



Research report

Parent mealtime actions that mediate associations between children's fussy-eating and their weight and diet

Helen M. Hendy^a, Keith E. Williams^{b,*}, Katherine Riegel^b, Candace Paul^b

^a Psychology Program, Penn State University, Schuylkill Campus, Schuylkill Haven, PA 17972, United States

^b Feeding Program, Penn State Hershey Medical Center, 905 W. Governor Road, Hershey, PA 17033, United States

ARTICLE INFO

Article history:

Received 10 February 2009

Received in revised form 21 October 2009

Accepted 24 October 2009

Keywords:

Fussy-eating

Parent mealtime actions

Children's weight status

Children's diet status

ABSTRACT

The present study evaluated parent mealtime actions that mediate associations between children's fussy-eating and their weight and diet. Participants included 236 feeding-clinic children in three diagnostic groups: 50 with autism, 84 with other special needs, and 102 without special needs. Children's weight was measured as body mass index percentile (BMI%), with only 26.4% of the present sample found to be underweight (BMI% less than 10). Parents reported children's diet variety as the number of 139 common foods accepted, children's FUSSINESS with the Child Eating Behavior Questionnaire, and their own use of four actions from the Parent Mealtime Action Scale: POSITIVE PERSUASION, INSISTENCE ON EATING, SNACK MODELING, SPECIAL MEALS. Multiple regression found that only SPECIAL MEALS explained variance in children's BMI% and diet variety. For children without special needs, mediation analysis revealed that variance in children's BMI% explained by FUSSINESS was accounted for entirely by the parent's preparation of SPECIAL MEALS. For all diagnostic groups, mediation analyses revealed that variance in children's diet variety explained by FUSSINESS was accounted for by the parent's use of SPECIAL MEALS. We conclude that although the parent's use of SPECIAL MEALS may improve BMI% in fussy-eating clinic children, it may also perpetuate their limited diet variety.

© 2009 Elsevier Ltd. All rights reserved.

Introduction

The problem of children's fussy-eating

For optimal health, the Centers for Disease Control and Prevention (CDCP, 2000) recommend that children be encouraged to maintain a healthy weight status with a body mass index percentile (BMI%) score between 10 and 85 for their age group. The CDCP also recommends that parents help their children accomplish this goal for healthy weight by encouraging them to eat a variety of nutritious foods from all food groups. Such goals for BMI% and diet variety may be particularly difficult for children who are "fussy eaters," a common feeding problem that can be measured with the six-item FUSSINESS dimension of the Child Eating Behavior Questionnaire (CEBQ; Wardle, Guthrie, Sanderson, & Rapoport, 2001). Past research suggests that fussy-eating children are often underweight (with BMI% less than 10) and they typically accept only a limited variety of foods (Carruth, Ziegler, Gordon, & Barr, 2004; Dovey, Staples, Gibson, & Halford,

2008; Galloway, Fiorito, Lee, & Birch, 2005). Surprisingly, children with fussy-eating patterns severe enough to be treated in hospital feeding clinics may often show normal weight status (Williams, Gibbons, & Schreck, 2005), perhaps because they eat mostly starches and high-calorie foods (Schreck, Williams, & Smith, 2004), and because parents often add nutritional supplements to their diets (Lockner, Crowe, & Skipper, 2008). Whether children are underweight or overweight, such fussy-eating patterns left untreated in childhood may result in diet and health problems that last into adolescence and adulthood (Falciglia, Couch, Gribble, Pabst, & Frank, 2000; Timimi, Douglas, & Tsiftsopoulou, 1997).

Parent actions associated with children's weight and diet status

Because children with fussy-eating habits are at risk for weight and diet problems, their parents may be expected to attempt a number of mealtime approaches to remedy these problems. The recently developed Parent Mealtime Action Scale (Hendy, Williams, Camise, Eckman, & Hedemann, 2009) identified four possible parent mealtime actions that were associated with BMI% for large random samples of average-developing children. These four actions included: POSITIVE PERSUASION that was associated with reduced BMI% in children, INSISTENCE ON EATING

* Corresponding author.

E-mail address: feedingprogram@hmc.psu.edu (K.E. Williams).

that was also associated with reduced BMI%, SNACK MODELING that was associated with increased BMI%, and SPECIAL MEALS prepared for the child that were different from the shared family meal, an action which was associated with increased BMI%. Other research has shown that parents tend to “give up” after their children have refused foods from the family meal three to five times (Carruth et al., 2004), when they may turn to other options to ensure that their children will eat. These options may include giving children commercially prepared nutrition supplement drinks, or preparing SPECIAL MEALS that consist of the children’s limited variety of favorite foods. However, turning to such SPECIAL MEALS of a few favorite foods can prevent children from reaching the apparent threshold of 10+ tastes across time needed for children to learn to accept new foods (Birch, McPhee, Shoba, Pirok, & Steinberg, 1987; Wardle, Herrera, Cooke, & Gibson, 2003), so that children’s diet variety may remain limited.

Purpose of the present study

Ventura & Birch (2008) suggest that complex relationships are likely among children’s feeding problems, parent mealtime actions, and children’s weight and diet. To help untangle such variable relationships, they recommend use of a four-step mediation analysis provided by Baron & Kenny (1986). For example, to examine whether a particular parent mealtime such as SPECIAL MEALS mediates the association between children’s FUSSINESS and BMI%, the four steps of mediation analysis would be: (1) determine if children’s FUSSINESS and BMI% are correlated. (2) Determine if children’s FUSSINESS and parent’s use of SPECIAL MEALS are correlated. (3) Determine if SPECIAL MEALS and BMI% are correlated. (4) If all three correlations examined in steps 1–3 are significant, determine if the correlation or R^2 change (the percentage of variance explained) by FUSSINESS for BMI% is substantially reduced when SPECIAL MEALS is partialled out first. Complete mediation is indicated if the correlation (or R^2 change) drops to insignificance ($p < .05$), and partial mediation is indicated if R^2 change drops substantially (arbitrarily set to 33% or more) even if a significant correlation still exists between FUSSINESS and BMI%. A similar set of four steps could be used to examine whether a particular parent mealtime action mediates the association between children’s FUSSINESS and their diet variety. If similar steps also demonstrate that specific parent mealtime actions mediate associations between children’s FUSSINESS and their diet variety, then these parent actions could then be the focus of future intervention efforts to improve BMI% and diet variety for children with fussy-eating patterns.

The purpose of the present study was to identify specific parent mealtime actions that might be targeted for future intervention to improve BMI% and diet variety in clinic samples of children with severe fussy-eating patterns. This goal was approached by first determining which of four-parent mealtime actions (POSITIVE PERSUASION, INSISTENCE ON EATING, SNACK MODELING, SPECIAL MEALS) could significantly explain variance in children’s BMI% and diet variety (measured as the number of common foods accepted) for a clinical sample of children seen at a hospital feeding program. Then, the four-step mediation procedure of Baron & Kenny (1986) was used to examine whether the significant parent actions identified could be shown to mediate associations between children’s FUSSINESS and their BMI% and diet variety.

Methods

Participants

Participants included a clinic sample of 236 children seen at a multidisciplinary feeding program in a tertiary medical center (153

males, 83 females; mean age = 58.3 months, SD = 42.8). Based on their developmental and medical histories, these children were categorized into three diagnostic groups: (1) autism spectrum disorders ($N = 50$); (2) other special needs including cerebral palsy, speech delay, mental retardation, and other genetic syndromes ($N = 84$); (3) no special needs or developmental delays that required intervention services besides those provided by the feeding program ($N = 102$).

Procedures

As part of the feeding program’s standard intake procedure, each child’s weight and height were measured and used to calculate BMI% scores (CDCP, 2000) for the children in each diagnostic group: mean BMI% = 46.0 (SD = 28.7) for children with autism, mean BMI% = 33.4 (SD = 32.8) for children with other special needs, mean BMI% = 36.3 (SD = 30.42) for children without special needs. Unlike past reports that fussy-eating children in non-clinic samples are often underweight (Carruth et al., 2004; Dovey et al., 2008), only 26.4% of the present samples of 236 feeding-clinic children were underweight (with BMI% less than 10). Separated by diagnostic groups, underweight children made up only 10.0% of the children with autism, 34.6% of the children with other special needs, and 28.0% of the children without special needs.

Parents were asked to complete a detailed questionnaire in which they reported child and family demographic information, the children’s diet and feeding behavior, and their own mealtime actions. For example, parents were asked whether or not they gave their child commercially available nutrition supplement drinks. Their children’s fussy-eating pattern was measured with the six-item FUSSINESS subscale within the 35-item Child Eating Behavior Questionnaire (CEBQ; Wardle et al., 2001), in which parents asked to use a five-point rating (1 = never, 2 = rarely, 3 = sometime, 4 = often, 5 = always) to describe how often their children showed each behavior, with the child’s FUSSINESS score calculated as the mean five-point rating for all six items. As a validity check to demonstrate that the 236 clinic children in the present study had extremes of fussy-eating, their mean FUSSINESS score was found to be 4.1 (SD = 0.9) in comparison to the mean of 3.1 (SD = 0.9) found for the 160 average-developing children used in the sample to develop the measure (Wardle et al., 2001). Also as might be expected, the 116 children in the present sample whose parents gave them nutrition supplements had significantly higher FUSSINESS scores ($t_{(234)} = 2.72, p = .007$) than did the 120 children whose parents did not provide such nutrition supplements (mean = 4.2, SD = .85; mean = 3.9, SD = .91; respectively).

For a brief measure of the children’s diet variety of food acceptance, parents were given a list of 139 common foods as used in past research (Williams, Hendy, & Knecht, 2008) and asked to report whether or not their children would eat each food (including 32 fruits, 25 vegetables, 13 dairy, 30 proteins, 36 starches, 3 others that included soups, stews, and pot pie), with diet variety measured as the number of foods accepted by the child (mean = 33.5 foods, SD = 23.4). As a brief check of the validity of the number of 139 foods accepted as a measure of diet variety, it was found as expected to be negatively correlated with the FUSSINESS measure ($r = -.344, n = 236, p = .000$).

Four-parent mealtime actions from the Parent Mealtime Action Scale (PMAS; Hendy et al., 2009) were selected for consideration in the present study because they had been found to be associated with children’s BMI% in a large random sample of average-developing children. These four-parent actions were measured with 11 items from the PMAS that included the POSITIVE PERSUASION subscale (four items), the INSISTENCE ON EATING subscale (three items), the SNACK MODELING subscale (three

items), and one item from the four items of the SPECIAL MEALS subscale (Hendy et al., 2009). Parents were asked to use a three-point rating (1 = never, 2 = sometimes, 3 = always) to describe how often in a typical week they used each parent mealtime action, then the mean rating for items within the subscales was calculated as the score. (Note: only one item from SPECIAL MEALS was available for the present study because the PMAS was still under development by the authors and all items within each subscale had not yet been identified by the psychometric examinations. However, this one item, “you prepared a special meal for the child, different from the family meal,” was found to account for 39% of the variance in the total SPECIAL MEALS score for the 2008 parents from Sample 1 in Hendy et al., 2009). To examine the validity of the factor structure for the 11 PMAS items included in the present study, factor analysis with varimax rotation was conducted with the strict requirement that items loaded .60 or higher within only one dimension. The 263 clinic children in the present study revealed the same four dimensions of parent mealtime action, and the same items within them, as those shown by the original PMAS sample of 2008 average-developing children (Hendy et al., 2009): POSITIVE PERSUASION (with the four items showing factor loadings of .863, .848, .821, .817), INSISTENCE ON EATING (with the three items showing factor loadings of .847, .834, .624), SNACK MODELING (with the three items showing factor loadings of .790, .719, .714), and SPECIAL MEALS (with the single item showing a factor loading of .959 alone within its dimension).

Results

Which parent mealtime actions explain children's weight and diet variety?

Multiple regression was used to identify which of the four-parent mealtime actions (POSITIVE PERSUASION, INSISTENCE ON EATING, SNACK MODELING, SPECIAL MEALS) could explain variance in children's BMI%, with the result that only the parent's use of SPECIAL MEALS was found to be significant ($\beta = .250$, $t = 3.81$, $p = .000$). Multiple regression was also used to identify which of the four-parent mealtime actions could explain variance in children's diet variety (measured as the number of 139 common foods accepted), again with the result that only the parent's use of SPECIAL MEALS was found to be significant ($\beta = -.318$, $t = 4.29$, $p = .000$).

Table 1

Evaluation of parent's use of SPECIAL MEALS as a mediator of the association between children's FUSSINESS and BMI% for three diagnostic groups from a hospital feeding clinic (autism, other special needs, no special needs) The four-step procedure of Baron & Kenny (1986) was used with FUSSINESS measured from the six items of the CEBQ (Wardle et al., 2001) and SPECIAL MEALS measured with one item from the PMAS (Hendy et al., 2009). To reduce the risk of Type I errors, the required p value was set at .03.

Step	Correlation examined	r	n	p	R ² change
(a) For children with autism (N=50)					
(1)	FUSSINESS and BMI%	.086	50	.551 (ns)	–
(2)	FUSSINESS and SPECIAL MEALS	.332	50	.018	
(3)	SPECIAL MEALS and BMI%	.377	50	.007	
(4)	FUSSINESS and BMI% (partialling out SPECIAL MEALS)	–			
Conclusion: no mediation.					
(b) For children with other special needs (N=84)					
(1)	FUSSINESS and BMI%	.155	81	.168 (ns)	–
(2)	FUSSINESS and SPECIAL MEALS	.290	84	.007	
(3)	SPECIAL MEALS and BMI%	.161	81	.150 (ns)	
(4)	FUSSINESS and BMI% (partialling out SPECIAL MEALS)	–			
Conclusion: no mediation.					
(c) For children without special needs (N=102)					
(1)	FUSSINESS and BMI%	.230	100	.021	.053
(2)	FUSSINESS and SPECIAL MEALS	.322	102	.001	
(3)	SPECIAL MEALS and BMI%	.242	100	.015	
(4)	FUSSINESS and BMI% (partialling out SPECIAL MEALS)	.165	97	.104 (ns)	.025
Conclusion: parent's use of SPECIAL MEALS mediates the positive correlation between FUSSINESS and BMI% because with it partialled out first, the R ² change (or portion of variance of BMI% explained) drops 52.8% from .053 to .025 and is no longer significant.					

Do SPECIAL MEALS mediate links between children's FUSSINESS and their weight and diet variety?

The four-step mediation analysis provided by Baron & Kenny (1986) was then used to examine whether the parent's use of SPECIAL MEALS mediated associations between children's FUSSINESS and BMI%, and between children's FUSSINESS and diet variety (number of 139 common foods accepted). Past research suggests that children with autism tend to show more risk of fussy-eating behavior and less risk of overweight than feeding-clinic children with other diagnoses (Schreck et al., 2004; Williams et al., 2008), which could alter the dynamics among the variables considered in the present study (children's fussy-eating behavior, parent mealtime actions, children's BMI% and diet variety). Therefore, separate mediation analyses were conducted for each of the three diagnostic groups: 50 children with autism, 84 children with other special needs, and 102 children without special needs other than their feeding problems. To reduce the risk of Type I errors with the multiple tests used on single data sets needed in the four steps of mediation analysis, the required p value for significance was set at .03 rather than the traditional .05.

For the outcome measure of children's BMI%, results indicated that the parent's use of SPECIAL MEALS mediated the positive correlation between children's FUSSINESS and BMI%, but only for the 102 children without special needs (see Table 1). More specifically, with SPECIAL MEALS partialled out first, the R² change (or portion of variance of these children's BMI% explained by their FUSSINESS) dropped 52.8% and was no longer significant. These results indicate that for clinic children without special needs, the variance in BMI% explained by FUSSINESS was accounted for entirely by the parent's preparation of SPECIAL MEALS different from the shared family meals.

Because the above mediation analysis required the use of continuous variables, children's weight was measured as BMI%. However, Fig. 1 provides a visual display of changes in the relative number of children in three categories of weight status (underweight with BMI% less than 10, normal weight with BMI% between 10 and 85, and overweight with BMI% over 85) when parents varied in how often they reported preparing them SPECIAL MEALS in a typical week (1 = never, 2 = sometimes, 3 = always) (see Fig. 1). It can be seen in Fig. 1 that the relative number of fussy-eating children who were of normal weight was higher when parents always used SPECIAL MEALS.

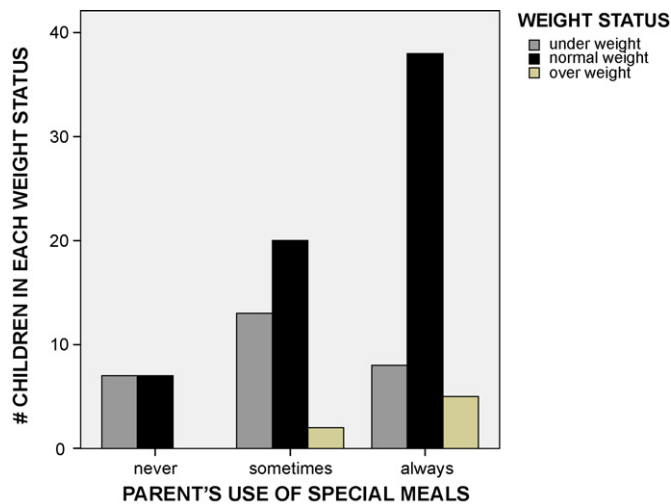


Fig. 1. The number of fussy-eating children without special needs who had a weight status of underweight (BMI% less than 10), normal weight (BMI% between 10 and 85), or overweight (BMI% greater than 85) when parents never, sometimes, or always prepared them SPECIAL MEALS different from the shared family meal. The relative number of fussy-eating children who were of normal weight was higher when parents always used SPECIAL MEALS.

For the outcome measure of children's diet variety (number of 139 foods accepted), results indicated that the parent's use of SPECIAL MEALS mediated the positive correlation between children's FUSSINESS and diet variety for all three diagnostic groups of feeding-clinic children (see Table 2). More specifically, with SPECIAL MEALS partialled out first, the R^2 change (or the portion of the variance of children's diet variety explained by FUSSINESS) dropped 38.1% for the 50 children with autism, the R^2 change dropped 55.9% and was no longer significant for the 84 children with other special needs, and the R^2 change dropped 40.8% for the 102 children without special needs. These results indicate that for clinic children in all three diagnostic groups, the variance in diet variety explained by FUSSINESS was accounted for partially or entirely by the parent's preparation of SPECIAL MEALS different from the shared family meals.

Table 2

Evaluation of parent's use of SPECIAL MEALS as a mediator of the association between children's FUSSINESS and DIET VARIETY (number of 139 common foods accepted) for three diagnostic groups from a feeding clinic (autism, other special needs, no special needs). The four-step procedure provided by Baron & Kenny (1986) was used. To reduce Type I errors, the required p value was set at .03.

Step	Correlation examined	r	n	p	R^2 change
(a) For children with autism ($N=50$)					
(1)	FUSSINESS and DIET VARIETY	-.410	50	.003	.168
(2)	FUSSINESS and SPECIAL MEALS	.332	50	.018	
(3)	SPECIAL MEALS and DIET VARIETY	-.321	50	.023	
(4)	FUSSINESS and DIET VARIETY (partialling out SPECIAL MEALS)	-.340	47	.017	.104
Conclusion: parent's use of SPECIAL MEALS partially mediates the negative correlation between FUSSINESS and DIET VARIETY because with it partialled out first, the R^2 change (or portion of variance of DIET VARIETY explained) drops 38.1% from .168 to .104.					
(b) For children with other special needs ($N=84$)					
(1)	FUSSINESS and DIET VARIETY	-.243	84	.026	.059
(2)	FUSSINESS and SPECIAL MEALS	.290	84	.007	
(3)	SPECIAL MEALS and DIET VARIETY	-.308	84	.004	
(4)	FUSSINESS and DIET VARIETY (partialling out SPECIAL MEALS)	-.169	81	.127 (ns)	.026
Conclusion: parent's use of SPECIAL MEALS mediates the negative correlation between FUSSINESS and DIET VARIETY because with it partialled out first, the R^2 change drops 55.9% from .059 to .026 and is no longer significant.					
(c) For children without special needs ($N=102$)					
(1)	FUSSINESS and DIET VARIETY	-.377	102	.000	.142
(2)	FUSSINESS and SPECIAL MEALS	.322	102	.001	
(3)	SPECIAL MEALS and DIET VARIETY	-.318	102	.001	
(4)	FUSSINESS and DIET VARIETY (partialling out SPECIAL MEALS)	-.306	99	.002	.084
Conclusion: parent's use of SPECIAL MEALS partially mediates the negative correlation between FUSSINESS and DIET VARIETY because with it partialled out first, the R^2 change drops 40.8% from .142 to .084.					

Discussion

The purpose of the present study was to identify specific parent mealtime actions that might be targeted for future intervention to improve weight and diet in clinic children with extreme fussy-eating patterns. Although past research suggests that non-clinic fussy-eating children are often underweight (Carruth et al., 2004; Dovey et al., 2008), only 26.4% of the present clinic sample was underweight. One reason for less underweight in clinic children with severe fussy-eating habits may be that they eat mostly starches and high-calorie snack foods, and that their parents often add nutritional supplements to their diets, which both could lead to weight gain (Lockner et al., 2008; Schreck et al., 2004; Williams et al., 2005).

Of the four-parent mealtime actions considered (POSITIVE PERSUASION, INSISTENCE ON EATING, SNACK MODELING, SPECIAL MEALS), only the parent's preparation of SPECIAL MEALS different from the shared family meals was found to significantly explain clinic children's BMI% and diet variety (number of 139 common foods accepted). For clinic children without special needs, results of the present study revealed that the variance in BMI% explained by FUSSINESS was accounted for entirely by the parent's preparation of SPECIAL MEALS. One interpretation of these findings is that fussy-eating in children may prompt parents to prepare SPECIAL MEALS their children will accept, but because such SPECIAL MEALS often include palatable high-calorie foods, their children experience gains in BMI%. For clinic children from all three diagnostic groups (autism, other special needs, no special needs), results of the present study also revealed that the variance in diet variety explained by FUSSINESS was partially or completely explained by the parent's preparation of SPECIAL MEALS. Taken together, the present results suggest that although the parent's use of SPECIAL MEALS may improve BMI% in fussy-eating children who are often underweight, such preparation of SPECIAL MEALS for fussy-eating children may also perpetuate their limited diet variety.

One explanation for why the parent's use of SPECIAL MEALS mediated the association between fussy-eating and BMI% only for the children without special needs may be that these parents feel more responsible for their children's fussy-eating and weight

problems than parents of children with special needs, who may attribute these problems to their children's diagnostic condition. Perhaps with such heightened sense of responsibility, parents of children without special needs become particularly diligent about preparing SPECIAL MEALS that include their children's favorite high-calorie foods to ensure that they will eat something during meals and maintain a normal weight status. Past research suggests that parents tend to "give up" offering their children the shared family meal after only three to five failed attempts (Carruth et al., 2004), when they may turn to nutrition supplements or SPECIAL MEALS that consist of the children's few favorite foods. However, turning to such SPECIAL MEALS may reduce the probability that their children reach the apparent threshold of 10+ tastes across time needed to learn to enjoy new foods (Birch et al., 1987; Wardle et al., 2003), with the result that their diet variety remains limited and they have increased risk for later eating disorders and health problems in adolescence and adulthood (Falciglia et al., 2000; Timimi et al., 1997). Future research might examine the specific foods, total calories, fat percentage, and nutrient quality included in such SPECIAL MEALS prepared by parents for their fussy-eating children to clarify how parents may be putting their children at risk for nutrient deficits by only serving them SPECIAL MEALS of their favorite foods.

Future research might also experimentally examine other approaches that parents of fussy-eating children might use to help their children maintain a healthy weight while also improving their limited diet variety. For example, perhaps changes in fussy-eating children's weight and diet could be compared for parents who continue to prepare SPECIAL MEALS for their children and for parents who prepare shared family meals that include foods from all food groups and that always include at least one food the child is likely to eat. Past experimental research with feeding-clinic and average-developing children (Hendy, Williams, & Camise, 2005; Paul, Williams, Riegel, & Gibbons, 2007) also suggests other mealtime conditions that enhance diet variety in fussy-eating children may include: (1) small daily expectations for consumption of each food offered at mealtime, (2) many repeated presentations of each food over time to pass the threshold of 10+ tastes, (3) offers of small and delayed rewards as an incentive for children to first taste the new foods, and (4) conditions that encourage peer modeling. Finally, future research might include more diverse samples than that of the present study to examine whether gender, age, ethnicity, socioeconomic status, and physical health moderate the complex relationships among parent meal-

time actions, children's fussy-eating behavior, and their weight and diet status.

References

- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173–1182.
- Birch, L. L., McPhee, L., Shoba, B. C., Pirok, E., & Steinberg, L. (1987). What kind of exposure reduces children's neophobia? Looking vs. tasting. *Appetite*, *9*, 171–178.
- Carruth, B. R., Ziegler, P. J., Gordon, A., & Barr, S. I. (2004). Prevalence of "picky/fussy" eaters among infants and toddlers and their caregivers' decision about offering new food. *Journal of the American Dietetic Association*, *104*, S57–S64.
- Centers for Disease Control and Prevention. (2000). *School health index for physical activity and health eating: a self-assessment and planning guide. Elementary school version*. Atlanta, GA: author.
- Dovey, T. M., Staples, P. A., Gibson, E. L., & Halford, J. C. G. (2008). Food neophobia and "picky/fussy" eating in children: a review. *Appetite*, *50*, 181–193.
- Falciglia, G. A., Couch, S. C., Gribble, L. S., Pabst, S. M., & Frank, R. (2000). Food neophobia in childhood affects dietary variety. *Journal of the American Dietetic Association*, *100*, 1474–1481.
- Galloway, A. T., Fiorito, L. M., Lee, Y., & Birch, L. L. (2005). Parental pressure, dietary patterns and weight status among girls who are "picky/fussy" eaters. *Journal of the American Dietetic Association*, *103*, 692–698.
- Hendy, H. M., Williams, K. E., & Camise, T. S. (2005). "Kids Choice" school lunch program increases children's fruit and vegetable acceptance. *Appetite*, *45*, 250–263.
- Hendy, H. M., Williams, K. E., Camise, T. S., Eckman, N., & Hedemann, A. (2009). The Parent Mealtime Action Scale (PMAS): development and association with children's diet and weight. *Appetite*, *52*, 328–339.
- Lockner, D. W., Crowe, T. K., & Skipper, B. J. (2008). Dietary intake and parent's perception of mealtime behaviors in preschool-age children with autism spectrum disorder and in typically developing children. *Journal of the American Dietetic Association*, *108*, 1360–1363.
- Paul, C., Williams, K. E., Riegel, K., & Gibbons, B. (2007). Combining repeated taste exposure and escape prevention: an intervention for the treatment for food selectivity. *Appetite*, *49*, 708–711.
- Schreck, K. A., Williams, K. E., & Smith, A. F. (2004). A comparison of eating behaviors between children with and without autism. *Journal of Autism and Developmental Disorders*, *34*, 433–438.
- Timimi, S., Douglas, J., & Tsiftsopoulou, K. (1997). Selective eaters: a retrospective case note study. *Child: Care, Health and Development*, *23*, 265–278.
- Ventura, A. K., & Birch, L. L. (2008). Does parenting affect children's eating and weight status? *International Journal of Behavioral Nutrition and Physical Activity*, *5*, 1–12.
- Wardle, J., Guthrie, C. A., Sanderson, S., & Rapoport, L. (2001). Development of the Children's Eating Behavior Questionnaire. *Journal of Child Psychology and Psychiatry*, *42*, 963–970.
- Wardle, J., Herrera, M. L., Cooke, L. J., & Gibson, E. L. (2003). Modifying children's food preferences: the effects of exposure and reward on acceptance of an unfamiliar food. *European Journal of Clinical Nutrition*, *57*, 341–348.
- Williams, K. E., Gibbons, B., & Schreck, K. (2005). Comparing selective eaters with and without developmental disabilities. *Journal of Developmental and Physical Disabilities*, *17*, 299–309.
- Williams, K. E., Hendy, H., & Knecht, S. (2008). Parent feeding practices and child variables associated with childhood feeding problems. *Journal of Developmental and Physical Disabilities*, *20*, 231–242.