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Emerald dragon bites vs veggie beans: Fun food names increase children's consumption of novel healthy foods

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Abstract

Caregivers often struggle with food neophobia on the part of young children. This study examined whether labeling novel healthy foods with fun names would increase children's willingness to try those foods and encourage them to eat more of those foods in a child care setting. Thirty-nine toddler and preschool age children (mean age = 3.9 years) were served each of three foods twice, once labeled with a fun name and once with a healthy name. Percentage of the food consumed by each child was recorded. Overall, children ate a greater percentage of the target foods when they were labeled with fun names. Also, a larger percentage of the children tasted the foods when they were labeled with fun names. This simple strategy could be effective for increasing consumption of healthy foods among young children.

Keywords

eating habits; food neophobia; preschool children

A variety of external cues influence eating patterns in both adults and children. With adults, much of this research has focused on factors that contribute to over-consumption of unhealthy foods. For example, the proximity of a candy dish (Wansink et al., 2006), the packaging of popcorn buckets (Wansink and Kim, 2005) and the size of serving bowls at a

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party (Wansink and Cheney, 2005), have all been found to influence adults' eating behaviors.

Consumer studies with adults have also found that changing the name of a food item can increase sales and subjective ratings of food quality. Evocative, favorable, and descriptive names for restaurant menu items resulted in more positive ratings of the foods (Wansink et al., 2005) and increased sales for those items by 27 percent in an adult sample (Wansink et al., 2001).

Research on the effects of external cues on eating patterns in children has primarily included efforts to reduce food neophobia, or avoidance of unfamiliar foods, particularly for fruits and vegetables. Increased exposure to a food (Birch and Marlin, 1982; Sullivan and Birch, 1994), access and availability (Hearn et al., 1998), and parent and peer modeling (Birch, 1980; Wardle et al., 2003a, 2003b) have all demonstrated success in increasing children's consumption of healthy foods.

Despite these findings, research has not yet examined whether children modify their food intake in response to the names of the foods as adults do. Even if this external cue is effective with children, children and adults may respond best to different types of names. Specifically, while terms that evoke thoughts of exotic locales, nostalgia, and even terms such as ‘low fat’ and ‘healthy’ may appeal to adults, children may be uninfluenced or have a bias against these food names and labels. Martins et al. (1997) found that information about the nutritional value of new foods, that is, ‘it's good for you’, had no effect on children's willingness to try new foods. Another study indicated that children rated a ‘healthy’ labeled drink as less pleasant and said they would be less likely to ask their parents to buy it than the same drink presented with control information (Wardle and Huon, 2000). This suggests that health information may not have a positive effect for children, who are more likely to report that ‘healthy’ and ‘tasty’ are mutually exclusive food qualities.

The current study examined whether children's neophobia for ‘healthy’ foods could be reduced by providing more fun and engaging names for novel foods in a child care setting. The aim of the present study was to examine the extent to which a ‘fun’ or ‘healthy’ name for foods affected children's willingness to taste and consume novel foods.

Method

Participants

Parents of toddler and preschool age children at a local child care center (N = 36, 23 boys) were told about this study and asked to consent for their child to participate. All parents (100%) consented. The mean age of the toddlers (n = 11) was 2.2 years (range 1.2–2.75). The mean age of the preschool children (n = 25) was 4.6 (range 3.25–6.75). The children were racially diverse with 67 percent Caucasian, 20 percent African American, 5 percent Hispanic American/Latino, 8 percent Middle Eastern/West Asian.

Procedure

The children ate lunch either in their classroom or in a large gymnasium. On each of six testing occasions (one week apart), a fixed amount of the target food was included on the child's lunch tray, along with a sandwich, fruit, and milk. Children were told the name of the target food (either a 'healthy name' or a 'fun name') and that they could have as much or as little of it as they wanted. If they wanted more of the target food, they could raise their hand and they would be served seconds. When the child finished eating, the amount of the target food that was left on the tray was weighed and recorded.

The three foods (the names they were given and the serving sizes) were edamame (*veggie beans*, *emerald dragon bites*, 68 g), chickpeas (*nutrition bits*, *roly poly poppers*, 56 g), and lentils (*healthy stew*, *teddy bear porridge*, 50 g). The order of healthy versus fun name was counterbalanced across foods, and the same food was not served two weeks in a row to minimize recall of the food with the other name. The Human Subjects Review Board at Bowling Green State University approved all procedures.

Results

The average percentages of foods eaten when labeled with the healthy and fun names were calculated. A repeated measures MANOVA was conducted with type of name (healthy versus fun) as a within subject variable and age group (toddler vs preschool) as a between subject variable. Overall, children ate a greater percentage of the target foods when they had the fun names than when they had the healthy names, $F(1, 34) = 4.74$, $p < .05$ (healthy food $M = 7.3\%$, fun name $M = 15.0\%$). For edamame, children ate 6.1 percent of the food served to them when it had the healthy name and 8.1 percent when it had the fun name. For lentils, children ate 8.8 percent of the food when it had the healthy name and 14.8 percent when it had the fun name. For chickpeas, children ate 10 percent of the food when it had the healthy name and 16.7 percent when it had the fun name. There was no main effect for age group, $F(1, 34) = 0.13$, $p = 0.72$; or interaction of age group and type of food name $F(1, 34) = 0.35$, $p = 0.56$.

When foods were labeled with healthy names, the percentage of children who tasted edamame, lentils, and chickpeas (i.e. ate more than 0 g) was 39 percent, 28 percent, and 28 percent, respectively. When these foods were given fun names 49 percent, 40 percent, and 40 percent of children tasted them. However, a series of McNemar tests revealed that these differences were non-significant for all three foods (edamame, lentils, and chickpeas), exact p's = 0.11, 14, and .14, respectively.

Discussion

The present study examined whether the name of a food (either 'healthy' or 'fun') would influence children's consumption of novel foods. Indeed, both toddler and preschool age children ate a greater percentage of the foods when they had fun names than when they had healthy names. Children were not significantly more likely to taste foods when they had fun names than when they had healthy names. However, given the relatively small sample size here, further examination of this issue may be warranted. As tasting foods has demonstrated

benefits in developing a preference for these foods (Birch and Marlin, 1982), this may represent an important strategy for overcoming neophobia in young children.

This study examined children's eating habits in a natural child care setting, and illustrates that it may be possible to increase children's consumption of novel foods through a simple and inexpensive technique such as creating fun names for the foods. This strategy is widely used in the marketing field (Wansink et al., 2001) generally for high sugar or high fat foods (Story and French, 2004). However, researchers have noted the important role that child care providers and teachers play in reducing the risk of young children for obesity (Sellers et al., 2005). It would be relatively simple for caregivers to use the naming strategy described here in child care settings, applying it to healthy food choices. This simple strategy could also be adapted for use at home by parents.

We recognize that this study has several limitations, including a relatively small sample size and a wide age range for the children (range = 1.2–6.8 years). Replication of these findings in a larger sample is warranted. Finally, it should also be noted that a large percentage of the children did not taste the new foods with either name. This underscores the issue of neophobia with children of this age and suggests that further research is needed to find additional ways to encourage children to consume healthy foods.

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