant dyads shape infants' responsiveness to hunger and satiety. This aspect of breast-feeding may not only make mothers more responsive to infant cues in early infancy, but may continue to characterize mother–infant interactions well into the toddler period. Future research should consider whether prolonged breast-feeding directly shapes maternal control in infant feeding or reflects other, more general, maternal characteristics that indicate responsiveness to the infant. For instance, an ethnographic study on maternal breast-feeding and pacifier use found that a lack of maternal responsiveness to infant crying was associated with more intense pacifier use and a short duration of breast-feeding (22). Another study found that breast-feeding duration was associated with high rates of interactive behavior between mother and infant as well as mothers' perceptions of the infant as being “easy” to care for (23).

It is also possible that breast-feeding through the first year influences the breast-fed infant's acceptance of solid foods, which in turn affects maternal control. Early dietary exposure to odors and flavors varies dramatically across breast-fed and formula-fed infants (24–26). A diversity of flavors and odors present in the maternal diet are carried into breast milk, whereas the variety of sensory cues in commercial formula are limited. There is some evidence that flavors of the mother's diet that are present in human milk can facilitate acceptance of solid foods (27,28). Thus, infants fed human milk have greater exposure to the flavors of the maternal diet and may more readily accept solid food than infants with relatively less exposure. In this sense, breast-feeding through the first year may provide infants with extensive exposure to flavors and odors of the maternal diet, facilitating the transition to and acceptance of solid foods. To the extent that breast-fed infants more readily accept solid foods, less maternal control and encouragement may be required to facilitate toddlers' consumption of new foods during this period.

The effect of breast-feeding through the first year on maternal control in feeding is particularly important when considering consequences for children's growth status and adiposity. Differences in growth patterns have been noted between breast-fed and formula-fed infants where breast-fed infants tend to have lower skinfold thicknesses and slower increases in weight and length during the first year of life (3,4). Further, a shorter duration of breast-feeding has been associated with obesity during adolescence in a sample of rural, white subjects with lower socioeconomic status (29). In this study, breastfeeding was not directly related to toddlers' growth status, but was indirectly associated with increased length and decreased skinfold measurements at age 18 months through its effects on maternal control in feeding. Maternal control in feeding mediated the positive relationship between breast-feeding at age 12 or 13 months and toddler energy intakes at age 18 months. Mothers who breast-fed through the first

year tended to use lower amounts of maternal control in feeding and had toddlers with higher energy intakes at 18 months. In turn, higher energy intakes were observed among taller and leaner (but not heavier) toddlers. These findings suggest that breast-feeding may serve to lower maternal control in feeding, permitting higher toddler energy intakes and growth. The links between maternal control and toddlers' growth status reported here also suggest that the maternal control in infant feeding should be evaluated in the context of understanding behavioral origins of healthful growth patterns and childhood overweight. Future research should evaluate whether prolonged breast-feeding may serve as a protective factor against problems of underweight and overweight by influencing the amount of control that mothers exert in infant feeding.

The findings of this research also indicate children's weight status may influence the amount of control in feeding used by mothers. In this study, maternal control in feeding was positively associated with toddler's weight, with greater levels of maternal control in feeding reported for heavier toddlers. This finding is consistent with work on the regulation of food intake in preschool children in which higher levels of maternal control were associated with greater child adiposity (7,8). In particular, a 1999 study observed that mothers of the heaviest preschool-aged children reported greatest restriction of children's access to palatable snack foods (8). One interpretation of this finding is that mothers look to their infants' weight status in determining the extent to which control should be used in infant feeding. In describing a model of proneness to obesity in children, Costanzo and Woody (30) suggest that parents will impose greater control over child-feeding when observing the child as being "at risk" for developing eating and/or weight problems.

APPLICATIONS

- Breast-feeding through the first year appears to support toddler energy intakes and growth by fostering a shared mother-infant regulation of toddler food intake.
- This research provides evidence that breast-feeding confers these benefits to the child by promoting patterns of mother-child interaction during feeding that maintain maternal involvement in feeding while acknowledging the child's role in the regulation of food intake.
- These findings may be used by clinicians to assist parents in making informed decisions about choice of infant-feeding method and to provide anticipatory guidance regarding infant feeding style when initiating dietary diversity.

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Table 1

Descriptive statistics for infant dietary intake and growth measurements

Variable	Boys		Girls	
	N	Mean±SD	N	Mean±SD
Energy Intake at 18 mo (kcal)^a Weight (kg)	31	1,104±270	24	1,009±198
12 or 13 mo	31	10.0±0.9	24	9.7±1.1
18 mo	31	11.3±1.0	24	10.8±1.2
Weight-for-age (%) at 18 mo^b Length (cm)	31	44±26	24	51 ±32
12 or 13 mo	31	76.3±3.1	24	75.3±2.7
18 mo	31	82.1±2.8	24	81.0±2.7
Length-for-age (%) at 18 mo^b Sum of skinfolds (mm)^c	31	46±29	24	50±29
12 or 13 mo	31	13.1±2.6	24	13.1±3.3
18 mo	31	12.3±2.4	24	12.6±3.0

^a Estimated from 3-day food records.^b Converted to percentile values using National Center for Health Statistics reference data (15).^c Sum of triceps and subscapular skinfolds.

Table 2

Parameter estimates for predictors of toddler energy intake at age 18 months

Variables	N	Regression weight (β)	Model R^2
Maternal control in feeding ^{a,b}	51	-.44 ^{**}	.26
Breast-feeding ^a	55	.27 [*]	.19

^a Adjusted for child gender and length at age 18 months.^b As determined by the child feeding questionnaire (Figure), with high scores indicating a high level of maternal control used in feeding.^{*} $P < .05$.^{**} $P < .01$.

Table 3

Parameter estimates for predictors of maternal control in feeding

Variables	N	Regression weight (β)	Model R^2
Infant weight at 12 or 13 mo ^{a,b}	51	.30 [*]	.15
Breast-feeding ^c	51	-.36 ^{**}	.27

^a Adjusted for maternal education and infant gender.^b Infant weight at the initiation of study, when mothers provided information on maternal control in feeding.^c Adjusted for maternal education, infant gender, and infant weight at 12 or 13 months of age.^{*} $P < .05$.^{**} $P < .01$.

Table 4

Mediation models predicting toddler energy intake at age 18 months

Mediation model	Step 1 ^a β	Step 2 ^b β
Breast-feeding ^c	.27 [*]	.20
Maternal control in feeding ^{c,d}	...	-.36 [*]

^a Breast-feeding at 12 or 13 months is established as single predictor of toddler energy intake at age 18 months.

^b Maternal control is indicated as a mediator by its prediction of toddler energy intake at 18 months, whereas the predictive power of breast-feeding is decreased to nonsignificance.

^c Adjusting for infant gender, length at age 18 months.

^d As determined by the child feeding questionnaire (Figure), with high scores indicating a high level of maternal control used in feeding.

^{*} $P < .05$.