REPORT

Trick, Treat, or Toy: Children Are Just as Likely to Choose Toys as Candy on Halloween

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ABSTRACT

This study investigated whether children would choose toys over candy when offered both on Halloween. Seven households gave trick-or-treaters a choice between comparably sized toys and candies. The subjects (N = 284) were between 3 and 14 years of age. Children were just as likely to choose toys as candy. There were no gender differences. The implication of this study is that children will not be disappointed by toy treats on Halloween. In practice, nutrition professionals should encourage adults to create holiday traditions that do not rely on unhealthful foods.

KEY WORDS: childhood obesity, prevention and control, dietary preferences

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INTRODUCTION

The prevalence of childhood obesity in the United States has dramatically increased in the last 3 decades.[1] Research suggests that the majority of American children need to improve the nutritional quality of their diets.[2] The surgeon general has asked Americans to address the problem of obesity on multiple levels, including the role of the environment and children's access to unhealthful foods.[3] In response, concerns are being raised about the food industry and the promotion of unhealthful foods to children.[4] Children collecting large amounts of candy on Halloween is an example of how the glorification of foods high in sugar and fat may contribute to a poor diet.

Parents are encouraged to limit the amount of sweets and high-fat foods that their children eat.[3] As parents work to promote good nutrition at home, they may feel thwarted by food advertisers and the environment. Nutritionally inadequate foods such as soft drinks, fast food, candy, and snack foods are inexpensive, readily available, and advertised directly to children.[4,5] Sweets are often advertised to parents with the message that providing these foods is a means of showing affection. For example, an advertisement for Hershey's candy, "Kisses" and "Hugs," shows the two candies side by side, paper ribbons entwined, and the caption, "Have you hugged and kissed your kids today?"[6] In one study, mothers reported that they chose foods for their children based primarily on nutritional value and long-term health.[7] Despite these good intentions, the foods they reported actually feeding their children included more sweets and less healthful breads and dairy products than they fed themselves.[7] These findings suggest that parents intend to feed their children in a healthful manner, but other factors interfere. Identifying and challenging these other factors are critical for children's health.

One important empirical question is whether children can self-regulate their intake and, if so, under what circumstances.[8] A study by Birch and colleagues suggests that children do self-regulate their food intake so that their caloric consumption evens out over several days.[9] It is important to note, however, that this study was conducted under the circumstance of having access to a balanced, healthful variety of foods.[9] These results cannot be assumed to generalize to our current food environment, in which such conditions are not the case. Further work by Birch and colleagues supports the idea that when parents impose restrictions on access to unhealthful foods, these efforts may backfire and result in those children showing higher consumption of these foods when given the chance.[10-12] One question raised in interpreting these findings is causality; parents of children who appear to have more difficulty self-regulating intake may be more likely to attempt to restrict food than parents of children who do not have this problem. A recent review of this literature concluded that the causal relationship among these variables has yet to be fully understood.[8]

provides indirect support for the thesis that children will overeat to some extent when placed in a conducive environment.[10-12] Three studies by this group employed a procedure in which children were given lunch, ate until they reported satiation, and then were left alone in a room for 10 minutes with toys, books, and large quantities of palatable snacks (ie, fig bars, popcorn, pretzels, candy chews, potato chips, chocolate bars, and ice cream). In those 10 minutes, the average calorie consumption was equivalent to 6% to 12% of the Recommended Dietary Allowance for the relevant age group.[10-12] These data suggest that children will continue to eat if they are given free access to palatable foods. Other relevant research suggests that children have a predisposition to prefer sweet foods,[13] and children tend to eat more when served larger portions.[14] In light of the evidence, we believe that exposure to large amounts of candy is a high-risk situation for overconsumption, and alternatives should be investigated.

Changing the adult behavior of handing out candy is a challenge because adults may feel that children will only like candy. If children will accept noncandy items, Social Cognitive Theory would predict that parents would be more likely to continue this new behavior and would serve as models for other parents who see their own children respond positively.[15,16] The aim of the present study was to investigate the utility of nonfood treats as substitutes for candy on Halloween. Because small toys are appealing to children, we designed this study to test whether children would place as high a value on toys as on candy while trick-or-treating on Halloween.

DESCRIPTION OF THE INTERVENTION AND EVALUATION

The study protocol was approved by the Yale Institutional Review Board for the protection of human subjects. The first year, we pretested the protocol by offering a choice of candy or toys at one household. Children appeared to understand the procedure, and there were no questions by parents or children about the procedure. The frequency of the selection of toys and candy was approximately equal during the pretesting session.

The following year, subjects were recruited during trick-or-treating at 7 households across 5 different towns in Connecticut. Three of the households were located in cities, and the other 4 were in suburbs. Subjects included 284 children (136 boys and 148 girls) ranging in age from 3 to 14 years. Eighteen children were excluded from analyses because they were either under age 3 or over age 14. We excluded children under 3 because their parents usually made the choice for them and children over 14 because they usually accompanied younger siblings and were not in costume themselves. Each theme stickers, and Halloween theme pencils. The candy choices were recognizable name brands, specially packaged for Halloween. The candies were lollipops, fruit-flavored chewy candies, fruit-flavored crunchy wafers, and "sweet and tart" hard candies. All of the toy and candy options cost between 5 and 10 cents per item.

When children arrived at the door, they were asked their age and gender and for a description of their Halloween costume. They were presented with 2 identical plates: 1 with 4 different types of toys and another with 4 different types of candy. The sites alternated whether the toys were on the right or on the left. The children were asked to choose either a piece of candy or a toy. If a child asked to have both a toy and a piece of candy, he or she was allowed to take both and was excluded from the study. The children's answers to the questions and their choice were recorded by a second research assistant, who was out of the children's view.

DESCRIPTION OF RESULTS

All subjects but one (a 4-year-old girl) complied with the request to choose either a toy or a piece of candy and did not ask to have one of each. Because the data were categorical, chi-square analyses were used to test for significant differences in the frequency of choosing toys versus candy. The statistical package used was SPSS Version 11.0.[17] The children chose toys (n = 135) as frequently as candy (n = 148) ($\chi^2_{1,283} = 0.60$, $P = .44$). Chi-square analyses were also used to test for gender differences ($\chi^2_{1,283} = 0.20$, $P = .66$). An independent samples t test was used to test the differences between the mean age of children who chose toys (mean = 8.7 years, SD = 3.1) and those who chose candy (mean = 9.3 years, SD = 3.5). This analysis revealed a nonsignificant difference between the groups ($t_{281} = -1.68$, $P = .10$).

DISCUSSION

The findings from this study suggest that children choose toys as often as candy when offered both on Halloween. This may reassure adults that children will not be disappointed by noncandy treats. Small toys are inexpensive and festive and may be viable options for adults who do not want to contribute to candy overconsumption.

The finding that nearly half of the children opted for toys suggests that children may forego candy more readily than adults expect. Social Cognitive Theory provides a framework for understanding how offering more healthful choices might become more common.[15,16] Because Halloween is special (ie, children dress up, walk around the neighborhood at night, socialize with other children and adults), nonfood treats may

The present study has several important limitations. First, the 7 households used were a convenience sample made of members of our research group. Further research with a representative sample of neighborhoods would provide important information about the generalizability of these findings. In particular, the role of race and ethnicity was not assessed in this study. Second, the children may have been cued that their behavior was being observed once they were asked their age and sex. Although we attempted to ask the questions naturally and record the responses out of sight, we cannot rule out possible demand characteristics of the situation. Third, it is possible that children chose toys in our study because they were novel. However, rather than using that as a reason to revert back to candy as the standby, this suggests that children respond positively to novelty and places the burden on adults to be creative in thinking of treats other than candy. It may be unrealistic to disassociate Halloween from candy entirely, but any decrease in the amount of candy eaten is a step in a healthy direction.

IMPLICATIONS FOR RESEARCH AND PRACTICE

Candy is inexpensive, is easy to obtain, and usually pleases children. Adults find it gratifying to give candy to children because of the pleasure children express, but children derive pleasure from other items as well. Adults need encouragement to use nonfood items to celebrate special occasions with children. Future research could assess the types of toys that may appeal most to children to maximize the likelihood that a toy would be selected over candy.

Some may argue that Halloween is "only once a year" and therefore not worth addressing. In response, we point to the way in which food and candy are advertised for numerous holidays. For example, one candy vendor's Web site sells candy specifically designed for weddings, baby arrivals, birthdays, Halloween, Christmas, Hanukkah, Valentine's Day, Easter, St. Patrick's Day, Cinco de Mayo, Earth Day, graduations, Mother's Day, Father's Day, Independence Day, and going back to school.[18] In light of the reinforcing nature of giving children candy at Halloween, it is understandable that adults give candy and other high-calorie foods at multiple holidays. Nutrition educators can help adults and children become more aware of how non-nutritious foods are often sold under the auspices of a "special treat" and, taken together, these special occasions represent many unhealthful food choices. In addition to education, simple modeling of new Halloween behaviors among nutrition educators may encourage other adults to change as well. Adults and children can work together to develop new holiday traditions that do not rely on non-nutritious foods.

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