

What would Batman eat?: priming children to make healthier fast food choices

Posted by nutritional anthropologist Geoff Bond
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Received 9 January 2011; revised 24 May 2011; accepted 23 August 2011

What is already known about this subject

- Healthier alternatives for popular menu items are infrequently selected.
- Presenting children with different cues can prime them into changing eating behavior.

What this study adds

- When children were asked what various admirable people would eat, 45% chose apple slices over French fries.
- Advising a parent to ask their child 'What would Batman eat?' might be an easy step to make healthier fast food choices.

Summary

Background: Fast food patronage is a frequent reality for many children and their parents. Although there are increasingly healthier alternatives for popular menu items (apple slices instead of French fries), they are infrequently selected.

Objectives: We investigated whether either of two priming tactics – the priming of a role model's food choices or the priming of healthy foods – could influence children to make healthier fast food choices.

Methods: In the priming model condition, 22 children (ranging in age from 6 to 12 years) were presented with 12 photos of 6 admirable and 6 less admirable models and asked, 'Would this person order apple fries or French fries?' In the health prime condition, the same children were shown 12 photos of 6 healthy foods and 6 less healthy foods and asked to indicate if each food was healthy or unhealthy.

Results: When children were asked what various admirable people – such as Batman or Spiderman – would eat, 45% chose apple slices over French fries, which was higher than the health prime ($P < 0.001$) or the control condition ($P < 0.001$).

Conclusions: Advising a parent to ask their child 'What would Batman (or another admired character or person) eat?' might be an easy step to take in what could be a healthier fast food world.

Keywords: Fast food restaurants, food choice, food intake, priming.

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Pediatric Obesity © 2012 International Association for the Study of Obesity. *Pediatric Obesity* 7, 121–123

Author Contributions: Study concept and design: Wansink, Camps, and Shimizu. Acquisition of data: Wansink, Camps, and Shimizu.

Analysis and interpretation of data: Camps and Shimizu. Drafting of the manuscript: Wansink. Critical revision of the manuscript for important intellectual content: Shimizu and Wansink. Statistical analysis: Shimizu. Obtained funding: Wansink. Administrative, technical, and material support: Wansink and Shimizu. Study supervision: Wansink.

Financial Disclosure: Dr. Wansink receives royalties from the book, 'Mindless Eating: Why We Eat More Than We Think' (2006).

Funding/Support: Dr Wansink received funding as the John S. Dyson Endowed Chair at Cornell University.

Introduction

In fast food restaurants, healthy options for children – such as apple fries (which are apple slices) at Burger King – are increasingly being offered as alternatives for regular menu items, such as French fries (1). Nevertheless, it appears that the less healthy alternative is still the dominant choice (2). Recent research has shown that presenting people, including children, with different cues can prime them into changing decisions and behaviour (3,4). Specifically, priming – the incidental activation of a knowledge structure (5) – can influence a variety of processes such as eating behaviour (6). Perhaps, priming could be used by parents to guide their children to select healthier options at a fast food restaurant (7,8).

We investigate whether either of two priming tactics – focusing on an affective component of a knowledge structure or focusing on a cognitive component of knowledge structure (5) – can lead a child to make a healthier fast food choice. Specifically, we examine if children are more likely to choose apple fries (thinly sliced apples) over French fries if they are primed with an admirable role model's food choices or with the healthiness of healthy foods.

Methods

Twenty-two children (13 females; ranging in age from 6 to 12 years, with a mean of 8.5; ranging in body mass index-for-age percentile from 15 to 97, with a mean of 72.3) were involved in this Institutional Review Board-approved study in the summer of 2009. They were involved in a summer-long camp that was designed for children from lower socio-economic families. Of the 22 children, eight were African-American, six were Hispanic and two were Asian.

The study was conducted during four consecutive Wednesday lunches, where each child was offered the choice of 'apple fries' (thinly sliced apples) or 'French fries' from a popular fast food restaurant. On each day, each child was privately asked 'Do you want apple fries or French fries with your lunch?' During the first and fourth week, the question was asked privately without a prime; the average of these 2 weeks serves as a default control condition. After lunch, their remaining apple fries or French fries were weighed to obtain a measure of how many grams and calories they consumed.

On the second week, each child was presented with 12 photos of (6 admirable and 6 less admirable) real and fictional models – a pilot study was used to determine admirable (e.g. Batman) or less admirable

(e.g. the Penguin) models – to see if there was any difference between two categories of models.

Each child was randomly shown each of the 12 photos and asked, 'Would this person order apple fries or French fries?' We recorded how many times they responded 'yes' to each model. We hypothesized that children who thought admirable models would eat healthily would activate positive associations towards healthy food and become more likely to choose apple fries over French fries.

The procedure on the third week was identical except that the children were shown 12 photos of 6 healthy foods (e.g. salad and granola) and 6 less healthy foods (e.g. pizza and burgers) and were asked to indicate if each food was healthy or unhealthy. None of the foods in our 12 photos looked similar to either apple or French fries. We hypothesized that children who identified the healthy food as 'healthy' would activate cognitive knowledge about healthy food and consequently make healthy food choices.

Results

During each of the two control weeks, two of 22 children (9.1%) selected the apple fries. On the week each child was primed with photos of models, 10 children (45.5%) selected apple fries, $\chi^2 = 24.3$, $P < 0.001$. This effect was more pronounced among children who thought admirable models would always eat healthy food than those who did not. Namely, the eight children who thought all six admirable models would eat healthily were more likely to order apple fries (62.5%) than those who thought fewer than five models would do so, $\chi^2 = 7.31$; $P < 0.01$. There was no difference between children who thought *less* admirable models would eat healthily and those who did not, $\chi^2 = 1.11$.

When children were primed with healthy foods, the number of children selecting apple fries was 4 of 22 (18.2%). This was not different than the control, $\chi^2 = 3.03$, $P > 0.05$. Unlike the results of admirable models, there was no difference between children who identified all healthy foods as healthy and those who did not, $\chi^2 = 0.16$.

Children ate most of the French fries or apple fries they had selected. The average child who selected French fries ate 227 ± 45 calories (70 ± 14 g), and the average child who selected apple fries ate 34 ± 2 calories (68 ± 4 g).

Comment

The right prime may help a child make the right food choice. When children were asked what various

admirable models would eat, they were temporarily more likely to make healthier food selections, presumably because their affective knowledge structure about healthy food (e.g. admirable people like healthy food) was activated. Activating their cognitive knowledge structure about healthy food (e.g. salad is healthy) did not influence their choice.

Our study was limited because we did not measure any psychological processes underlying children's responses. While the admirable models were selected in a pilot study, it was only assumed that these particular children perceived admirable models as admirable. Similarly, how the activated affective knowledge structure influenced food choice merits a more in-depth investigation. Furthermore, our second experimental condition always came after the first experimental condition. Thus, it is possible that children became tired of any priming after the first condition. Nevertheless, the fact that children showed the effect only for admirable models ruled out a possibility that the effect was simply because they became more familiar with apple fries.

Fast food patronage is a frequent reality for many children and their parents. Simply instructing a parent to order healthier food for a child is neither empowering for a child nor easy for a parent (9,10). Advising a parent to ask their child 'What would Batman (or another admired character or person) eat?' might be a realistic step to take in what could be a healthier fast food world.

Conflict of Interest Statement

No conflict of interest was declared.

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